Organizational Learning and Situated Identities: A Study of Change in 'High Reliability' Organizations

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This Thesis is Dedicated to Carol

Acknowledgements

Wisdom is the principal thing. Therefore get wisdom and with all thy getting, get understanding*.

The concept of community can be many things. Community can mean a place, or a group with a shared interest. Community can symbolize wide-ranging relationships over rather undefined areas of life. In the Canadian traditions of pluralism and pragmatism, community involves shared understanding, which can give rise to an attitude of wisdom. Community shapes and is shaped by identity.

Although I may have written it, this thesis is the product of a 'community' made up of family, friends and colleagues. I know that without the support of this community this work would not have been possible. My heartfelt thanks to:

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Mom and Dad: For always setting an example of doing the right thing, caring for others and staying the course. I have taken this to mean following my dreams and aspirations.

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My Wife Carol: For your constant consideration, thoughtfulness and love, thank you with all that I am. Here's to the next stage in our journey together, now one with more time for us.

Wayne F. St-Amour
Lancaster, England

*Dome Inscription, Manchester Central Library, St. Peter's Square. Proverbs 4:7.

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Organizational Learning and Situated Identities: A Study of Change in 'High Reliability' Organizations

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Abstract

This research explores situated learning and identity during periods of major organizational change within two 'high reliability' organizations (HROs), a British nuclear power station operator and a Canadian electricity grid operator. Situated learning refers to learning that occurs in the everyday experience of social practice, and identity is described as a learned outcome of social interaction. HROs are a fertile setting for examining learning and identity as integral elements of change. In HROs learning by experimentation is not an option without risking safety and system reliability. Further, in both firms, stable operating routines, which influence identity formation and contextual significance, have to take place alongside major change caused by industry deregulation.

I argue that identity can influence commitment to organizational goals, collective motivation and internalization of norms and values; it is therefore relevant to the response of a community to major changes when people are pressured to learn new practices and roles that differ from previous experience or assumptions. This circumstance is referred to as identity tension.

The thesis focuses on two main theoretical areas. First, there is a debate in the literature about whether identity tension impedes or facilitates learning. Evidence from this research suggests that we should go beyond this dichotomous view. Instead of being *either* impeded *or* facilitated, a community's learning can be *both* impeded *and* facilitated dependent on two key mediating factors: social identification and a process of change that facilitates identity continuity. The study shows that learning was impeded in the firm that employed a top-down approach to change. In this case members were expected to replace their existing notions of identity with a new conception, which fit better with the intentions of the organizational change. In the other firm, learning was facilitated when a process of change was adopted which promoted self-determination, having options and a degree of control to negotiate identity continuity and alignment. This finding illustrates that in some situations communities can negotiate new identities and learn new practices, thus they are able to transform. In other cases communities will withhold knowledge, which impedes learning both for themselves and the wider organizations in which they are located. This evidence introduces a new interpretation of the idea that learning is an assumed outcome of a community's practice repertoire. The research illustrates that in contrast to conventional views, despite the presence of legitimate peripheral participation, learning can be inhibited when community members withhold knowledge because of identity tension.

Second, there is a view in the literature that communities are self-replicating social systems which embrace changes in their practice only in incremental ways. Empirical evidence demonstrates that communities are capable of more than just incremental changes to practice, since members did engage in an integrative problem solving process to jointly create a new set of practices in the merged organization. Consequently, it seems possible that communities of practice are capable of evolving in dynamic ways.

This notion holds implications for management practice when communities of practice are faced with transformation. A model that draws from the study cases makes the 'below surface' aspects of identity negotiation more visible. In this way the thesis contributes some enhanced understanding of how identity continuity might be facilitated within a broader social system in an organization. Ultimately, the thesis extends current notions of situated learning through using insights from social identity theory, in order to deepen understanding of the complex interplay between learning and identity.

Introduction

Organizational learning is a priority for maintaining and increasing firm performance and competitiveness in today's rapidly changing business environment. An environmental shock in the form of new laws and regulations, for example, takes a 'twenty-first century' firm out of its normal operating and activity routines, which triggers adaptive processes in an attempt to ensure firm survival and growth. Organizational learning makes adaptive processes possible because acquiring knowledge to interpret parameters of a change, converting knowledge into new action repertoires and creating new knowledge to inform adaptation practices, are fundamental features of change[1]. Learning in the context of change impacts organizational traditions as actors negotiate different activities and find their way in new organizational circumstances.

Social and organizational identities are key elements of organizational culture. Social identity develops through a process of learning about nationality, gender or performed role and influences a person's understanding of what it means to be a member of a group. Organizational identity is also profoundly linked to organizational culture because it is grounded in organizational symbols and local meanings, which serve as its 'internal symbolic context' (Hatch and Schultz, 1997:358). Members dynamically orient multiple social identities with the identity of their organization, yet theorists have demonstrated that groups with strong organizational identification have greater intentions to stay with a firm, perform

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[1] Organizational learning is defined in this thesis as a process which combines knowledge acquisition, knowledge conversion (dependent on transfer) and knowledge creation, which draws on situated learning theory (Bourdieu, 1977; Lave and Wenger, 1991; Brown and Duguid, 2002).

1

better, are more cooperative (Ellemers et al, 1998; Jetten et al., 2002). Further, research on organizational mergers has shown that the success of a merger partly depends on employees letting go of their pre-merger organizational identity and learning the new post-merger identity (Terry et al., 1996). A central theme of this thesis is the influence of social and organizational identity tension[2] when, as part of the firm's adaptation endeavors, managers seek to initiate organizational change that necessitates learning a new organizational identity. I refer to this new identity as an *intended* identity.

Social identity theory (Tajfel and Turner, 1979, 1986; Stryker and Burke, 2000) postulates that when social and organizational identities are aligned, group actions are likely to be consistent with the achievement of organizational goals. Identity tension results when groups experience a lack of situational control, a loss of self determination in negotiating expressions of multiple identities or being forced to adopt an intended identity and forsake their root social identity. As a result of this tension, work groups can adopt various strategies to resist learning new practices associated with the intended organizational identity and induce resistance strategies that include withholding knowledge or refusing to participate in learning endeavors. For example, learning can be impeded when actors elect to withhold from transferring knowledge or engaging in cooperative processes to release 'know how' when an intended organization identity calls into question their existing social identity conception. On the other hand, identity questions that test self-reference can trigger an exploration of underlying assumptions and scrutinization of conventions, thus stimulating critical reflexivity and learning processes. Both situations result from

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[2] Throughout this thesis the terms identity 'tension' and 'conflict' are used interchangeably in reference

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social and organizational identity conflict when new circumstances are prompted by organizational change. Consequently, conflict between social and organizational identity has the potential to facilitate or act as an inhibiting factor for organizational learning in a context of change. It is not clear what it means for organizational learning when conflict arises between a work group's social identity and an organization's intended identity. Moreover, neither of these divergent views consider variation in the *type* of learning and whether adaptive forms of learning such as single-loop which add to work routines, or generative, double-loop types of learning which question norms and procedures adding to the firm's knowledge base, (Argyris and Schön, 1974; Argyris, 1999), are equally impeded or facilitated in situations of identity based tension. The subject of my study investigates whether organizational learning is impeded or facilitated in situations of identity conflict, which leads to the central question of my research, "What impact does social and organizational identity tension have on organizational learning in a context of change?"

To study this question I employ a symbolic interactionist approach. Interactionism is known as both a theoretical paradigm and research method (Blumer, 1966, 1969, 1971; Prasad, 1993; Charon, 2001). As a theoretical paradigm in the social sciences, symbolic interactionism is concerned with emphasizing meaning in social situations. Symbolic interactionism posits that people have images of themselves, which are shaped by (and shape) meaningful social interaction. These images influence how meaning is assigned and how people engage in action though an ongoing process of definition. Symbolic interactionism departs from individual learning theory, which situates and focuses learning as a cognitive process. Instead,

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to social and organizational identity strain and divergence.

symbolic interactionism facilitates an understanding of group social life as people define meaning and achieve symbolic representations of identity by doing things together. Symbolic interactionism is considered a research method because participant observation and interviewing are considered as essential modes of data gathering within this perspective.

The research settings for my project are two 'high reliability organizations' (HROs), a British nuclear power station operator and a Canadian electricity system operator. HROs typify an organization where even a minor error in process poses risks to members and to the safety of the public (Roberts, 1990). This condition of HRO operation counts on tightly coupled interdependent group work in critical operating areas, which promotes highly salient group identity. As I will argue, HRO members I studied have tight alignment between their social and organizational identity prior to organizational restructuring, however as a result of change, members experienced tension between their current social identity and the intended organizational identity. In this setting, identity alignment and its attendant relationship with organizational learning in a context of change is important both for promoting organizational learning to enable change and, pragmatically, to ensure safe and reliable operations in high hazard settings while undergoing change. HRO's as a firm type also magnifies my subject of focus since learning by trial and experimentation are not viable options and learning in a context of change in high reliability settings requires a balance of old and new processes in order to mitigate against operational risks. Both HROs attempt to manage processes of change as adaptive measures in response to environmental alterations caused by deregulation, but each company employs a different approach in an attempt to produce the

organizational learning necessary to achieve the desired change. The contrasting approaches to organizational change enable my investigation of the implications for learning in different situations of social and organizational identity conflict.

My focus is on inter and intra-organizational communities of practice as units of analysis. I study clusters of communities as three groups: administrative, professional-technical and management in each organization to investigate multi-vocality of the social person in community and their constructions of identity, organizational learning and change. This approach is consistent with a symbolic interactionist view of people's construction of images of themselves through an ongoing process of definition. Various perspectives cut across my project. Hierarchies of conceptual frames include the wider business environment as the trigger for organizational change, through to the need for each culture to learn new processes and the implications for learning in situations of identity conflict. To achieve a deep understanding of the social process of interest and to enhance my primary aim of micro-level process theory development, I bound my project by three theoretical domains – organizational change, organizational learning and social/organizational identity. My project objective is to firstly achieve a deep understanding of the micro-level social processes that inform these organizational phenomena. My emphasis on micro-level processes proposes some commensurate understanding of actions and interventions at the level of practice within and across communities. This makes my second objective possible: to make a theoretical contribution to the field of organizational learning as situated practice through better understanding social identity and organizational identity formation, maintenance and alignment as key factors that influence learning. A third objective of my study is to

inform the debate on what situations of identity conflict mean for organizational learning and whether learning is facilitated or impeded or effected in some other way.

Significance of the Study

The three central themes of organizational change, learning and social/organizational identity have, in their own right, been explored extensively in their respective literatures yet, there is little empirical research on the links and consequential relationships between these concepts. The results of my study, which draw these themes together, will be of potential benefit to theorists and practitioners who are concerned with understanding organizational learning and social and organizational identity tensions brought on by change.

First, my research intends to contribute to organizational learning as an academic endeavor by providing insights to enhance understanding of attendant effects of social identity as a key mediating factor of organizational learning in situated contexts. Second, my study will be of interest to scholars who investigate transformational change as a learning process in diverse and complex settings by tracing aspects of organizational change and the micro-level processes that hold the potential to either facilitate or impede that change. Finally, my project results may also be helpful to managers in their attempts to put organizational learning into practice by unbundling and demonstrating the critical linkages between social and organizational identity tension organizational, learning and organizational change.

Organization of the Following Chapters

This thesis is divided into nine chapters, which discuss the impact of social and organizational identity (SOI) tension on organizational learning in a context of change. This first chapter presents the subject, overview, and scope of my project. Chapter 2 traces the organizational phenomenon by introducing the study organizations, research sites and contextual aspects of their requirement to adapt to business environment changes. This chapter also outlines the similarities and differences between the study firms. Chapter 3 reviews the literature relating to the core concepts in this study, organizational learning, social identity and organizational change. In this chapter, I discuss the dichotomous views concerning the implications for learning in situations of social and organizational identity tension that is presented in the literature. This chapter also focuses on symbolic interactionism as the perspective and theoretical orientation that overarches my study. I also discuss a gap in the management and organizational literature that relate to understanding social and organizational identity as a key mediating factors of organizational learning in the context of change. I present an argument that social identity as it relates to organizational learning has not been sufficiently considered or empirically supported. Chapter 4 discusses my methodological approach for this project. It outlines the approach I took to study distinctions of intensity or identity tension within and across six community of practice clusters. This chapter also introduces my rationale for conducting this research in two 'High Reliability Organizations' (HRO) – one located in Britain, that I refer to as GenerCo and the other in Canada that I have called PowerCo. In this chapter I explain that my project interest evolved from research that I conducted at PowerCo where I was employed.

Chapter 5 discusses the research results. I employ examples of major change in the study sites as the contextual frame against which, my project is set. The data presented in Chapter 5 enables an interpretation of social and organizational identity tension and a discussion of the attendant relationship this phenomenon presents for organizational learning, which I take up in Chapter 6. Chapter 6 unpacks the findings and outlines what I interpret the data to mean and how this meaning may be related to my study aims. Chapter 6, begins to set out the empirical basis for theoretical, methodological contributions as well as a contribution to management practice which I discuss in Chapter 7. In Chapter 7, I trace the case organization's experience and what seemed to influence learning outcomes in contexts of transformational change which raises implications for the practice of management. I construct a model to convey these implications. Chapter 8 focuses on the case organization findings, as the basis for building theory. This chapter uses the case data as well as relevant theories to formulate the theoretical contributions of this research. Chapter 9, the conclusion, discusses the interdependent nature of organizational learning, identity-based tension and organizational change. It outlines implications for future research that stem from the foundations developed in this study and presents theoretical, methodological contributions and contributions to management as practice. Based on this research, Chapter 9 proposes a theory that expands the current version of situated learning theory by conceptualizing some of the underlying dynamics of identity-based tension and how understanding these dynamics may shed light on managing the challenges of negotiating social identity in a context of transformational change.

Chapter 2
Research Context

Introduction

This chapter presents the organizational and situational context of the research

sites. I first introduce and present the business environment and conditions of the case

firms, which I have assigned the pseudonym, 'GenerCo' for the British firm and

'PowerCo' for the Canadian company. Then, I present a discussion of the nature of

the organizational circumstance and current conditions for both organizations. Next,

I discuss the theoretical construct of 'high reliability' as a defining characteristic of

the firms. Finally, I compare and contrast the similarities and differences that

characterize the firms as a means of achieving a deeper understanding of each

organization and offer some concluding comments for this chapter.

Organizational Profiles

GenerCo

GenerCo's was formed as part of the electricity industry privatization in the

1990s. Its principal activities are the generation, sale and trading of electricity. Prior

to its formation, GenerCo operated as a cost of service utility. This meant that the

company's electricity supply would be assured and its costs would be covered.

GenerCo developed from a centralized organization that operated all electricity

generation and transmission as a vertically integrated statutory monopoly. All power

supply was provided to England and Wales from 1948 to 1990 under this system

(Newbery and Pollitt, 1997).

The company owns and operates nuclear power stations in the UK, which amounts to approximately one-fifth of the country's electricity supply. My study focuses on two adjacent nuclear power stations that share site infrastructure.

GenerCo Research Locations

The research site centres on two adjacent nuclear power stations that GenerCo operates. I name the stations, Station Coast and Station Peak respectively. With a staff compliment of 420, Station Coast operates two early 1980s-vintage advanced gas nuclear reactors (AGR) and started generating electricity in 1983. The 450 employees at Station Peak also operate two, albeit newer, AGR reactors.

Figure 2.1 GenerCo Management Functions

GenerCo Power Station Management Functions

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                        ┌──────────────────┐
                        │ Station Director │
                        └──────────────────┘
┌──────────┬──────────┬──────────┬──────────┬──────────┬──────────┐
│  Human   │ Station  │ Station  │ Station  │ Station  │ Safety & │
│ Resource │Operations│   Work   │Technical │Engineering│Environment│
│          │          │Management│Maintenance│         │          │
└──────────┴──────────┴──────────┴──────────┴──────────┴──────────┘
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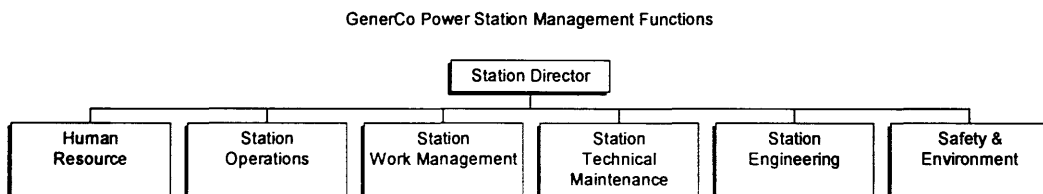
Station Peak started generating power in 1988, five years after Station Coast. Station Peak's output rating is 1250 megawatts[3] as compared to Station Coast's 1150-megawatt rating. The stations are located about 30 metres from each other and share the same site. GenerCo's main functional areas are shown in Figure 2.1. GenerCo has had difficulties with low electricity prices as a result of market reforms. The drop in wholesale price and multiple, concurrent issues such as aging plant, the public acceptance of nuclear power generation and a changing energy policy, have combined

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[3] A megawatt is a unit of measurement for electricity. One megawatt is equal to one million watts – an amount sufficient to light 10,000-100-watt bulbs.

to create some uncertainty about the viability of the industry (Helm, 2003).

According to Helm, (2003) a major issue facing the nuclear power generation sector was the double effect of the loss of its government-sponsored status as a generator and the emergence of new technologies. Under the old regime, nuclear generation was assured a place in the dispatch order to supply power. Costs of operation were 'underwritten' by the national government. Under the privatization arrangement, nuclear operators must compete with other forms of generation. Moreover, because of the need for superior safety, nuclear power is an expensive form of generation and plants are costly in comparison to natural gas-fired technology. Technological advances meant that new natural gas-fired generating plants could be built at a significantly lower cost and located near the source of consumption. Nuclear plants needed to be large and mostly located in remote areas where large supplies of water were available. These changes posed difficulties for nuclear power's cost competitiveness.

Finally, some doubt exists in the marketplace as to whether GenerCo can operate for prolonged periods at high load factors – a notion that erodes confidence and contributes towards diminished shareholder investment (Helm, 2003). GenerCo's management team identified the need for culture change as the main solution to remedy the company's problems. An organization-wide performance improvement initiative, which I refer to as the 'Performance Improvement Initiative' or 'PII' initiative, has been launched to address management's perceived need for increased productivity and efficiency. A main feature of the initiative is its 'fleet-wide' approach. The organization is focused on achieving human performance efficiencies by consolidating best practices from one power station and instituting those practices

in all of the stations in the fleet. Organizational documents point out that the

endeavor to combine work practices as a central tenet of the culture change aims to

focus on cost savings and improving human performance so that GenerCo can

become more efficient. The PII initiative's fleet-wide approach requires the transfer,

conversion and creation of knowledge.

PowerCo

The passing of a legislative Act in the Canadian province where PowerCo is

located signaled the shift to competition in the electric industry in that province. In

the traditional structure, each utility organization was a regulated monopoly and each

of the three large utility companies operating in the province had a monopoly service

area where customers 'belonged' to a company based on their geographic location.

Costs and rates were reviewed and approved by a regulatory agency. The new Act

created PowerCo as the organization responsible for operating the competitive market

for generation and the safe, reliable operation of the provincial electric grid. This

original legislation evolved out of discussions among industry stakeholders over

several years. A series of factors contributed to the start of the deregulation process.

Some consumer groups considered the policy of the day where consumers paid an

averaged cost of electricity unfair. For example, large industrial consumers argued

that they should receive financial benefits from lowest cost generators of power and

that these generators should calculate their costs on a basis that provided the highest

value to customers.

New generation technology had also become available. Small and highly

efficient generation plants were beginning to provide industrial customers with the

ability to install cogeneration units to offset their energy requirements. These plants could be located closer to the consumer, hence reducing the cost of transmission. Moreover, the time to bring these new plants on-line was significantly shorter when compared to large, centralized thermal power plants. Also during this period, consumers had seen the emerging benefits of deregulation in other industries such as telecommunications and natural gas. Industry and commercial customers wanted to be able to choose their service provider and see energy costs reduced to enhance their competitiveness worldwide. Finally, privatization policies had already come into the spotlight in the United Kingdom and in the United States (Helm, 2003).

PowerCo Functions

Essentially, PowerCo operates the 'stock market' for buying and selling electricity at the wholesale level in the province. As well, the company is responsible for managing the electric grid, which carries electricity between provinces and is interconnected with the United States. The electric system is comprised of over 20,000 kilometres of transmission lines and over 400 substations. Over 200 employees are spread across the main functional areas of grid and market operations. Control and coordination of the provincial electric power grid is one of PowerCo's key activities. The process of control and coordination is founded on balancing electricity supply with the demand on the system 24 hours a day, year-round. Control room operators may dispatch power plants on or off the system and take steps to manage the 'flow' of electricity as part of their activities to achieve this balance. The organization manages buy-sell transactions for hundreds of market players and conducts electricity transactions each year worth billions of dollars. Because PowerCo was formed as a result of deregulating the electricity industry, in terms of

work history, virtually every PowerCo employee and the entire management team had spent considerable time employed by a formerly regulated utility company. Many came to PowerCo from just such a company. Regulated utilities up to the point of deregulation were specialized, technical organizations. Many were vertically integrated and operated power generating stations, electric transmission and distribution grids and retail customer services. Employees at PowerCo predominantly came from three such companies from two adjacent Canadian provinces. Each of the three companies is considered 'relatively mature' with roots dating back to the early 1900's (Kwaczek and MacRae, 1996). These companies can be characterized by stable environments, incremental change, and strong hierarchical management traditions, which are largely due to their cost of service, monopolistic operating conditions (Helm, 2003) and their high reliability traits. According to Smart et al., (2003) these design features contribute toward deeply embedded core values in high reliability organization staff. They typify regulated utility organizations. The features include: "…organizational leadership which prioritizes extreme reliability, a prime cultural norm labels any action jeopardizing reliability, 'a disgrace', the specification of standard operating procedures and clear hierarchy, i.e., a task-based approach is taken to organizational design and zero tolerance must be applied to any feature impacting this task-based view in order to eliminate cascading error" (Smart et al., 2003: 736).

PowerCo Management Composition

PowerCo's management structure is made up of a CEO and eight other executive officers (Figure 2.2). The executive team is responsible for all aspects of PowerCo's business. PowerCo staff, including the executive group themselves,

colloquially refers to this group as the 'G8'. Control and power held by this group is seen as metaphorically similar to the leaders of the world's eight developed economies *[Interview10P-S19]*. The group is made up of seven men (six Caucasian and one Asian) who are mostly professional engineers. Although the Asian man is directly involved in executive meetings, he is the only person who is not an officer of the organization, thus, the group is comprised of eight executive members, counting the chief executive, and one *exofficio* member.

Figure 2.2 PowerCo Management Functions

PowerCo Organizational Functions
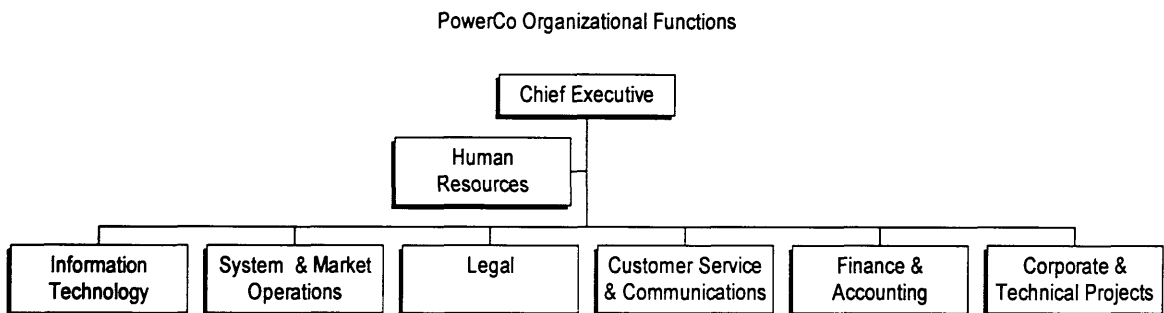
Each of the members has in excess of 15 years experience mostly in the electric utility industry. In some cases, executives have been in the industry for over 30 years. Professional backgrounds cross a range of fields from engineering to finance, law, corporate communications and marketing. When deregulation came into effect, two main organizations were formed. PowerCo was created to operate the competitive wholesale market and the real-time generation dispatch in a Canadian province. A second organization, given the pseudonym TransmiCo, was also created as a result of deregulating the provincial electricity industry. Where PowerCo operates the wholesale electricity market and the power grid, TransmiCo is responsible for the overall coordination of the transmission (electricity transportation)

system. TransmiCo's business ensures new lines are constructed and new commercial generators are interconnected onto the grid. When a new commercial interest builds a generator and wants to 'hook up' to the grid to sell electricity, it must coordinate all specifications, interconnection and engineering standards set by TransmiCo. As the organization responsible for long range planning and system expansion, TransmiCo must also ensure any new high voltage transmission lines are built in time to ensure the infrastructure can adequately handle growth. TransmiCo also coordinates the regulatory processes to set tariffs for accessing the grid, which are subject to regulatory approval. In August 2002, as a result of a stakeholder consultation process the government decided to refine its energy policy and merge the PowerCo and TransmiCo organizations. My study deals with the impact of social and organizational identity on different groups' organizational learning experience when PowerCo merged with TransmiCo. In particular, an aspect of the merger that features management's attempt to consolidate work practices in the grid outage planning process.

High Reliability Organizations (HROs)

HROs are useful types of organizations to examine in light of my research question on organizational identity since their unique characteristics tend to magnify the key conditions that are germane to my project. Roberts (1990) defines HROs as those where even a minor error in process may seriously hinder the very existence of the firm as well as the safety of external actors. Weick and Sutcliffe (2001:3) give the examples of, "...power grid dispatching centres, air traffic control systems, nuclear aircraft carriers, nuclear power generating plants, hospital emergency departments,

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and hostage negotiation teams," as HROs. Similarly, LaPorte and Consolini (1991),

further typify HROs as having two significant operating challenges which include

first, managing complex, demanding technologies and in this environment making

sure to avoid major failures, and second, maintaining the capacity for meeting periods

of very high peak demand and production. Perrow, (1986), describes the

environment in which HROs operate as tightly coupled, complex and within highly

interdependent technologies. HRO operations magnify issues concerned with

learning and change. In relation to learning for example, Weick (2001) suggests that

organizations in which reliability is a more pressing issue than efficiency often have

unique problems in learning and understanding. He argues that if these problems are

left unresolved, organizational performance can be adversely affected. Weick and

Sutcliffe (2001:56) contend, "Effective HROs both encourage the reporting of errors

and make the most of any failures that are reported,"…knowing that, "moments of

learning are short lived". Weick believes substitutes are needed to replace learning by

experience which cannot be a feasible option in HROs and believes 'imagination,

vicarious experiences, stories, simulations' and other symbolic representations of the

effects of technology need to be instituted in place of trial and error learning (Weick,

2001: 330, 331).

Organizational change is also problematic in HROs since the production of

change must take place without compromising diligent performance of stable, routine

practices or compromising their mission-critical capabilities and relinquishing their

safe, reliable operating effectiveness. Hence, *change* must take place while *retaining*

existing practices in certain organizational functions. Failure to retain core practices

could risk exposing the organization and the public to significant economic losses and the possibility of potentially catastrophic consequences (Bierly and Spender, 1995).

Organization Contrasts and Similarities

The companies differ from each other in a number of ways. The companies operate in different countries - GenerCo is a British organization, and PowerCo is a Canadian firm. As a nuclear power station operator, GenerCo uses different technology as compared to PowerCo, which operates the electricity grid and wholesale market. This technological difference also has a bearing on the degree of risk associated with the operations of both firms. Higher levels of risk are typically associated with a catastrophic failure in GenerCo as a nuclear power station operator, than with PowerCo. Nonetheless, both firms fit the characterization of 'high reliability' since degrees of risk to the public can result from errors or equipment failures (Weick and Sutlciffe, 2001). In terms of firm financial performance, according to financial statements in both companies' annual reports, GenerCo required financial assistance from the government in order to survive financial insolvency, whereas PowerCo is profitable. GenerCo's history dates back to the 1940's and although various PowerCo employees came from regulated utilities that operated since the early 1900s, by contrast, PowerCo was constituted in 1996, which makes GenerCo a much older firm. Although director-level staff is located at the power stations, GenerCo's top managers work in a different location. All of PowerCo's top managers are located on-site.

Finally, PowerCo has approximately 200 employees compared with GenerCo's two adjacent station staff complement of about 900. GenerCo's operations are also highly unionized and various trade unions are active at Station Coast and Station Peak. As well, various contracted trades that regularly engage in station operations and maintenance are also union members. In contrast, while some organizational members express support for the philosophy of trade unions and endorse their activities, no unions exist at PowerCo.

GenerCo and PowerCo have some differences, the companies also share similarities on two main fronts. First, largely because of technological advances in electric power generation, governments have elected to deregulate the electricity industry in the jurisdictions in which GenerCo and PowerCo operate. As a result, both firms are operating within a context of major organizational change. Secondly, their high reliability characteristics underscore various key similarities. Because of the need for systematic routine actions and procedures, HROs are typified by strong, hierarchical cultures (LaPorte and Consolini, 1991; Smart et al., 2003). Up to the point of electricity industry deregulation, GenerCo operated as a regulated utility. PowerCo is predominantly made up of employees who worked at the three large regulated utility companies in that Canadian province. Both companies therefore, have histories that stem from a context of regulated utilities. Stable environments, incremental change, and strong hierarchical management traditions that are largely due to their cost of service characterize regulated utilities, monopolistic operating conditions (Rodrigues, 1996; Helm, 2003) and their high reliability traits.

Degrees of High Reliability

Another important aspect of similarity and difference between GenerCo and PowerCo, is that while both firms are high reliability organizations, the outcome of an accident from errors or failures in operations is significantly different. Firms that fall into the high reliability industry type are not all the same in terms of public safety risk or potential impact from operating errors or system failures. High reliability firms can share key defining characteristics, such as impact on the public from a failure in their operations or the extent to which an error exposes the public to risk. As shown in Figure 2.3, however, degrees of distinction in the outcome of errors or failures can be different among HROs even though they share the same industry category.

Figure 2.3 Distinctions Between Degrees of 'High Reliability'

	Low ← Public Safety Risk → High
High	Skydiving Training School	GenerCo High Reliability Organizations PowerCo
Impact from Major Failure		
Low	Non-HROs	Stadium Fire Protection System
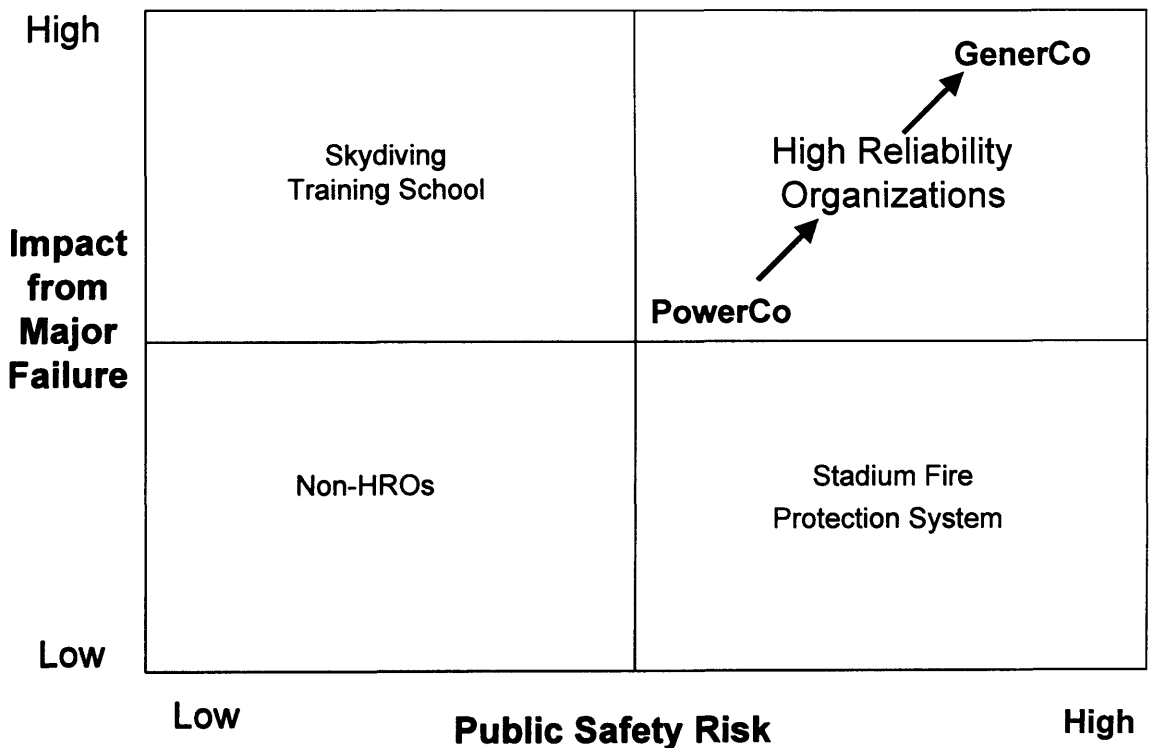
While GenerCo and PowerCo are both HROs, GenerCo's circumstance can be differentiated. As a nuclear power station operator, GenerCo must maintain safe, reliable operations, and concurrently guard against potentially catastrophic risk. In contrast, an error or failure in operations at PowerCo could trigger less catastrophic outcomes. Because of its role as an electricity market and power grid operator, the magnitude of public safety risk and relative impact from a failure or error in operations, while possibly significant, is at a lower level than that of GenerCo. The nature of coupling between the failure consequences and safety risk properties also points to the degree of tightness and looseness within each firm's action repertoire. Actions at the micro-level of situated practice inform the broader firm-level collection of actions that make up an organizational response to change. Weick (2001:386) argues that as actions are subject to a decrease in variation and discretion, a system is more tightly coupled. He maintains that the source of change targets and success of change efforts, "should also be affected by the pattern of tight within, loose between (social systems) and that the general rule is, "easier to produce change within than change between social systems".

Brown and Duguid echo Weick's conception of these properties and their relation to change in social systems. They argue that, 'Changes can propagate easily' in communities of practice (Brown and Duguid, 2002: 143). Precisely because GenerCo and PowerCo are both HROs, yet they exhibit degrees of distinction between the failure consequences and safety risk properties, provides further rationale to study these organizations and their situated practice cultures in relation to social and organizational identity and learning processes in a context of change.

Conclusions

This chapter introduced the situational and institutional context for the study sites GenerCo and PowerCo. Each organization's evolution was traced (Figure 2.4), as were the macro conditions that triggered the need for organizational adaptation.

Figure 2.4 - Research Context Outline

Deregulation	(Environmental change - macro trigger for action)	
↓		
Organizational Change	(Study context)	
↓		
Change In collections of Communities of Practice	↕ (Study theme)	Interrelated & interdependent (Iterative)
↓	↕ (Study focus)	
Organizational Learning		
↓	↕	
Social and Organizational Identity	(Micro process)	
↓		
(Outcomes, Meaning & Implications)		
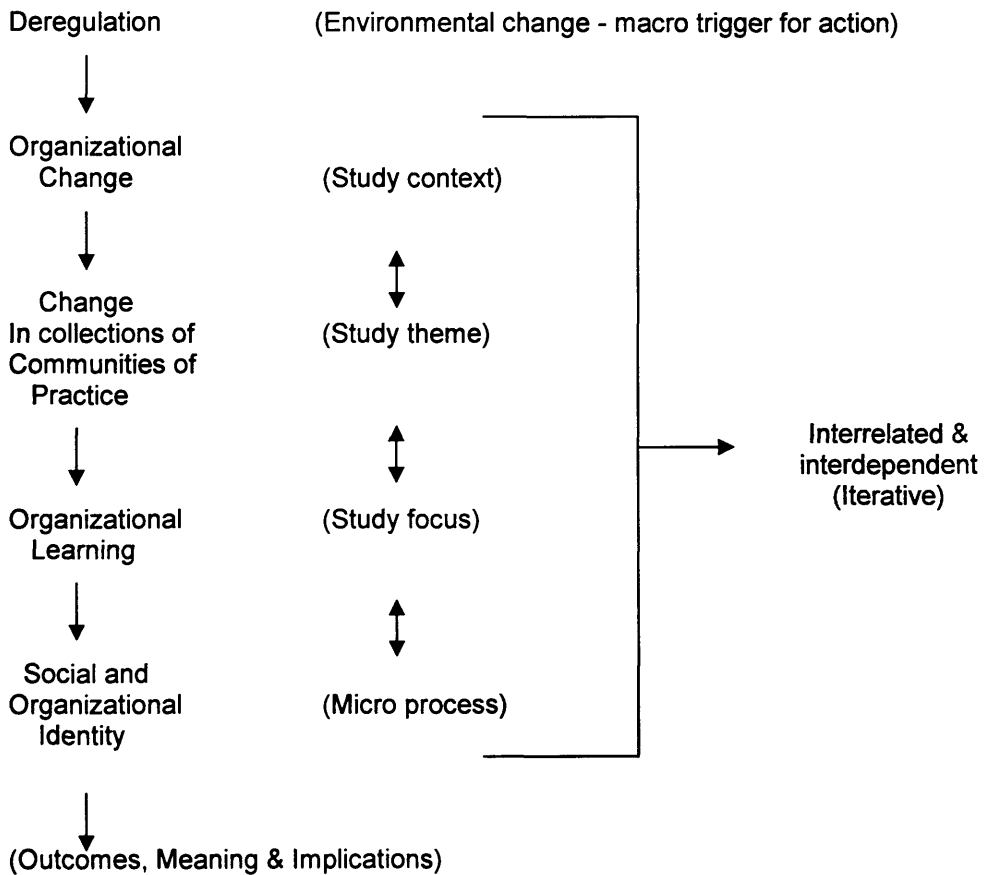
The necessity to change has required each company to learn an intended organizational identity, which is linked to the requirement to change organizational culture and action repertoires or practices (Reckwitz, 2002). Both firms are faced with instituting organizational change in response to industry deregulation and consolidating work practices between groups is at the heart of each change endeavor.

In PowerCo's case, the firm is required to merge with an organization that is involved in the transmission of power. Although TransmiCo operates within the electricity industry, it does so in a different operational area from PowerCo. Similarly, GenerCo is also required to respond to regulatory pressures to become more efficient and profitable. GenerCo has instituted a firm-wide productivity enhancement endeavor, entitled PII, and the company has identified a fleet wide approach to sharing best practices as a key feature of the organizational change. In both cases organizational communities of practice are required to learn new practices as a central feature of the organizational change. In this thesis I take communities of practice as defined by Lave and Wenger, (1991: 98) to mean:

> A community of practice is a set of relations among persons, activity and world over time and in relation with other tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage. Thus participation in the cultural practice in which any knowledge exists is an epistemological principle of learning. The social structure of this practice, its power relations and its conditions for legitimacy define possibilities for learning (i.e. for legitimate peripheral participation).

A failure to collectively learn these practices suggests that the change endeavors will be jeopardized. Both organizations need to make these changes within a context of high reliability – a context, which magnifies change issues. In the next chapter, I will review the extant literatures in relation to my project interest.

Introduction

In Chapter 2, I discussed the research context with particular emphasis on the

theoretical construct of 'high reliability' as a defining characteristic of the firms I

studied. I presented the environmental conditions and institutional field of the case

firms and went on to discuss the nature of the organizational circumstance and current

conditions for both organizations. Finally, I compared and contrasted the similarities

and differences that characterize the firms as a means of achieving a deeper

understanding of each organization. Each of the study firms is undergoing

organizational change in response to significant alterations in their business

environment, which was triggered by industry deregulation. Organizational learning

is central to cultural change since this type of change is dependent upon knowledge

acquisition to interpret and inform the change process, knowledge conversion as new

action routines are created, and knowledge transfer to facilitate successful ongoing

practices as a result of the need to change.

In this chapter I review the relevant extant literatures, which includes:

symbolic interactionism (SI), organizational and social identity, organizational change

and learning. First, I discuss the theoretical tradition of SI as a 'genre of research in

the social sciences that emphasizes meaning in social situations' (Prasad, 1993: 1403)

because it informs and overarches this research. Then, I turn to a key conceptual

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element of interactionism - identity. I review the literature as a basis for understanding this complex multidimensional social construct in its relevance for both organizations and social persons. Next, I briefly discuss different types of organizational change as change sets the context for my project. I use organizational change as the setting for my research since an increased capacity for members to learn new practices holds the potential to enable change. Conversely, if organizational learning were impeded in an attempt to preserve social identity, efforts to produce organizational change could be resisted (Sheldon and Bettencourt, 2002; Ellemers and Rink, 2005). Finally, I review organizational learning in the context of change and I raise criticisms against some of the base assumptions that relate to organizational learning in situated contexts and explain how my research attempts to contribute towards better understanding these issues. Social and organizational identity (SOI) tension is highlighted through four key publications that contribute to the organizational learning and SOI literature. I argue that while the social processes that underpin organizational learning are linked to social and organizational identity, there is no apparent consensus on whether SOI tension enhances or facilitates learning, rather, a dichotomy is presented in the literature where learning is either facilitated or impeded in conditions of change.

In the latter part of this chapter, I discuss my research in relation to some of the underrepresented areas in these literatures. I then present an argument as to how my study may help shed light on the important, yet under researched area of the impact of SOI tension on learning in a context of organizational change.

Symbolic Interactionism as Theoretical Perspective[4]

Blumer (1969) conceived the term symbolic interactionism based on George Herbert Mead's (1934) foundational work on human group life and human conduct. Mead, a social psychologist from the 'Chicago School' sociology tradition laid the foundations for SI drawing on pragmatism. Blumer (1969) states that symbolic interactionism rests on three premises: that human beings act toward things on the basis of the meanings the things have for them; that the meaning of such things derives from the social interaction one has with others; and that these meanings are handled in, and modified through, an interpretive process. Pragmatists like Mead and John Dewey (1933) postulate that actors experience a continuous process of adaptation the constantly changing social world. People's relationship to the environment depends on an active intervention – a process of interpretation or definition. Definition is founded on how knowledge of something is useful in the situations that people enter. Finally, pragmatism postulates that understanding the social person is accomplished through focusing on action (Charon, 2001: 30, 31). Interactionists see Mead as the architect of the philosophic frame of the paradigm and Blumer (1969) is attributed with naming symbolic interactionism and establishing SI as a theory and research approach. (Jeon, 2004). Rather than concentrating on the individual as psychology does, or exclusively on the social system as with sociology, symbolic interactionism may be defined as a theory that is centred on the *process* of interaction (Forgas, 1979).

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[4] Symbolic Interactionism is both a theory and a method (Blumer, 1969; Prasad, 1993). In this discussion I refer to SI as theory and discuss SI as method in Chapter 4.

Theoretical Meaning of 'Symbolic' and 'Interactionism'

Symbolic interactionism contains two constituent domains. Within the paradigm, the word 'symbolic' is meant to convey the importance of the way social actors assign meaning to things. Objects in their own right do not convey meaning. Meaning does not come from objects in the world, but rather from the labels (symbols) we assign to objects. Symbols are considered a type of social object that are used to represent whatever people agree they should represent (Charon, 2001). Taken this way, symbols are social, meaningful and important to everyday human lived experience. Symbols include spoken language, and gestures such as holding two fingers in a way that means 'V' for victory or an extended thumb for 'thumbs up' approval. Symbols are used in people's everyday meaning making for representation and communication. Symbols on their own also hold no meaning. People make symbols and agree on what they stand for through interaction (Charon, 2001: 46-47). Thus, people's actions, appearances and words serve as significant symbols (Mead, 1934).

Interaction or 'social action' is action that takes account of others. This is seen as an important aspect of symbolic interactionism since others guide our actions... (thus)... their actions and the actions of others are *social objects* (Charon, 2001: 149). Blumer (1969:5) points out that human action is based on the meaning things hold for people and that this meaning is derived from, handled in and modified through the interpretive process of social interaction. Charon (2001: 151) defines symbolic interactionism as "...the study of human beings interacting symbolically with one another and with themselves...". Self-interaction is significant since human beings are not simply subject to the actions of others to direct their actions in turn.

The process of interpretation at its root involves defining. Defining and re-defining work in an ongoing interplay of action and re-action. On this point, Blumer (1969: 55) argues that the, "...human being is not a mere responding organism...he may do a poor job in constructing his act, but construct it he must.". Moreover, 'self' is a complex concept that also involves action. Self also defines identity or who the self is. Mead's (1934) seminal work describes the essence of self as both 'cognitive' – the internalized conversations ('I'm hungry', 'Why did I say that?') through self-communication and 'social' as a person engages with other meaning making actions that take place through interaction with others. Mead developed the notion that as people interact they 'take the role of the generalized other' and by doing so, they incorporate organized patterns of reciprocal relations among identifiably distinct groups and communities (1934: 154-155). Mead (1934) and Goffman (1959) were among the first interactionists to highlight the contextual and social aspects of identity formation and its implication for social persons engaged in everyday experience (Hatch and Schultz, 2004). Because of its inherent duality, between the self and the intersubjective nature of interaction, the SI tradition is ideally suited as a theoretical frame in which to understand identity.

Organizational Identity

Organizational identity refers to a collective perception of what it means to be 'who we are' in a firm. Dutton et al, (1994) propose that organizational identity is a common conception and shared beliefs about what an organization is and Child and Rodrigues (2003: 539) cite Albert and Whetten's (1985) definition of organizational identity as the central, distinctive and enduring features of an organization's character. At the same time, Child and Rodrigues (2003) argue that while this definition helps to

understand the idea of organizational identity, it does not fully explicate the concept because the definition excludes a key characteristic of identity - *change*. Some authors criticize this conception because it suggests that an organization's identity is durable and immutable (Child and Rodrigues, 2003). Moreover, Albert and Whetten's characterization could be further enlarged by including the notion of *multiple* identities (Ellemers and Rink, 2005). By this I mean, that the same group of female lawyers, for example, could also be mothers, and thus the group membership might be characterized as holding concurrent, multiple identities. The position taken here is that while aspects of a firm's identity, such as core values, are resilient, organizations can and do change identities (Corley and Gioia, 2003) as managers modify structures or recombine firm resources as adaptive measures against environmental pressures (Gagliardi, 1986). Organizational identity is conceptualized as an 'inside' view of a firm or how members characterize the company. While organizational identity is influenced by what others think of an organization it is not an 'outside' view or *image* of a firm (Hatch and Schultz, 1997). Organizational identity is the sense of affiliation we assume when we belong to an organized entity. Organizational members sometimes wear clothing, use briefcases or drink coffee from mugs embossed with the company logo as a way of connecting their social identity with the organizational identity.

Hence, organizational identity can be a combination of features that include distinctive, evolving and multiple identities, which members consider representative of a firm's character at a certain point in time. Like social identity, it is a learned outcome of social interaction, which can influence commitment to organizational goals, collective motivation and how members internalize norms and values.

Social Identity

Social identity is a complex and multi-dimensional construct. Working from the locus of self and moving outwards, identity may be characterized as *self* (who I am), *occupational* or practice-based (who I am in terms of what I do or in terms of my practice) and *national* (who I am in relation to others who share my national culture). Although different forms of identity and others such as gender and race are discussed in organizational theory literature, (cf. Child and Rodrigues, 2003; Corley and Gioia, 2003), this research project pertains to understanding identity within two dominant constructs: social identity and organizational identity. Social identity is a dual concept, which connects 'self' as both a social person and as a member of a group. Self-identity, also termed self-concept is rooted in personality theories of psychology. Gleitman (1987: 313) argues that, "All of us have a sense of 'I', of 'me' and 'mine'". He refers to a child's discovery of 'touch back' or the feeling of double touch when a child first touches part of their own body and feels the touch sensation but knows the initiating contact came from himself and not from another person. He asserts that through that sensation the child learns to distinguish her own body from the outside. Cherrington (1994: 78) suggests self-concept is presumed to be an essential human manifestation, referring, "...to our own conscious awareness of who we are...relative to others and from evaluative impressions...". Carl Rogers' (1961) humanist personality theory concept depicts self-identity or self-concept as a collection of beliefs, attitudes and values acquired about ourselves from our individual unique experiences. This feature of self-identity gives an essential reference, as Gleitman claims there can be no, "... complete 'I' without a 'you' or a 'they' for a crucial component of the self-concept is social" (Ibid.).

This interplay between self-identity and social process is a foundational concept of identity and it is a dominant theme within the social psychology literature (Hogg and Abrams, 1999; Thye and Lawler, 2005). Self-identity has to do with our sense of self but, "Identity is formed by social processes", (Berger and Luckmann, 1966: 173). As, "Organizations are systems of coordinated actions among individuals and groups", according to March and Simon (1993: 2), the link with social processes is an essential connective feature of organizational identity – the second dominant form of identity discussed in the management literature. Social structure, or how individuals are grouped in organizations, determines the social processes involved with both forming and maintaining identity (Berger and Luckmann, 1966).

This means that actors hold self-identity (informed by social processes) and through their interaction with groups within organizational settings, they concurrently hold organizational identity. While self-identity depends on both one's self-concept and one's relationship with others, social processes within organized systems inform and form one's organizational identity. Identification with groups and the collective action among social persons is the domain of social identity and social identity theory.

Social Identity Theory

According to Hogg and Abrams (1999), social identity theory is rooted in Tajfel's (1981) early work on social perception and categorization, his pursuit of intergroup actions and research on a social psychological understanding of prejudice and between group conflict. Tajfel's together with Turner developed notions of social identity, which integrated self-esteem and positive distinctiveness for groups (Turner, 1982; Tajfel and Turner, 1986). Social identity theory (Tajfel and Turner, 1986) is

composed of *categorization* or the way people come to understand groups by placing them into a labeled category, *identification* or our association with groups, often to sustain self-esteem and *comparison* or the way in-group members compare themselves with other groups. Tajfel and Turner (cited in Hatch and Schultz, 2004: 59) conceptualize groups as 'members of a social category who share some emotional involvement in a common definition of themselves' who achieve 'some degree of social consensus' about the evaluation of their group and of their membership.

Figure 3.1 - Social Identity, Organizational Identity & Change Relationships
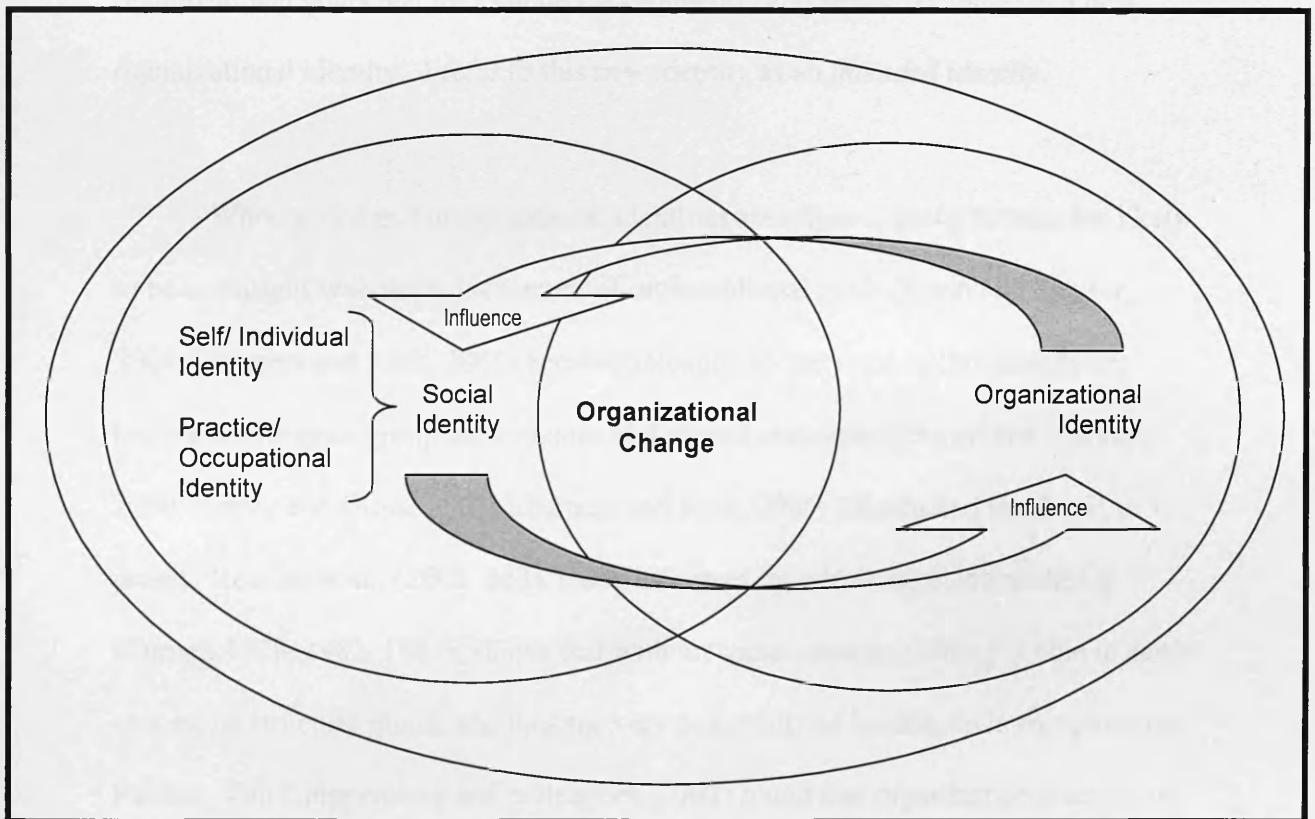
Social identity develops through a process of learning from group membership, nationality, gender or performed role. Both individuals and organizations have identities and a group is said to have a social identity (Stryker, 1980) whereas a firm has an organizational identity (Albert and Whetten, 1985; Gioia and Thomas, 1996). Social identity theory posits that when people identify with a group they extend their need for positive self-esteem towards the group such that members treat their group as both positive and distinct from other groups (Tajfel and Turner, 1979; 1986). A central theme throughout this thesis is the relationship between social and organizational identity alignment when managers seek to initiate organizational goals that necessitate the production and hence, learning, of a new organizational identity. I refer to this new identity as an *intended identity*.

When social and organizational identities are aligned, group actions are likely to be consistent with the achievement of organizational goals (Ervin and Stryker, 2001; Ellemers and Rink, 2005) because intended identity and social identity are known to influence group performance and related outcomes (Brown and Starkey, 2000; Corley and Gioia, 2003; Ellemers and Rink, 2005; Riketta and van Dick, in press). Reicher et al., (2005: 563), study informed by self categorization theory (Turner, 1978, 1982, 1987), shows that without social identity nothing is able to serve as a social structure guide, and thus the very possibility of leadership is compromised. Further, Van Knippenberg and colleagues (2002) found that organizational actors are more likely to preserve their identification with the former organization than the post-merger organization if discontinuity such as relocation, major management change and culture occurred. These claims were supported empirically across different organizational types (Van Knippenberg et al., 2002).

Self-categorization theory implies that strong identification with a group can regulate social interaction within and across groups, which shapes cultural contexts, intergroup harmony and determines people's pragmatic action strategies (Turner, 1982; Turner, 1985, 1987; Turner et al., 1994). The subject of my study centres on the implications for organizational learning once dissonance or identity-based conflict arises for members when managers elect to produce an intended identity in response to a change in their business environment (Figure 3.1). Conflict emerges when organizational members discern an inconsistency between their current social identity and the intended identity because of salience effects, which are integral in determining the relative level of importance for different identities (Ashforth and Johnson, 2001, Ellemers and Rink, 2005).

Power relations are core to social identity (Asch, 1952). Identity-based conflicts arise on two dimensions. First, as intended identity is perceived to conflict with the current or 'root' identity that causes problems in how groups self-categorize. Second, conflict surfaces as an outcome of 'how' managers attempt to introduce an intended identity and involve the identity transition process, identity continuity and degrees of negotiation. Without such processes, evidence suggests employees may be the subject of identity regulation and thus, identity serves as an instrument of management control (Kunda, 1992; Parker, 2000; Alvesson, 2000; Alvesson and Willmott, 2002, Alvesson and Robertson, 2006). In this second way, communities might be more concerned with the process of change and less concerned with the expressed need or ultimate goal of change.

Writers have been divided in the past over 'social identity' theory and 'identity' theory. Stets and Burke's (2000: 224) comprehensive examination of both social and identity theories argues that, '…there are more differences in emphasis than in kind and that integrating the theories can establish a more fully integrated view of the self". Stets and Burke (2000) posit that both theories recognize the reflexive self and through a self-categorization or identification process identity is formed. The authors contend that social identity formation involves 'in and out group' dimensions, thus the group is the target of concentration. With identity theory, the self is seen as an occupant of a role and persons attenuate between their social structure roles in relation to another person's role. Hence, identity theory focuses more on role than group (Stryker, 1980).

Stryker, (1987) situates identity theory as a derivative of the symbolic interactionism[5] frame, which ascribes causal importance to the development and maintenance of social action through a 'self' (Mead, 1934). A person's response to 'self' is seen as both constitutive and reflective of emergent social interaction (Ervin and Stryker, 2001). In this thesis, while I emphasize social identity and, therefore draw on the precepts of social identity theory, I adopt Stets and Burke's (2000) stance that there is greater utility in treating both theoretical notions as virtually the same rather than different constructs.

As Stets and Burke (2000) point out, the major difference between the two perspectives has to do with the basis for identity. Social identity is focused on the

social person (in relation to their group and in turn group in relation to organization).

This can be portrayed as 'being' or 'becoming' a member of a community of practice

(Brown and Duguid, 1991; Orr 1996; Brown and Duguid, 2002). Identity theory,

however, concentrates on what a social person does (in relation to a role or function).

This can be described as 'doing' practice. Since a practice based view of

organizational learning is founded on learning identity by 'doing practice', (Lave and

Wenger, 1991; Wenger, 1998; Nicolini, Gherardi and Yanow, 2003), and because I

investigate this mode of learning in my research, there appears to be little advantage

in a separation between becoming a full member of practice, from doing the work or

performing the role of that practice, since both being and doing are mediated by

action. As Stets and Burke argue, "...being and doing are both central features of

...identity". (2000: 234) Thus, I treat both identity and social identity theories as

integrated constructs.

Criticisms of Social Identity Theory

Giddens (1991) suggests that a postructuralist orientation conceives of a social

world that is discursive and dispersed, and as such, self does not exist. Hence, in this

view, identity may be found only in language and discourse. As such, critical

theorists might view combining self as structure and object, and integrating action and

power, as being consistent with a functionalist paradigm. Poststructuralists may

therefore criticize social identity, and by association, social identity theory, along

three focal lines. In addition to the contention that identity is a functionalist notion, a

postructural perspective might also raise an argument that social identity facilitates

reductionism. Further, it could be suggested that identity serves to subordinate gender

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[5] Symbolic Interactionism is discussed here as a philosophical paradigm and as a research method in

equality and to satisfy personal interests, higher status individuals ensure group conformity through the use of identity as control (Alvesson and Willmott, 2002; Alvesson and Robertson, 2006).

Postructuralists assert that 'society' and the 'individual' cannot be separated (Giddens, 1979) and thus, an individual cannot be both subjective and objective self (Collinson, 2003). Where the postructuralist view considers separation of self as reductionist, interactionism affords a dual appreciation of self as simultaneously object and subject. Interactionism views self as an intrinsic human character following on Mead's (1934) commentary that a self-conscious and purposive representation to oneself is exclusively human. For Mead, this connotes *having* a self and hence, what being human means (Charon, 2001). The notion of simultaneously experiencing self as both subject and object is perhaps best explained through the process of self-dialogue. People silently talk to 'themselves' and state 'Gee, I'm very hungry' or 'Nice one! I did well at that'. These conceptions of self are evaluative references against other self expectations or group comparisons and serve both to orient a person to their group and, at the same time, to shape how the group members see themselves in action and concept.

Further, research of prisoner of war (POW) coping strategies shows the importance of social interactions, social support and group activities in forming and reinforcing identity. In this context some actors were able to connect with conceptions of self as artist, gardener, group member or poet and 'escape' from the dismal conditions of the POW camp. For example, Jones (1980) reviewed six books

written by former POWs who had been held in North Vietnamese camps during their imprisonment. He identified common coping strategies that sustained all of the prisoners. The strategies included: "(*a*) loyalty to country (remembering their heritage, focusing on their patriotic duty to resist), (*b*) idealizing their family (hoping to return with a feeling of having been worthy of them), and (*c*) alliance with fellow prisoners (communications, mutual support, cooperative resistance)", (Cited in Davis et al., 1995: 435). Jones's study shows that national identity, social identity and group social relations play a role in how identity is shaped and, in turn, shapes group through interaction, even in singularly difficult social situations. Prisoners were able to summon dual conceptions of themselves as 'in prison' and at the same time 'free persons' through the vehicle of their art, writing or group relationships.

Therefore, people are shown to have the capacity to perceive 'self', both as subject and as object. Furthermore, Foucault (1980: 47), suggests, " …that if one imposes a penalty on somebody this is not in order to punish what he has done, but to transform what he is". I interpret transformation in this context to mean transformation of social identity.

People may be pressured to conform to group interests as postructuralism suggests, nonetheless, in the dual connotation of interactionism, individuals effect group just as group has a bearing on individual action, values and meaning making (Blumer, 1969; Giddens, 1991; Prus, 1996). Postmes et al., (2005:18), argue vigorously along this line and state that group relations are not dependent upon solidarity or unity within the group but that a shared in-group identity is a prerequisite condition for the expression and development of individuality. The authors note that

to be able to express ourselves as individuals, or 'who we are', we also need to be able to express who 'we are not' and the same situation applies to group relations. Moreover, it must be stressed that while power and control is implicated in social identity formation and maintenance, (Knights and Willmott, 1985) social identity theory and interactionism places heavy emphasis on individual agency. Hence, group identification is not mandatory, but rather, a choice.

Poststructuralism also implies that if social identities are in a constant state of development and in phenomenological terms, 'inner stream of consciousness' (Denzin, 1992: 26), which is continuously emergent, how can identification be studied, since its very existence is questionable? At least two reasons satisfy this line of questioning. First, a sense of self and social identity is a historic and dynamic project. Denzin (1992) argues, this project lies in a range across modes of identification, where meanings of identity are situated in an interaction process, which emerges and shifts as a person establishes and negotiates the task at hand. Thus, social identity is both dynamic and multiple and it also can be a subject of study because it is representational of our social history as much as it is significant in the present. Goffman (1983) refers to this approach of studying social identity as an 'interaction ordering' and he suggests that situated, temporal, biographical and emergent processes through negotiation also shape it (See also Strauss, 1978). Hence, one way to understand our self is by reflecting on who we were in relation to who we are. The same holds for our identification with groups past, present and our conception of identification into the future. Knowledge of our past in a critically reflexive way, implies that while identity is emergent, it also can be crystallized for study, which in turn is, '…precisely part of a reflexive mobilising of self-identity'

(Giddens, 1991:33). Therefore, for both a sense of self and as member of group, identity is the central focus of negotiation (Strauss, 1978; Denzin, 1992). A second reason that social identity can be studied is because when identity clashes occur between ourselves and group, or our group and organization, we experience tension (Child and Rodrigues, 2003).

As I will argue, identity tension is key in the ongoing process of situated learning. I refer to situated learning as learning that occurs in the everyday experience of social practice. The source of tension has to do with how multiple, dynamic social and organizational identities are negotiated and treated within their hierarchical order of salience (Charon, 2001), or 'range', as Denzin (1992: 26) puts it, when changes in organizational structure, practices and processes occur. Change can require actors to learn new practices that vary from previous experience or understanding. Discord between a current social identity and an intended organizational identity illustrates that if identities did not exist, or could not be studied, the tension that stems from the identity dissonance would not occur. Thus, social and organizational identities exist and can be a subject of study even though identities are in constant processes of development.

The poststructuralist paradigm does shed light on the multiple nature of identity and it has given profile to the way power and control can be used by higher status organizational members to try forcing intended identity. However, and in response to the criticism that social identity is an entirely functionalist construct, interactionism introduces ideas that feature the emancipatory nature of member learning in organizations. For example, learning in organizations suggests the possibility of

personal growth and development for members, while at the same time, building organizational capacity for action (Coopey and Burgoyne, 2000). While people do experience multiple and sometimes conflicting identities, group relations act as a sorting mechanism to signal the appropriate action at a given time to help individuals and groups navigate in changing contexts. Without such social mediation, people could swim in a never-ending backwater of identity dissonance (Goffman, 1963, 1967) or liminality (Tempest and Starkey, 2004). Goffman's (1959) front and back stage distinctions illustrate these social conventions. Along this line, Goffman (1959: 35) argues that, "...when the individual presents himself before others, his performance will tend to incorporate and exemplify the officially accredited values of the society, more so, in fact, than does his behavior as a whole". However, without understanding social process that underpin learning, implies that these potential beneficial outcomes might be missed.

Giddens (1991: 53) suggests that identification in changing contexts, '...is the most elemental feature of reflexive conceptions of personhood'. He further notes that the best way to analyze social identity is in those instances where a sense of self is 'fractured or disabled' (Ibid.). Social and organizational identity tension is intended to serve as the very condition where a sense of self is fractured – a condition that is exacerbated by organizational change.

Change in Organizations

Organizational change has been the subject of voluminous discussion and debate within the management and organizational theory literature. Abundant examples of change processes may be found (*cf:* Kanter et al, 1992; Stace and

Dunphy, 1994; Kotter, 1996; Stickland, 1998; Burnes, 2004). Various authors have commented on the important interrelatedness of learning and change. Lave and Wenger (1991: 57) for example, suggest, "Learning, transformation, and change are always implicated in one another...", whereas Snell, (2001: 5) references the role of managers as stimulators of change and contends that a critical aspect of learning involves, " ...managers engaging in 'generative learning', questioning basic assumptions about self and others, the nature of the organization and its environment". Sociologists Gherardi and Nicolini, (2003: 50) maintain that, "...learning-in-organizing is not only a way to acquire knowledge in practice but also a way to change or perpetuate such knowledge...".

The close association between learning and change is also taken up in the strategy and capability literature. Following on Porter, (1980), Burnes (2004: 429) contends that strategy is conceived as a rational, quantitative process concerned with an organization's external environment and that a key role for managers is to identify trends, establish future objectives or targets, and then implement them. This view is consistent with Daft and Weick's (1984), assertion that organizations are at their core, interpretative systems and that deep connections exist between scanning, interpretation and learning (Weick, 2001). These ideas also resonate with Turnbull-James and Arroba's (2005) research and underpin their argument that a key leadership role involves the capacity to read internal and external worlds and understand hidden aspects of organizational systems such as emotions (Tajfel and Turner, 2004; Turnbull-James and Arroba, 2005). Hence, a link exists with the role of managers as active, interpretive agents of change and the role of managers whose actions inform learning by establishing the context for practice.

Because organizational change is a contextual feature and not the sole subject of my study, I will confine my discussion of the change literature to the areas that directly relate to my project. Burnes (2004: 322-325) presents a framework that integrates some of the most influential research on organizational change (*cf:* Kanter et al., 1992; Pettigrew et al., 1992; Quinn, 1996; Stace and Dunphy, 2001). His framework first conceives of organizational change as small scale or *incremental*. Citing Pettigrew et al., (1992) he associates this type of change as small in scale and relatively unimportant (2005: 324). In contrast, he identifies major and important shifts in an organization's structure as *transformational* change. Taking environmental conditions into account, Burnes (2004: 323) depicts the incremental-transformational continuum as follows, "Incremental or fine-tuning forms of change are geared more to changing the activities/performance /behaviour/attitudes of individuals and groups, whereas transformational change is geared towards the processes/structures and culture of an entire organisation". He classifies environmental dimension as ranging from stable and planned change through turbulent business environments that he more closely associates with an emergent approach to change.

With respect to my project, the data illustrate that both study sites are experiencing turbulence in their environments. In response to a government directive, GenerCo, is required to reduce costs and increase productivity to sustain operations and PowerCo, received legislative 'direction' to merge with TransmiCo. As such, both firms' business environments are most closely described as turbulent than stable (Newman and Nollen, 1998; Burnes 2004).

Transformational change also necessitates organizational cultural and structural shifts. For example, Newman and Nollen (1998) argue that not all organizational change is incremental and step-by-step. The authors depict radical change, which requires firm transformation, as implying 'quantum and fundamental change in the firm's core values, as well as its strategies, structures, and capabilities' (Newman and Nollen, 1998: 47). Transformational change is recognized as large, discontinuous change (Burnes, 2000, 2004). In contrast to incremental change, which is small scale (Salaman and Asch, 2003, Burnes, 2004), transformational change implies a shift in foundational aspects of a firm such as mission, structure and core values, and in this way it has the potential to arouse tension between social and organizational identity. Hence, transformational change presents a greater prospect for goal and identification misalignment and discontinuity between organizational and work group interests.

While all change is complex (Burnes, 2000, 2004) and there is no way to know that actions taken are appropriate adjustments *ex ante*, change which requires transformation seems even more difficult for firms. Historic realizations inform the identity of an organization with an already established path of deeply embedded routines and processes (Brown and Starkey, 2000), which present potential issues when radical change triggers a shift in organizational emphasis. Changes in relation to identity, learning and knowledge are often not either/or considerations. Communities of practice are asked to maintain their existing practices consistent with their current identity, while at the same time, embrace new, different activities and incorporate these into a new organizational identity as a 'both/and' construct (Barlow, 2001). Along this line, Pfeffer and Salancik (1978) suggest that when the dominant beliefs or

paradigm (identity) of the organization are attacked, the arguments are likely to be met with counter argument and endeavors to reinforce the paradigm.

Marks & Spencer, the UK High Street retailer, switch from a history of exploration (March, 1991) founded in growth and diversification, to shrinking activities down to a core list of 'going back to basics' of retail merchandising, is an example of this change situation and identity dynamic. Over the past decade, Marks and Spencer chose to explore ventures beyond its core business of retailing foodstuff and clothing and diversified its business to include credit cards, loans and financial services (Finch, 2004). The company stretched into 'home and lifestyle' marketing through launching its 'Lifestore project'. Over 12,000 items are sold in the Marks & Spencer Lifestore from barbecues, benches and outdoor lighting in the 'Al Fresco' line to confetti, cutlery, champagne flutes and cups in the 'Celebrate' department. Other new Marks & Spencer products and ranges include bathrooms and gym equipment. Vittorio Radice, Executive Director of Home said, "Marks & Spencer Lifestore is an exciting concept that breaks new ground. It represents our first step towards becoming a leader in the home market" (Finch, 2004).

A bidding war over the company ownership sparked the need to turnaround the business and triggered the need for transformational change. Marks & Spencer switched its emphasis from exploring new business lines and activities to concentrating on 'old certainties' (March, 1991). First, the organizational identity changed when the company diversified beyond the product lines that were consistent with its traditional identity. The recent management decision to move away from financial services and competing in home market products triggered another phase in

Marks & Spencer's evolving organizational identity. Marks & Spencer's ongoing transformation might be seen as a natural process in its evolution, but nonetheless, this example shows it is likely that organizational members are faced with learning a new identity in the dynamic context of the company's evolution and change.

Understanding SOI tension in relation to organizational learning builds on the assumption that the potential benefits derived from organizational learning as a dynamic firm-based capability, (Teece, et al., 1998; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Winter, 2003) are *available for facilitating organizational change*. Social identity theory posits that work group members resist transformational change in situations of tension in order to protect their root social identity (Ellemers and Rink, 2005). For example, Ellemers (2003) demonstrates that employees' strong group identification with an existing organizational identity resisted activities to institute a major culture change. Moreover, Jetten and colleagues (2002) show that organizational members resisted work-team restructuring efforts in direct relation to the extent of group identification before the restructuring initiative. This work demonstrates an association between strong social identities leading to commensurate strong resistance to learning new practices necessary for organizational change.

Consequently, because of strategies of resistance in times of transformational change, acquiring, transferring and creating new knowledge (organizational learning) might not accessible to be put into practice. The prospect that actors may refrain from sharing knowledge because of identity tension holds particular significance for situated learning since legitimate peripheral participation (Lave and Wenger, 1991) depends on a newcomer's *access* to practice. Situated learning is referred to as

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learning that occurs in the everyday experience of social practice. Without such access learning additional practices as part of a new organizational identity can be inhibited (Child and Rodrigues, 2003).

Change in organizations holds consequences for those who wish to introduce a change and equally for those who are affected by a change (Salaman and Asch, 2003; Burnes, 2004). Moreover, at times changes can be significant and alter the organization's identity (Newman and Nollen, 1998). Change triggers shifts in social relations (Dawson, 2003). Therefore, change is implicated as a catalyst that makes identity more evident. Gagliardi (1986: 117) contends that maintenance of cultural identity in terms of prevailing values is the primary strategy of an organization. He argues that identity maintenance serves as a stabilizing influence in the face of change. Further, Gherardi and Nicolini (2001) point out the difficult dual potential of maintaining cultural identity in the face of change as one outcome of change affords the potential for people coming together, exchanging perspectives and sharing knowledge. Change in this sense holds the potential to facilitate the firm in learning an intended identity, or on the other hand, change might detract from organizational learning because it can intensify a tenacious hold on the existing identity (Gherardi and Nicolini, 2001). Gherardi and Nicolini, (2001) note this other potential result of change. Here, people may feel isolated, uncommunicative and engage in relations of conflict with others. As a result, the willingness to share knowledge becomes blocked (Child and Rodrigues, 2003).

The notion of identity as durable is conceptually alike with Bourdieu's (1980:133) ideas of 'habitus' as 'structuring structures' and 'master patterns'. Swartz

(1997: 103) deconstructs Bourdieu's ideas by considering habitus as a disposition that results from socialization experiences in which 'external structures are internalized'. Thus, habitus can be seen as both providing advantages and disadvantages in dynamic settings for communities of practice. On one hand, habitus can anchor practice members in familiar patterns of action and therefore act as a stabilizing influence in conditions of uncertainty and discontinuity brought on by major change. On the other hand, because habitus tends to reinforce actions, perceptions and attitudes 'consistent with the conditions under which they were produced' (Bourdieu, 1977: 77), it can shape a community's actions to perpetuate known structures, and by doing so, the community can loose sight of opportunities (Swartz, 1997). Hence, like habitus, identity is not straightforward. Ellemers and Rink (2005) caution against the social engineering of identity in an attempt to produce change. Rather than some reified social product that can be manipulated, social identity is complex and prone to idiosyncratic manifestation as actors engage with communities and as communities engage with co-communities in their larger social system. However, while social and organizational identities are complicated, I will argue that they have a major role to play in mediating processes of learning in communities as they undergo change.

Collections of people as either groups or communities of practice (Lave and Wenger, 1991; Wenger, 1998) are key in understanding organizational learning. Some writers advocate a view of learning that is founded on the idea that individuals and organizations learn in the same way (e.g. Argyris and Schön, 1978; Lant and Mezias, 1990; Levitt and March, 1988). These views hold that learning occurs in one person's mind through cognition and is in turn transferred to another person's mind. Hence, learning is represented as individual cognition. In opposition to this

perspective the view of organizational learning in this thesis is that learning is a social action process. Put this way, and consistent with Weick's (2001: 267) contention, organizational learning and knowledge is not what people possess in their heads, rather, as 'collective mind' it is something people do together. The idea that learning and knowledge is associated with change has its basis in social network theory, which is largely informed by the symbolic interactionist perspective (Blumer, 1969; Prus, 1996). This theoretical perspective views actions as embedded in social structures and that these structures are made up of interacting networks of interpersonal relationships (Blumer, 1969; Granovetter, 1985; Uzzi, 1997). The academic literature focuses on three important dimensions in relation to these networks.

First, networks engage and sustain in patterned relationships (Dubini and Aldrich, 1991: 305). Second, these relationships are dynamic or synonymous with change (Johannisson, 2000) and third, the relationships interact in a way that makes sense of complex social realities (Brown and Duguid, 2002; Weick, 1995, 2001). Owing to the dynamics of action in patterned relationships, interacting in a way that results in learning and knowing, each of the three dimensions has the potential for affecting social identity, organizational identity or both. Early writers who evolved this perspective and saw learning emanating from social action include Follett (1920) who argued, "...there was no such thing as the individual...there is only the group and the group unit – the social individual" (Quoted in Graham, 1995: 230). Cook and Yanow's (1993) study of flutemakers showed that organizational learning is cultural and consists of a firm, "...learning to do what it does" (p. 378), since, "...knowledge is learned collectively, not individually", (p. 381). In this manner, firms acquire strategic competence to learn their way through problems (Dixon, 2000). Finally,

networks can pertain to a national identity or the identification a person makes with a geographic country of origin or affiliation with an ethnic group. This complex set of identities coalesces and provides people with a sense of who they are in the world. At the same time, these multiple, diverse identities are dynamic and continuously in a state of formation. Social identity and change are each sides of the same coin. As people evolve through life stages, move in or out of different work groups or organizations, their multiple social identities shift and develop. These issues have implications for group memberships within practicing communities and ultimately for an organization as a whole. They are also rooted in how an organization sees itself or its organizational identity.

Organizational Identity and Change

Changing the nature of the firm carries with it changing the nature of the shared perception of 'us' or the organizational identity. Change and disturbance typify the historic experience of organizations, and as Burnes (2004: 427) contends, operating in a stable state or predictable environment for anything other than relatively brief spans of time is the convention for firms since the industrial revolution. Burnes (2004) cites examples that trigger change for firms such as economic fluctuations, development of new products, processes or technologies, social and political change – all of which spell upheaval for firms and frequently instigate departures from existing pathways of intent. Implications for social and organizational identity and organizational learning are introduced once an organization sets out to institute or adapt to change. Managers who intend to initiate an organizational transition, or institute change as an adaptive measure, could find themselves navigating within a persistent tension that has been the subject of

considerable debate in the management, organizational learning and knowledge literature (Burnes, 2000; Dawson, 2003; Salaman and Asch, 2003; Burnes, 2004).

The tension arises between deploying resources or emphasizing actions designed to acquire and search out new knowledge, and assessing when and how to enhance and elaborate on what a firm already has learned and thus, knows (March, 1991). At the centre of this tension is social and organizational identity tension. A person's identity contextualized in this discussion is made up of social identity and occupational or practice identity. Reicher et al., (2005: 563), study informed by social categorization theory, (Turner, 1982; Turner, 1987) shows that social identity serves as a social structure guide, and thus facilitates smooth organizational functioning. Their study demonstrates the important link between top management's intentions to produce a change in organizational identity and the potential for conflict that stems from the necessity for a commensurate alignment in members' identity. The authors suggest that by ignoring this relationship, leadership is compromised. Self-categorization theory (Turner, 1987) implies that strong identification with a group can regulate social interaction within and across groups, which shapes cultural contexts, intergroup harmony and determines people's pragmatic action strategies (Turner, 1982; Turner, 1987; Turner et al., 1997).

Social and organizational identity alignment is important to smooth organizational functioning since theorists have demonstrated that groups with strong organizational identification have greater intentions to stay with a firm, perform better, are more cooperative (Ellemers et al, 1998; Jetten et al., 2002). Further, research on organizational mergers has shown that the success of a merger partly

depends on employees letting go of their pre-merger organizational identity and learning the new post-merger identity (Terry et al., 1996). If a post merger identity is deemed inconsistent and a threat to a current social identity, theorists argue that employees are likely to adopt strategies to resist the merger (Jetten et al., 2002; Van Knippenberg et al., 2002), which include refraining from processes that stimulate learning and withholding knowledge.

Organizational identity is much less within the control of the organizational actor. People can change their hair colour or occupation but a decision to alter the identity of the organization of which they are a part, is most often made by top-level managers (Gagliardi, 1986; Rousseau, 1998). This organizational tension has been described as a management decision whether to exploit or explore (Gupta et al., 2004) and follows on March's (1991) conception of the distinction between exploring new possibilities and exploiting old certainties. March (1991) considers this question is a central management concern in studies of adaptive processes. He notes that this polemic can be traced back to the work of Schumpeter in the 1930s (Schumpeter, 1934). Moreover, even though organizations can be said to be ambidextrous and dynamically explore *and* exploit (Birkinshaw and Gibson, 2004), differences in emphasis or an outright change in orientation as a means to adapt to environmental alterations poses implications for organizational identification. When a decision to explore is taken say, over the traditional practice of exploitation of skills, a commensurate shift in identity can be expected in part or even all of the organization (Child and Rodrigues, 2003; Ellemers and Rink, 2005).

There is divergence among 'management' and 'learning' authors on the appropriate lens through which to view management actions to evoke new learning (exploration) and knowledge, or to focus on what is known and has already been learned within the firm (exploitation). Some writers consider the tension between the two factors as options which need to be balanced (March, 1991), or as interrelated constructs that have a bearing on value, (Gupta et al., 2004) or finally, as tensions which facilitate and inform learning, (Crossan et al., 1999). However, there appears to be consensus among theorists (Schumpeter, 1934; Gupta et al., 2004; Crossan et al., 1999) that changing from one situation – for example from exploration to exploitation, has to be managed. A 'process' of managing organizational change of this sort implies the potential to produce identity-based tensions within an organization. This tension is rooted in how a firm with a history of embedded learning routines and practices and a foundational stock of knowledge, needs to learn another identity in order to adapt to the new condition or how to negotiate a balance between both conditions.

Organizational change has a major bearing on the organizational identity the firm sets out to assume in place of its current or historic identity (Dutton et al., 1994; Rousseau, 1998; Ellemers and Rink, 2005). Significantly, this type of change depends on firm-level transformation. Nonetheless, although the exploration-exploitation tension has been widely discussed, by comparison, authors have paid relatively little attention to the potential social and organizational identity conflict from tension and how this conflict relates to organizational learning (Brown and Starkey, 2000; Child and Rodrigues, 2003). As will be discussed, the relationship

between social identity and organizational learning is, as yet, a relatively unexplored field of enquiry. First, however, the notion of identity tension will be explored.

Social and Organizational Identity Tension

Social identity conflict itself is the subject of some debate in the organizational learning literature on two dimensions. First, certain authors hold the view that owing to the rigidity and durability of self-concept as a key component of social identity, identity-based conflict impedes learning (Brown and Starkey, 2000; Child and Rodrigues, 2003. Other authors contest this orientation and argue that identity is flexible and dynamic for both individuals and organizations (Corley and Gioia, 2003; Rothman and Friedman, 2003). The latter perspective is based on the idea that identity-based conflicts serve as catalytic social processes that spark new forms of learning. The second dimension of this debate involves the identity itself. The first group of authors situates the debate in the context of *social* in relation to *organizational* identity whereas the second group focuses on whether organizational identity is adaptable in its own right. The nature of the debate concerns whether identity conflicts arise as a result of being rigid or flexible, or as a consequence of the clash between social versus organizational intended identity.

Because my project is located in the organizational learning field, which itself is a social construction, I adopt a position like other writers who accept that organizational identities and for that matter, social identities, which are also socially constructed, can and do change (Brown and Starkey, 2000; Child and Rodrigues, 2003). As well, as social identity theory (Abrams and Hogg, 1990) shows, identities

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operate along a continuum of salience (Stryker, 1980). Identities that are highly salient engender the greatest commitment and are plausibly, the most difficult for a person to change. Although, as I have argued, people and groups espouse an array of identities, as a means of social navigation (Goffman, 1959), one discriminates in favour of the social category (social or organizational) that is most salient (Ervin and Stryker, 2001). For example, authors Deal and Kennedy (2000: 6) write about links between social and organizational identity in IBM this way:

> When a sales representative can say, " I'm with IBM", ...he will probably hear in response, "Oh, IBM is a great company, isn't it?" He quickly figures out that he belongs to an outstanding company with a strong identity. For most people, that means a great deal.

The position taken in this thesis is that since identity types (social and organizational) both seem to have consequential links with learning in firms, and since social identity and organizational identity influence each other, both identity types warrant inclusion in this investigation. Identity rigidity and flexibility is somewhat secondary as organizations involved in major change as shown in the Marks and Spencer example discussed earlier, intend to modify their organizational identity as part of the change itself.

Hence, my project is concerned with the implications for organizational learning when actors' identities conflict with the intended organizational identity and to a lesser extent with the question of identity rigidity or flexibility, since first, identities are learned constructions and second, because top managers institute identity changes by virtue of changes they make for internal reasons or as environmental adaptation endeavors (Gagliardi, 1986; Brown and Starkey, 2000). This view proposes a conception of communities of practice as holding multiple,

dynamic identities which include those of its members such as newcomer or veteran as well as its social identity, for example, as a community of flute makers. Communities not only engage in practice, consistent with social identity theory, they also categorize themselves and other communities as a way of understand groups by placing them into a labeled category, thus flute makers are different from power station control room operators. Communities also identify within a social context as a community to sustain collective self-esteem. Finally, often as a mechanism to reinforce salient aspects of their social identity, they compare themselves in many ways with other groups. Parker suggests organizational cultures should be seen as "fragmented unities" – sometimes collected, sometimes divided. Other authors (Kotter & Heskett: 1992; Anthony, 1994; Parker, 2000) understand organizations as being inseparable from their culture, in effect, they *are* their culture. Anthony (1994: 98) puts it as, "…culture cannot be treated simply as a resource, to be separately managed. Culture represents a series of relationships rather than a commodity".

In 'being' their culture, organizations are subject to learning that is influenced by social processes such as those associated with the social learning model (Eysenck, 1947; Bandura and Walters, 1963; Bandura, 1977; Elkjaer, 2003). Anthony (1994:103) suggests leaders' assert influence on organizational culture in three ways; the leader's determination of structure, the extent and speed of technological change and the leader's formulation of other people's reality. In these areas, he argues, leadership is seen to possess transformational possibilities through the potential ability of a leader to reformulate the understanding of others. He claims reformulation may occur through symbolic reconstruction or the natural process in which the way we see things is in part the result of the way they are told and communicated to us, and

through deliberate motivation or the utilization of the use of power and control by the leader. In this way senior managers have a major effect on organizational identity. For example, Ellemers and colleagues (2004) postulate that leaders might use the constituent elements of social identity (e.g. self-categorization) as a motivator to enhance group performance. Identity is relevant to a community of practice's response to significant change because change can impact people's traditions. Change processes can pressure actors to learn new practices and roles that vary from their previous experience or assumptions. This circumstance is referred to as identity tension. Albert et al., (2000: 13) call for more research into the area of social and organizational identity and deem that, "Identity and identification, in short, are root constructs in organizational phenomena and have been a subtext of many organizational behaviors". The authors depict organizational identity as a stabilizing force and suggest that, "Identity serves as a rudder for navigating difficult waters" (Ibid.).

Moreover, Hatch and Schultz (1997: 357) echo the importance of leaders and managers in the creation, reinforcement and maintenance of organizational identity through, "…strong links with vision and strategy…and the explicit role of top management". The authors relate how organizational identity is grounded in organizational symbols, local meanings and is therefore rooted in organizational culture, which they argue serves as the 'internal symbolic context for the development and maintenance of organizational identity' (1997: 358). In this way culture is connected to social and organizational identity but nonetheless it is different in orientation.

Moingeon and Ramanantsoa (1997) suggest that because identity is symbolically characterized through language, stories and social artifacts that social and organizational identity is revealed through culture. This perspective is consistent with Prasad (1993) and Hatch and Schultz's (1997) conceptions, who also place high correlation on identity as symbolically represented, and hence, as a related but not entirely similar social phenomenon. Consequently, it is evident that top management can influence organizational identity in important ways and the serial effects of this influence are linked to the very cultural foundation of a firm. One mode of instituting organizational identity change is by launching a new vision statement. Top managers employ vision statements to signal organizational identity members, according to Daft (1999). This notion locates organizational identity as an internal construct that is symbolized through culture and social action differently from image – or the view of the firm that organizational members believe others see (Dutton and Dukerich, 1991). Image, therefore is an external view of an organization, in effect, how others see the firm. Hence, management can approach culture change by changing organizational identity in various ways-either by adjusting image or creating another identity. However, identity adjustment is not as straightforward as initiating a different advertising or marketing strategy. Hatch and Shultz (1997) distinguish culture change approaches along social constructionist lines and argue that many organizational change endeavors are wrongheaded. They suggest that, "…culture manages managers rather than the other way around", (Hatch and Shultz, 1997: 360).

Figure 3.2 shows social and organizational identity tension as having a potential impact on organizational learning within, and between groups, and between groups and their organization. Research has demonstrated that SOI alignment is

associated with commitment to the organization and increased work effectiveness (van Dick, 2001; Ellemers and Rink, 2005). Accordingly, a management focus on producing SOI alignment implies a more likely condition for stimulating knowledge acquisition, knowledge conversion and creating new knowledge in practice-based environments.

However, a problem surfaces with a premature conclusion that SOI alignment *in itself* facilitates organizational learning in a context of change. As discussed earlier, it is unclear whether the conflict arising from social and organizational identity tension impedes or facilitates organizational learning. Further, some other unforeseen impact might also arise once these tensions emerge. For this reason, Figure 3.2 utilizes the word 'impact' instead of the two dominant views which imply learning is either impeded or facilitated under these conditions.

Figure 3.2 - Social and Organizational Identity Tension
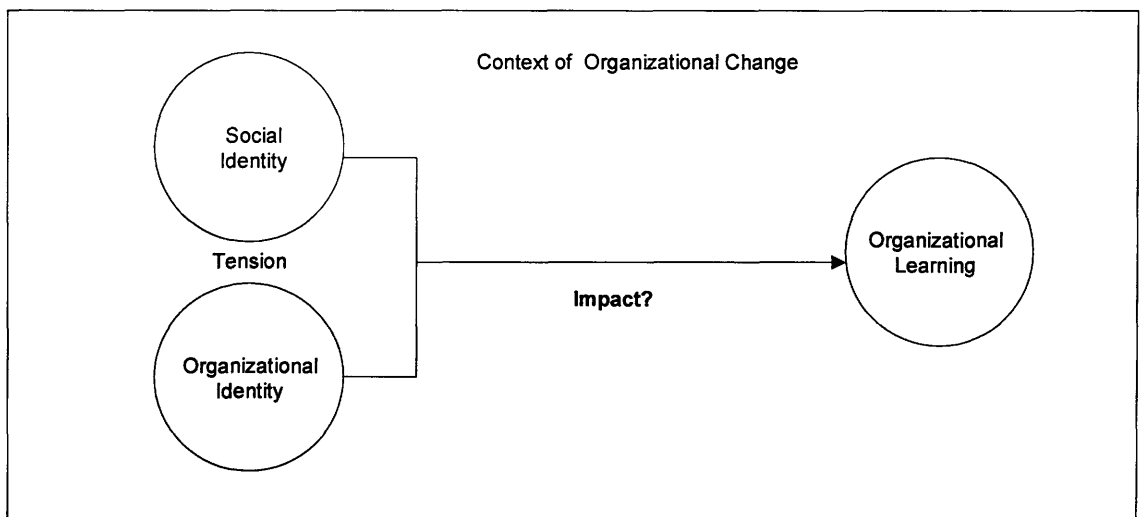
Identity Tension and Organizational Change

High identity salience implies commitment to a group through which, self-esteem, is reinforced. Certain social identity theorists characterize the concept that social identity may prevail over an intended organizational identity as the meta-contrast principle. According to Oakes, Haslam and Reynolds (1999), the meta-contrast principle 'predicts that a given set of items is more likely to be categorized as a single entity to the degree that differences within that set of items are less than the differences between that set and others within the comparative context' (1999: 58). A group resistance strategy that opts to retain an existing social identity in favour of learning and intended organizational identity is linked to the meta-contrast principle as a mode of defining comparative relations and also to the context dependent nature of social identity categorization. To share a social identity necessitates a shared social meaning of an action context. This entails some common understanding of what is going on within, around and between groups and relative accessibility to the group for new and existing group members (Oaks, Haslam and Reynolds, 1999).

Regardless of whether the tension concerning SOI is founded in a contradiction between an intended organizational identity introduced in response to change or with merging practices with another group, as Child and Rodrigues (2003) point out, if the identities of groups are not aligned, people are likely to adhere to their more immediate and longstanding social identities. A resulting consequence may be that because of the identity-based conflict, an actor becomes unwilling to share knowledge or make the effort to learn new practices, which both shape and reinforce the intended organizational identity. Wenger (1998: 85) refers to situations where legitimate peripheral participation is obstructed as those, "…which prevent us from

responding to new situations or from moving on". Group members can subsequently

choose to retain their knowledge and elect not to share it depending on the member's

role either within the community of practice or with the organization as a whole.

Authors who support this line of reasoning (Brown and Starkey, 2000; Weick, 2001;

Child and Rodrigues, 2003) contend that learning is impeded because of the

psychological angst and social discomfort experienced by actors' when SOI tension

leads to identity-based conflicts. In this characterization, dissonance between social

versus organizational identities is seen to impede organizational learning and

knowledge creation. Individuals are closed to change because they are seen to defend

and hold their identities stable. A stable conception of personal identity is considered

important for making sense of everyday experience, particularly in the context of

dramatic change and 'high uncertainty' (Brown and Starkey, 2000: 112).

In contrast, other writers argue that both social identities and organizational

identities are flexible and dynamic (Corley and Gioia, 2003). This perspective

contends that while labels about things within a firm remain constant, meanings about

those things continuously change. In this view 'customer service excellence' might

remain as a one of a firm's core values but the actions underlying the label are

constantly being changed and negotiated by organizational members. Most

importantly, authors who hold this view claim that identity-based conflicts enable

organizational learning. This line of reasoning suggests that identity-based conflict

stemming from SOI tension actually *facilitates* organizational members' learning and

knowledge processes. In contrast to the perspective held by certain writers that

identity-based conflict *impedes* organizational learning (Brown and Starkey, 2000;

Weick, 2001; Child and Rodrigues, 2003), this opposing view suggests that the

conflict brought on by incongruent identities is implicated in sparking learning, knowledge acquisition and conversion (Corey and Gioia, 2003; Rothman and Friedman, 2003). In this context actors are required to engage in reflexive processes in order to make sense of the situation that has sparked the identity-based conflict in the first instance.

Reflection is a key catalyst for identity since it sparks self-examination and comparison with others (Mead, 1934; Brown and Starkey, 2000; Reynolds and Vince, 2004; Turnbull-James and Arroba, 2005). In this view, learning is embedded in the outcome of this conflict resolution process, which has been mediated by reflection and identity reconceptualization. Other authors share similar views on the association between identity-based conflict and its contribution to stimulating an environment that is conducive for organizational learning. For example Senge et al., (1994: 415) suggests that a negative aspect of identity is that it can encourage, "...deeply guarded views which we hold of our own identity, and which predispose us to act in habitual ways". According to Law and Lodge, 1984, one such habit is the routine way we learn and often, according to the authors for those in high status positions to legitimize knowledge claims. Law and Lodge suggest that, "Leaders invest a great deal of time and energy in acquiring special competencies, hence, it is reasonable for them to want to maximize the scope of those competencies" (1984: 129). Thus, because knowledge 'as practice' (Lave and Wenger, 1991; Wenger, 1998, 2003), is an identity forming process, the extent to which knowledge is considered important and valued, hence deemed legitimate, poses significant implications for social identity. Practice-based knowledge that is important and valued by a group, which top managers subsequently judge as non-legitimate

knowledge because it may have become devalued in a particular bid to change an organization, also seems to be part of what might spark identity-based conflict.

Finally, Herasymowych and Senko's (2000) study found that people learn most deeply when they have whole learning experiences or use preferred *and* non-preferred learning styles. The authors offer an example of using a preferred learning style when a person signs their name. Although once a person had to learn how to sign their name, after years of making signatures, the act of signing often occurs without new learning. However, the very same task takes on a different meaning once attempted with the 'other' hand[6]. This perspective suggests that when prompted by a change, say the conflict between a person's social identity and a new organizational identity, learning and knowledge might be stimulated. When social identities are perceived to be in conflict with the organization's identity this theoretical view holds that different courses of reckoning, testing core values and organizational introspection, stimulate certain forms of learning. Consequently, while the literature dominantly discusses a dichotomy where in situations of identity tension learning is either impeded or facilitated in contexts of transformational change other potential outcomes might emerge.

Identity Tension and Organizational Learning Dichotomy

To this point, I have touched on different factors that have a bearing on producing tension when social and organizational identities conflict. These factors

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[6] When I explored this phenomenon, at the 2003 University of Cardiff Employment Research Unit Conference, participants used words like 'more conscious', 'slowed' and 'deliberate', 'uncomfortable' and 'unusual' when they described the procedure of making their signature with the opposite hand as being. Herasymowych and Senko (2002) contend that the tension between the different ways of making a signature prompts learning.

include dissonance in conceptions of self and self-esteem, issues arising from conflicts over what is deemed legitimate knowledge and tensions about the rationale or process of change. In the discussion that follows, I concentrate on four works that discuss the implications for learning in situations of identity tension. The four papers are split. Two papers adopt one stance and the other two papers share an opposing view. The literature does not supply substantive works on learning outcomes that might differ from these dominant views. Moreover, Strauss and Corbin (1998) note that comparisons facilitate insights into variations in patterns and that contrasts highlight these comparisons. Hence, while the potential that learning would be subject to a range of outcomes in conditions of identity-based tension, I emphasize the dominant dichotomous views presented in the literature on the basis that these contrasting orientations might yield the richest and deepest insights.

In the first two papers the authors argue that organizational learning is impeded in conditions of identity-based conflict. This discussion is informed by research carried out by Brown and Starkey (2000) and Child and Rodrigues (2003). The second set of papers contains arguments that organizational learning is facilitated when identity-based conflict arises. Studies by Corley and Gioia (2003) and Rothman and Friedman (2003) support this view. Brown and Starkey's (2000) paper adopts a psychodynamic perspective in its examination of the relationships and implications between learning and identity. They argue that organizational learning is impeded when a firm experiences identity conflicts because of the organization's interest in maintaining its root identity. The authors consider five defense tactics used by organizations and individuals to sustain identity, but that thwart learning. Like individuals, the authors contend that organizations too experience 'self-esteem' and

ego defenses propagate denial, rationalization, idealization, fantasy and symbolization as mechanisms to preserve self-esteem. They characterize denial as a condition where knowledge and responsibility is disclaimed and acts and their consequences are renounced. Rationalization is meant to describe attempts to justify motives that are found to be unacceptable so they become plausible and tolerable. Idealization refers to a process that overvalues and aggrandizes some object and eliminates any undesirable features. Fantasy represents a collective cognitive effort to realize unachievable objectives and desires and symbolization describes a process which substitutes anxiety producing objects with alternatives that promulgate myths, which shield members from the less desired reality (Brown and Starkey, 2000). Founded on Berzonsky (1988) and Blasi's (1988) research, the authors present an identity change process that reconceputalizes self-concept as:

> (1) Process, the means by which identity is encoded, elaborated, and integrated; (2) Structure, the way identity is organized; and (3) Content, the information from which identity is constructed (Berzonsky, 1988)

Brown and Starkey's (2000: 113) discussion is anchored by theory and not in empirical data to support their contentions on identity change, however, it is set apart from the other research because it provides the closest framework for action that managers can take to actually tackle the subject of learning in light of SOI tension. The authors suggest that critical self-reflexivity, being open to others and using doubt as a springboard for learning offer the first set of processes to promote identity change. Second, dialogue about future identity embedded as a foundational strategic management characteristic is identified. Finally, promoting and seeking an attitude of wisdom is proposed. Here, the authors define wisdom as a composite of curiosity, a willingness to learn, and an openness to learn new things about one's environment that challenges accepted assumptions. They relate wisdom in this context to Weick's

(1993, 1995, 2001) conception of sensemaking in which collective identity actively makes sense of their environment, especially during times of dynamic and uncertain contexts of change.

Child and Rodrigues 2003 paper also provides commentary on the subject of SOI tension and organizational learning. The authors use empirical evidence to support their recommendations on how managers might effectively navigate when learning is subject to SOI-based conflict. The authors argue that when faced with identity-based conflict, individuals will be reluctant to engage in 'unlearning' (Hedberg, 1981) past identities – a requisite condition for organizational learning. They suggest that learning would be further impeded since organizational actors would resist participation in activities designed to transfer knowledge. They emphasize that this situation is exacerbated based on the type of knowledge involved and whether the knowledge source was internal or external to the firm. Child and Rodrigues (2003: 552) argue that the more knowledge is tacit and technical and held by different international interests, the more likely social identity might impinge on organizational learning. This point raises important questions for both the 'knowledge master' whose identity-based conflict influences his lack of willingness to pass along his knowledge and for the 'knowledge apprentice' who requires legitimate peripheral participation (Lave and Wenger, 1991; Wenger, 1998) in order to gain access to the necessary knowledge[7]. It also poses potential issues for becoming a full member of a practice and thus learning identity.

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[7] I will take up this point in later discussions in the form of a criticism of communities of practice. Communities of practice are often depicted as social groups who willingly and frequently share knowledge (Brown and Duguid, 1991; Lave and Wenger, 1991; Wenger, 1998; Brown and Duguid, 2002). Legitimate peripheral participation, however, would be dependent on willing and frequent knowledge exchanges, without which, suggests exemption from becoming a full member of a practice on the basis of power and control issues.

Child and Rodrigues provide examples from their research on situations where groups successfully learned national and occupational identities even though the groups experienced identity conflict. The authors stipulate that SOI is an important topic for management research, particularly in times when decentralization, home-based occupation and specialized knowledge triggers the establishment of new forms of organizing (Ibid.). Child and Rodrigues suggest two requirements that serve to facilitate learning in situations of identity-based conflict. First, psychological safety (Edmondson, 1999) for groups is foundational to promote a sense of willingness to share knowledge and second, mutually acceptable 'overarching goals' are necessary to 'integrate participants efforts' and to 'provide a sense of direction for the learning process' (Ibid.). The space for reflection and providing sufficient time are important in order for a new dominant logic (Starkey, 1996) to emerge through negotiation. Unlike Brown and Starkey, however, Child and Rodrigues are less specific about how management actions may bring to bear the requisite psychological safety and mutually acceptable overarching goals requisite for organizational learning. Thus, my study sets out to explore these recommendations yet, informed by empirical evidence, to also better understand how managers might promote learning in light of identity-based conflict.

In contrast to the views expressed by Brown and Starkey (2000) and Child and Rodrigues (2003), that conflict from SOI tension impedes learning, Corley and Gioia adopt a view that learning is facilitated in situations of identity conflict. In Corley and Gioia's (2003) research, organizational identity is featured over social identity and the authors take issue with the popular view of organizational identity characterized

by Albert and Whetten, (1985) in which organizational identity is a core, distinctive and enduring feature of organizations. Gagliardi's (1986) view is related to Albert and Whetten's (1985) in terms of the beneficial aspects of identity because of its stabilizing effect, which anchors sensemaking and routine actions. Gagliardi (1986: 117) suggests that, "The primary strategy of an organization is the maintenance of its cultural identity in terms of prevailing values". However, Corley and Gioia argue that organizational identity is not stable and enduring but rather, flexible and dynamic. Here, the focus is on the destabilizing effects of identification and instead of features that promote constancy, Corley and Gioia emphasize the potential for learning in conditions of disorganization and discontinuity.

Further, they suggest that effective adaptation sparks interplay between organizational identity and image and this management action contains inherent properties that destabilize organizational identity. The authors maintain that stability only pertains to how actors conceptualize 'labels' that correspond to what they believe represents the organization. Their study, which is consistent with social learning theory and involves cultural interactions, shows that conflict facilitates higher order forms of learning. The authors cite semantic learning as a subtle form that involves a change in meaning that underpins labels and actions. Thus, changes occur in group understanding of themselves and in the way they ascribe meaning to things. This research points out how organizational identity is indeed dynamic and evolving. Managers take steps to change organizational identity in response to environmental changes, thus identity is tightly linked with adaptive processes (Gagliardi, 1986). At the same time, Corley and Gioia's study only hints at what managers can actually do to effectively negotiate change as it mostly concentrates on semantic learning as a

foundational enabler of change and identity modification. This runs in contradiction to the emphasis on intention that various authors argue is crucial for organizational learning (Dewey, 1933; Elkjaer, 1999, Dixon, 2000, Elkjaer, 2003). The authors do, however, discuss how power can divide interests and thus, polarize groups who have high social identity salience if leaders employ what they refer to as an 'in-your-face' change approach (Corley and Gioia, 2003: 634).

Rothman and Friedman's (2003) work is aligned with Corley and Gioia's (2003) in that both groups of authors contend that SOI tension produces a condition in which learning is stimulated. Rothman and Friedman, however, underscore the importance of conflict itself. The authors present an analysis of conflict and highlight its role as a social condition that serves as a catalyst for stimulating learning. They explain the conventional view of conflict in the context of *resources*; described as materials economic benefits, territory and coercive power, and *interests*; involving motives, goals, values and also coercive power and identity. Rothman and Friedman's treatment of identity is consistent with the treatment of identity in this project. They conceptualize the relationship between conflict and identity in the following way:

> These conflicts may be expressed and negotiated in terms of resources or interests, but they really involve people's individual and collective purposes, sense of meaning, and definitions of self (2003: 590).

The authors conceive identity as having to do with 'purpose, meaning, self and group definition and associated with relational power' (2003: 585). Rothman and Friedman (2003: 584) not only emphasize conflict as a relevant condition for learning, (conflict is a process through which organizational learning occurs), they argue that, "...a sound theory for engaging conflict within the context of organizational learning is needed", if organizational learning is to evolve beyond the domain of those who are

'exceptionally skilled' (Ibid.). The authors make this claim on the basis of Argyris research. Argyris (1993) illustrates a process of learning in the face of conflict when two organizational practitioners manage to resolve the conflict and effectively manage the clash. Rothman and Friedman (2003: 593) suggest that, while learning occurred in Argyris's study, little was explored to help explain the conflict and that an analysis of the conflict itself could reveal associated opportunities for learning.

Furthermore, Rothman and Friedman argue that SOI-based conflicts promote conditions where advanced forms of learning occur. They characterize double-loop learning (Argyris and Schön, 1974; 1978) as a form of conflict resolution because it provokes members to inquire into the reasoning they take to support their positions as well as what the taken position means for them (Rothman and Friedman, 2003: 583). While the authors point to the important role conflict plays in generating organizational learning, unlike Brown and Starkey (2000), however, Rothman and Friedman do not present any concrete description of how a practitioner can take steps to facilitate a learning process. Their account is theoretical and their ideas also correspond with Argyris (1993) who submits that he, '…lacked an adequate theory for describing and explaining what he actually did', in relation to informing practice about how to make learning possible in light of conflict (quoted in Rothman and Friedman, 2003: 593).

This review presents a picture of the relationship between social identity and organizational learning as an important one as the constructs share deep connections. At the same time, the picture is not clear. Much of the literature pertaining to social and organizational identity resides in the social psychology field with relatively sparse

coverage in the management field and scant discussion in the organizational learning literature. The inadequate treatment of SOI is important to the organizational learning literature for at least two reasons. First, organizational identities are crucial to organizational continuity as an identity enables coherence from the past to 'establish direction for the future' (Kimberly, 1987: 233). Thus, a number of advantages emerge from alignment with an organizational identity, which includes a stimulus for members to solve problems that threaten a shared organizational identity (Dutton and Dukerich, 1991). Castanias and Helfat (1991) also point out that strong organizational identity alignment can be a force that drives an organization to strive for optimal performance. Finally, deep identification can anchor firms in a collective sense of who they are during times of uncertainty brought on by substantial change (Rousseau, 1998). Fiol (1991, 2001, 2002) considered deep identification as a source of sustainable competitive advantage. Later she reconsidered her stance and argued that owing to turbulence and rapid change, a sustainable competitive advantage is amorphous, hence, situated identification is a more likely factor in 'providing temporary competitive advantages' (2001: 697).

Although social and organizational identity is the focus of Fiol's discussion, their role in mediating knowledge transfer and organizational learning, are left undiscussed. The earlier literature points out that identities are learned and, at the same time, they mediate learning. Moreover, identity-based tension that has the potential to impede learning in a context of change goes beyond just the knowledge transfer problems that focus on the mode and type of knowledge (e.g. tacit/explicit) or its attributes (e.g. sticky/leaky). This view considers both the knowledge type and intervening factors such as identity tension as crucial for enabling knowledge transfer.

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Leaving organizational learning and knowledge processes out of a discussion on social and organizational identity suggests only a partial understanding of the learning and knowledge transfer phenomenon. This point is particularly relevant to Fiol's (2001) assertion. She argues that today, gaining advantage entails nurturing organizational members' situated identification with constantly changing organizational identities, grounded in member commitment to deeply anchored values and outcomes. Later, Fiol (2002) refers to identity transformation as a process that results in social and organizational identity alignment, argued here as social processes that are implicated in knowledge transfer and organizational learning.

Summarizing the Dichotomy

The literature presents divergent views among authors that do discuss SOI in relation to organizational learning. Various distinctions of emphasis relate SOI-based conflicts as a condition, which impedes learning, (Brown and Starkey, 2000; Child and Rodrigues, 2003), whereas other writers views suggest that SOI conflict facilitates learning (Corley and Gioia, 2003; Rothman and Friedman, 2003). Moreover, although some of these distinctions are founded on first-hand empirical research that focuses on the question of social identity and organizational learning (Child and Rodrigues, 2003), other views are based largely on theoretical analysis (Brown and Starkey, 2000; Corley and Gioia, 2003; Rothman and Friedman, 2003). The literature yields little discussion on any other outcome, for example where learning is static and neither impeded nor facilitated in situations of identity-based tension and transformational change.

Finally, although there appears to be consensus on the important implications of SOI tension and ensuing conflict for organizational learning, only Brown and Starkey (2000) present a concrete description on how practitioners can take steps to promote how such conflicts may be managed and thus enable conditions for putting organizational learning into practice. The next section discusses organizational learning and how it occurs in practice which intends to set out the relationship for what identity tension means to learning – whether learning is enhanced, facilitated or subject to some other outcome.

Organizational Learning

Organizational learning can be described as a diverse and disparate discipline. It has sparked a catalogue of themes, many of which have been widely discussed in the management and institutional theory fields. Some of these themes include 'who is doing the learning' – the individual or the firm, 'how does learning take place' – in the mind or as a constituent social process and 'what is learned' – information captured in texts or databases in contrast to processes of becoming a fully competent practitioner through experience. Because organizational learning as a discipline spans such a wide and varied scope, a fully detailed discussion of each organizational learning distinction is beyond the practical constraints of this thesis. There are, however, significant areas of discussion that have both contributed to the field and have a bearing on my project. I have grouped these areas into three main sections.

The first discussion introduces some of the contextual features of the organizational learning literature and sets the foundation for, as I will argue, a critical

view of the discipline. The second discussion pertains to epistemologies of knowledge and relates to what is learned. The third discussion centres on why a practice-based situated learning rather than individualistic orientation is more closely linked with my project and presents an overview of the relationship between situated learning and change in the context of social identity. Finally, in the fourth part, I review the extant relevant literature and identify a series of criticisms of organizational learning, which my research attempts to address.

A Basis for a Critical and Reflective Stance

Organizational learning has evolved as a multi-dimensional concept and shares multiple definitions and characteristics. Drawing on Easterby-Smith et al., (1998), Dutta and Crossan (2003) describe organizational learning as being a range of processes from objective and technical to being humanistic and political from among the various definitions (Nevis, DiBella and Gould, 1995; Levitt and March, 1988; Garvin, 1993; Argyris and Schön, 1978). Organizational learning in this work is depicted as a social process which combines knowledge acquisition, knowledge conversion (dependent on transfer) and knowledge creation (Helleloid and Simonin, 1992), which draws on situated learning theory (Bourdieu, 1977; Lave and Wenger, 1991; Brown and Duguid, 2002). In this view, learning is a pragmatic conception where content of knowledge and the process of learning are inextricable (Dewey and Bentley, 1949). As communities engage in practice learning becomes embedded in routines, which survive the knowledge repertoire of a single actor. In this way, because knowledge is institutionalized in a 'habitus' (Bourdieu, 1977; 1990) situated practice becomes an important mechanism of organizational learning (Gherardi et al., 1998).

However, while numerous authors are generally positive towards learning in communities of practice (E.g. Gherardi et al., 1998; Swan et al., 2002), I do raise a criticism in relation to practice-based learning because of the lack of discussion in the literature concerning learning as a social process with inherent issues of politics and power. Social processes are steeped in power interests that place boundaries around what may be considered legitimate knowledge, which persons are provided access to communities of practice and how change is negotiated for a particular community (Coopey, 1994; 1995; Coopey and Burgoyne, 2000; Contu and Willmott, 2000). The literature that discusses learning in practice-based settings portrays a view of learning that implies firm-wide benefits that occur dominantly in conflict-free settings (Brown and Duguid, 1991; Orr 1996; Brown and Duguid, 2002). Moreover, in communities where legitimate peripheral participation is present, learning is such a well documented outcome that it might be taken as an assumed result of practice in all cases (for example, studies by Orr, 1996; Cook and Yanow, 1993). The situated learning literature pays little attention to the community's social identity, particularly in a context of transformational change where the community's sense of itself changes when it is required to adopt a new set of practices. For example, Orr's (1996) oft cited study of photocopy repair technicians largely ignores within-group conflict and power relations (Contu and Willmott, 2000). Orr's (1996) discussion is not empirically supported on how this community's social identity is impacted by change in the larger corporate setting of which it is part. Moreover, learning in communities is dependent upon a common construction of knowledge and legitimate participation (Lave and Wenger, 1991; Wenger, 1998). Coopey (1994, 1995) has argued that power and politics is underrepresented in the literature that concerns practice-based learning.

In order for legitimate peripheral participation to take place, the learner must be afforded an opportunity to have access to a practice. The community of practice literature is largely silent on the role of a 'gatekeeper' who holds knowledge back or refrains from participating in processes that facilitate learning (Brown and Duguid, 1991; Orr 1996; Brown and Duguid, 2002). The role of gatekeeper may also reside in group norms and routines – their social identity. Examining social identity opens the prospect of revealing how this power works in relation to in-group and out-group dynamics as well as with showing how barriers may be created which could prevent actors from true participation in a community of practice. Thus, to understand learning as a social process, it seems important to appreciate these factors. This critical view of organizational learning is consistent with a perspective that organizational learning is neither a straightforward, easy to implement, nor automatic process (Easterby-Smith et al., 1998; Antal et al., 2003).

Some writers (Fulmer and Perret, 1993; Probst et al., 1998) note that learning enables organizations to adapt to their respective environments and at the same time, develop sustainable competitive advantage. The advantage they submit is couched in the organizational capabilities associated with a resource-based view (Wernerfelt, 1984; Barney, 1991) founded on a learning, knowledge acquisition and application, and knowledge management processes. In order for learning and knowledge to coalesce in a way that provides a competitive advantage, translation or what some authors consider an organizational act of sensemaking-for-action through an interpretative process is necessary (Wood and Caldas, 2002: 26). Other distinctions of emphasis may be found in the organizational learning literature pertaining to the dichotomous perspectives surrounding what the authors describe as routine and

innovative learning processes (St-Amour and Easterby-Smith, 2003). These distinctions include, for example, single versus double loop or adaptive versus generative approaches to learning (Senge, 1990). For example, Argyris and Schön (1978) refer to single and double-loop learning. Single-loop learning can be equated to activities that add to the knowledge base or firm-specific competencies or routines without altering the fundamental nature of the organization's activities. Fiol and Lyles (1985), consider single-loop learning as lower-level learning, whereas Senge (1990) views single-loop learning as related to adaptive learning or coping. Finally, Mason (1993) sees single-loop learning as non-strategic learning.

In contrast, double-loop learning and an associated third type Argyris and Schön call deutero learning (1978) or what some authors define as triple-loop learning occurs when, an organization acquires the capability to 'learn to learn or learn about learning'. These types are considered more advanced forms because in addition to detection and correction of errors, organizational players consciously question and modify existing norms, procedures, policies, and objectives Argyris and Schön (1978). Double-loop learning involves changing the organization's knowledge base, firm-specific proficiency or routines (Dodgson, 1993). Double-loop learning is also called higher-level learning by Fiol and Lyles (1985), generative learning (or learning to expand an organization's capabilities) by Senge (1990), and strategic learning by Mason (1993). Strategic learning is defined as "the process by which an organization makes sense of its environment in ways that broaden the range of objectives it can pursue or the range of resources and actions available to it for processing these objectives." (Mason, 1993: 843).

Generative learning types, as Senge (1990) postulates, have to do with an organization's capacity to create and is team-based. It can be characterized as building blocks of experience within the firm, which are reinterpreted for future capability, and characterized by active associations. It uses generative thinking to actively integrate new ideas into a problem-finding framework (Driver: 2002), which results in connecting newly developed concepts to ideas raised throughout the organization. Senge argues that teams, not individuals are the fundamental learning unit in modern organizations and that unless teams learn, organization cannot learn. While teams are different from communities of practice, they share a common 'groupness', as such, they experience the mutually constitutive experience between social persons and the collective of forming, maintaining and transforming social identities.

Organizational learning processes are moderated by complex and dynamic social relationships within a firm (Driver, 2002). Hence, the social and organizational identity relationship between management and employees can be considered an important element of the systemic properties attributed to learning by the organization as a whole. Through interactions over time 'emergent' properties of the organizational system may shift the practice of organizational learning in favor of one learning approach over another and what SOI conflict means for higher order types of organizational learning which are necessary to produce transformational change (Newman and Nollen, 1998).

Argyris (1999) suggests that organizational learning is the subject of criticism by some authors who claim various organizations use learning as an instrument of

normative control (Kunda, 1992). Still other authors argue that organizations learn to preserve the status quo and thus learning of this sort is the enemy of organizational change and reform (Fiol and Lyles, 1985; Leavitt and March, 1988). With a view to these criticisms Argyris argues that it is constructive to inquire about the usefulness and benefit of organizational learning of *any* kind. Along this line, he identifies two prevailing branches of thought in the literature. One branch prescribes a variety of enabling devices through which organizations can enhance their capability for productive learning but does not inquire into the gaps that separate reasonable prescription from effective implementation. The other branch is skeptical of organizational learning. This branch tends to treat impediments surrounding learning mostly as a form of managerial control and ineffective organizational action as unalterable facts of organizational life (Argyris and Schön, 1996). My interest is to adopt a critical and reflexive stance in relation to organizational learning that focuses on the intersection between organizational capacity for learning and the social and political relations between organizational actors, in particular with respect to tension that arises from SOI conflict.

Dominant Epistemological Views of Knowledge in the Organizational Learning Field

Two foundational and related ideas distinguish the knowledge as practice from the knowledge as content conception – (1) whether individuals and organizations learn in ways that are the same or different and (2) learning as either a cognitive or social process. These fundamental ideas are discussed in turn.

Some theorists argue that organizational learning is about people individually learning in firms, hence, learning takes place within an individual's head and what is known is transferred from that person into the organizational context. In this view, since only organizational members are capable of learning, knowledge comes into a firm either through members' learning or from introducing a new member who has knowledge that was not previously available (Argyris, and Schön, 1978). This perspective is perhaps most widely represented by Simon's (1991: 176) statement that 'all organizational learning takes place inside human heads; an organization learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge the organization didn't previously have". A central tenet of this conception is that when learning is increased for the individuals who make up the firm membership, learning for the entire firm is increased commensurately. This perspective may be considered cognitively oriented as it is founded on individual member learning and not on a holistic process that involves the organization.

The second foundational idea that discusses learning as either a cognitive or social process arises from the first notion's conception of knowledge as object rather than as process (Bontis, 1997). It considers knowledge as an 'immaterial and a temporal substance', where knowledge can be taken out of 'context and be recorded, classified, and distributed', or implies a 'technical competence' (Nonaka et al., 1996). Some scholars hold divergent views on organizational learning from their respective fields. This view also concentrates on the technical aspects of knowledge production to enhance organizational performance (Easterby-Smith and Lyles, 2003) and it stems back to stimulus-response models (*cf:* Skinner, 1953; Hedberg, 1981). This view implies that the sole expression of learning is to advance organizational interests

(Cook and Yanow, 1993). While this view is anchored in rationality like the first perspective, it differs by its emphasis on instrumentality. This perspective employs a central premise that an organizational member's learning is viewed as an instrument to negotiate adaptation to changes in the environment Cyert and March (1963).

On the other hand, various authors posit views of organizational learning as situated and having more to do with process and practice than individual cognitive events that focus on increasing a person's knowledge store. As a conceptual frame for understanding learning, social learning theory departs from theories of individual learning. Individual learning theories assume primacy for learning as a cognitive process where an individual's 'theory in use' (Argyris and Schön, 1974, 1978) or 'mental models' (Senge, 1990) explain acquiring, transferring and applying knowledge as a 'commodity' which moves from one person's head to another. The social learning conception in the broader organizational learning discipline is sometimes built on the Cook and Yanow, 1993 paper, which orients learning as a cultural process. Easterby-Smith and Lyles (2003: 3) also credit the 1999 Cook and Brown paper as an exemplar for this mode of learning. Social learning approaches characterizes knowledge as a practice or 'knowing' rather than individual learning approaches where knowledge can be construed as a possession, or treated as 'content'.

However, it is important to connect learning and knowledge to deal with the implication that knowledge is created when something is learned. My contention is that learning and knowledge are two halves of the same coin. Learning is inextricable from knowing as learning is the act of acquiring knowledge (Cook and Yanow, 1993)

and in this pragmatic notion, knowledge is one outcome of learning (Easterby-Smith and Lyles, 2003).

Learning as Process

In contrast to the notion that learning occurs solely as cognition another stance discusses learning as a process where learning takes place through participation in communities of practice. Practice-based learning is characterized as a process where knowledge is transferred through action from a more experienced to a less experienced practitioner. This perspective, which I adopt in this thesis, views learning as taking place in everyday organizational life. It is unlike the cognitive view, which is more closely associated with classroom learning, as practice-based perspectives do not separate the learning space from the place of work (Brown and Duguid, 1991; Orr 1996; Brown and Duguid, 2002; Nicolini et al., 2003; Elkjaer, 2004). The practice-based perspective also promotes a view of learning as a capability-building process. Learning here is the preparation for the race yet-to-be run. The logic of this interpretation implies that learning practice embeds skills and competence within a community so that once an issue presents itself to a firm, capability is ready, willing and able to effectively deal with the issue.

According to Wenger (2003), social learning systems are comprised of three structuring elements: communities of practice, boundary processes among the communities and identities as shaped by our participation in these systems. He uses three characterizing traits to define communities of practice. First, communities of practice, he suggests, are "bound together by a collective understanding of what their community is about and hold members accountable through a sense of joint

enterprise", (Wenger, 2003:76). Second, members establish a community culture or shared norms and relations of mutuality that reflect their interactions. Third, communities of practice produce a shared repertoire of communal resources made up of language, stories, styles artifacts, sensibilities, tools and routines (Wenger, 2003: 80).

Social learning is considered to be important by some authors for reasons such as Yanow (2003: 40,41) outlines. She notes that this type of learning is collective and is founded on situated acts including language. Yanow (2003) further argues that social learning also engages the artifacts that are the focus of daily work-related practices and it includes the nonexclusive cognitive forms of knowledge like tacit, kinesthetic and aesthetic and the nonexclusive change-oriented situational formulations of work, learning and experience. She maintains that social learning follows on Polanyi's (Polanyi , 1966; Polanyi and Prosch, 1975) formulation of tacit knowledge: something learned when a person is focusing on something else. While the social learning orientation holds much in common with the view of collective knowledge that is founded on shared sensemaking, there are at least three criticisms raised against the approach to learning strictly as individual cognition from a symbolic interactionist perspective (Mead, 1934; Blumer, 1969; Prus, 1996; Snow, 2001). The first has to do with the emphasis of learning and knowledge in relation to its emphasis on the individual.

Individual Emphasis

Whether, as Boddy (2002: 57) suggests, organizations consist of "…people trying to influence others to achieve certain objectives"… or, as with the analogy

offered by March and Simon (1993:23) that, "Organizations are assemblages of interacting human beings and they are the largest assemblages in our society that have anything resembling a central coordinative system" or even with Morgan's (1998: 74) image of organizations as 'brains', and 'information, communication and decision-making systems', each construct of the 'organization' has at its core the nature of intersubjectivity and interaction founded on human lived experience.

Plaskoff (2003:165) identifies intersubjectivity as 'shared understanding' and the 'act of transcending the private', or individual and 'becoming one with the other' and sees intersubjectivity as, 'the key to communities and community-building'. Interactionism emphasizes the intersubjective nature of knowledge primarily in the socially constituted construction of meaning.

Cognitive-Social Constructions of Knowledge

Theorists who adopt polar opposite views on learning and knowledge as either cognitive or social tend to debate the initiating sequence and epistemological contribution between the socially mediated cognitive processes (for example Weick, 2001; Nonaka and Takeuchi, 1995) in relation to learning and the socially constituted interpretive practices which inform joint action (Blumer, 1969; Berger and Luckmann, 1966; Nicolini et al. 2003). This debate frames a second criticism of the view of learning and knowledge as solely an individual-cognitive activity. Snow (2001) offers additional principles that complement and broaden Blumer's (1969) seminal work on symbolic interaction. In relation to this discussion, Snow's orienting principle of 'interactive determination' is foundational to the criticism leveled against the prominence placed on individualistic-cognitive perspectives, which contradict

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practiced-based approaches to organizational learning. Snow offers a different idea to engaging in the 'chicken and egg' debate of the psychologically founded idea that knowledge is resident first in one's head, and then shared through practice-based learning. His thinking also differs from the opposing sociologically-based argument that the originating knowledge was socially informed in order for it to become knowledge. Snow (2001: 369) maintains that for, "…all practical purposes, neither individual or society nor self or other are ontologically prior but exist only in relation to each other; thus one can fully understand them only through their interaction, whether actual, virtual or imagined."

The cognitive - individualistic notion of knowledge in a person's head to be acquired, transferred (into another person's head) and stored as if knowledge is an asset or commodity, runs contrary to the important interactionist premise that knowledge cannot be 'known' without first some social context for making sense of it and that both cognition and social interaction are necessary because neither are ontologically prior (Snow, 2001) and thus on their own insufficient to create knowledge. In relation to knowledge as a function of a coexistence between cognitive informed by and contingent upon intersubjective interaction, Goffman (1967: 2) argues that its "…proper study…is not the individual and his psychology, but rather syntactical relations among sets of different persons mutually present to one another."

Both theorists highlight the important connection between knowledge and the socially constituted, intersubjective nature of learning. For Snow and Goffman, the learned cannot be separated from the knowing and both must take place in a setting of human lived experience in order to be constituted, valued and to realize the requisite

sensemaking which is necessary for organizational learning. Finally, Berger and

Luckmann (1966:3) assert that within the very essence of sociology of knowledge,

which is concerned with the analysis of the social construction of reality, "all human

'knowledge' is developed, transmitted and maintained in social situations".

Weick (1991, 1995) contends that given a response to the same stimulus, an

organization will adopt a sufficiency stance and respond the same way to a similar

past stimulus. Weick (1991: 117) theorizes his argument along the lines of

institutional theory and suggests that 'organizations are most notable for the sameness

of their responses than for the difference in their responding' and that the sameness

results from common 'practices' and 'socialization' as well as from the 'establishment

of routines'. Weick's contention mirrors those of authors who argue that

organizations are 'dominated by routines (Cyert and March, 1963; Nelson and Winter,

1982) in which - actions stem from a logic of appropriateness or legitimacy, more

than from a logic of consequentially or intention' (Levitt and March, 1988:320), and

that, 'organizational actors are more habit driven and imitative than rational'

(Moingeon and Edmondson, 1996). Thus, for organizational learning to be of value

within a firm intentionality (Elkjaer, 2003) on the part of management is needed and

the enabling processes for socially constituted, practice-based processes for

knowledge development seem to offer the greatest promise to produce learning in a

manner that takes identity-based tension, with inextricable power relations, into

account (Ellemers and Rink, 2005).

Blumer (1969: 3, 4) maintains that two traditional presentations of meaning are frequently offered. First, reflecting the tradition of 'realism' in philosophy, meaning emanates from the thing itself and thus, there is no process involved in the formation of meaning – hence a chair is clearly a chair in itself. The second traditional perspective is founded on isolating the particular psychological elements that produce the meaning, which informs the psychological or individual-cognitive orientation, such as 'sensations, feelings, ideas, memories, motives and attitudes'. These versions of meaning differ from symbolic interactionism, which views meaning as having a different source. It does not view meaning as emanating from the fundamental makeup of the thing that has meaning, or arising from an individual's coalescence of psychological elements. Instead, symbolic interactionism sees, 'meaning as arising in the process of interaction between people. The meaning of a thing for a person grows out of the ways in which other persons act toward the person with regard to the thing. Their actions operate to define the thing for the person and thus 'meaning is seen as social products', as creations that are formed in and through the defining activities of people as they interact (Blumer, 1969: 5).

Blumer (1969) cautions about a premature conclusion that the meaning derived through interaction is the meaning that is applied in some associated action. To inform action, a process of interpretation occurs whereby a person first engages in a self-interactive communication process to define understanding. Second, the actor 'selects, checks, suspends, regroups and transforms the meanings in the light of the situation in which they are placed and the direction of their action, or 'what I will do'. Meanings play their part in action through a process of self-interaction but critically,

this interaction cannot be performed individually, as with the psychological view, if joint action, shared sensemaking or collective meaning is to occur. Symbolic interaction, thus sets out to balance the agency-structure, micro-macro dichotomy. It does this by switching emphasis away from knowledge as an objectified and separate construct and instead centres on interaction between people in everyday experience. Power relations are central and not marginal in this context as social persons negotiate their identities within communities and in times of change which requires the importation of new knowledge, between communities.

The literature on knowledge transfer is filled with various, often dichotomous, conceptions of enabling the process of transfer by concentrating on knowledge as object. For example knowledge 'type' either tacit or explicit, von Krogh, Ichijo, Nonaka; 2000 or 'situatedness or proximity' of actors involved in the transfer process (Sole and Edmondson, 2002), as an enabling or inhibiting characteristic, while still others Dixon, 2000 on the 'method' of transfer (near transfer/far transfer) as well as the retention in databases or curation of knowledge (Davenport and Prusak, 1998). With the exception of Sole and Edmondson's (2002) concentration on situated knowledge as a function of proximal relations, these views tend to decentre the social processes that mediate knowledge creation and transfer, such as situated practice. Instead, a perspective that draws on the attributes of knowledge, while at the same time, attending to the importance of mediating social processes may provide a more complete picture of the factors that enable or inhibit knowledge creation and transfer. This orientation is consistent with Orlikowski's (2002) view that as knowledge and identities are simultaneously constituted among the various areas of emphasis about

knowledge itself, it is also important to concentrate on the social processes that enable actors to *enact* knowledge.

In this notion, personal and organizational learning are not separated constructs and value is placed on an actor's learning rather than dissociating it from the context of the enterprise. The individual-cognitive view de-emphasizes the importance of knowledge in culture, and conceives of culture as something an organization *has,* rather than what it *is* (Martin, 1992, 2002). This perspective considers learning of a particular curriculum (Fenwick, 2001) as a common goal for all organizational members. As such, this view leaves little room for the concepts of personal learning preferences or within-firm variance. This perspective suggests that members share the same levels of support and face the same obstacles as others (Edmondson, 1999, 2002). Further, drawing on MacKeracher and McFarland's (1994) study in women's workplace learning, Fenwick argues that, "complexities in relational learning...contradict many learning organization assumptions", (Fenwick, 2001: 80). She identifies various effects that diverge from the supposition of wide, homogeneous learning. Fenwick states that, "...workplace learning has been shown to vary dramatically according to...intentions, disjunctures they apprehend, their positionality and relations in the workplace community, their values of knowledge and view of themselves as knowers", (Fenwick, 1996).

According to these authors and in the context of this criticism, the knowledge as object approach to learning overlooks pluralist, multi-vocal and multi-cultural approaches because it assumes all members learn in the same way. Finally, this perspective pays little attention to social identity described in this context as the

cultural framework in which learning takes place (Hatch and Schultz, 1997). For example, Burke, conceives identities as, "...meanings a person attributes to the self. They are relational, social and placed in a context of interaction and they are a source of motivation" (1980: 18).

Assurance of Learning as an Outcome of Practice

A final criticism has to do with the portrayal of organizational learning as a natural outcome of a community of practice's action repertoire. In the conception of learning as natural, knowledge is created through a four-part process, which includes socialization, where a 'place or field' (Bourdieu, 1977; 1990) enables people to share experience. Externalization or metaphorically depicting tacit knowledge is the second part. The third and fourth parts are referred to as the combination or assemblage of explicit knowledge into systemic specifications and internalization, which involves explicit-to-tacit knowledge conversion or learning by doing (Nonaka et al., 1998). This rational-instrumental outlook on knowledge creation with a view to 'understanding, managing and measuring' knowledge (von Krogh et al., 1998), fails to consider what it means if organizational actors choose not to participate in such knowledge creation and propagation activities (Child and Rodrigues, 2003). Drawing on Penrose (1979), Child and Rodrigues (2003: 541) argue that, "Groups can acquire identity by developing a unique knowledge about ways of working successfully, and be reluctant to give this away". As such, learning may not be rational but more of a relational notion as I argue in this thesis in contrast to the rational-instrumental conception.

Other authors maintain that in order for 'organizational' learning to occur, learning must be tackled as an intentional process. For these authors, organizational learning requires an environment that is suitable for learning that depends on a 'willingness' and 'intention' to learn (Dixon, 2000: 18) and 'significant commitment' (Carroll et al., 2003: 596). Intention and commitment are significant aspects of learning without which, organizational learning could be compromised or become the exclusive domain of the individual learner (Cyert and March, 1963). I argued earlier that individual learning in its own right is not a particularly helpful construct to understand organizational learning as issues with the individual learning approach can introduce knowledge transfer problems (Easterby-Smith and Lyles, 2003). Knowledge transfer issues are not of the same level or substance in practice-based settings because of the situated nature of the learning. A 'learning from the experience of adaptation' that is founded on learning impetus from both within and outside an organization may offer effectiveness in learning capabilities by expanding the boundaries of the firm's experience. At the same time, the requisite 'intention' connected to organizational learning in a practice-based setting is offered here as a construct for learning that balances individual growth and development with a firm's strategic ambitions and goals.

Dixon (2000: 18) suggests that even if knowledge of how to enhance performance or implement new practices emerges within an organization, that knowledge is not always effectively transferred within the enterprise. In fact, it often is not moved *across* firms or even *within* an organization itself.

On this point, Dixon argues:

> In fact, it takes a certain amount of intention to create knowledge out of an experience. This involves a willingness to reflect back on actions and their outcomes before moving forward. In an organization with a bias for action, the time for reflection is hard to come by.

Following on the work of pragmatist, John Dewey (1933), Elkjaer further reinforces the importance of organizational learning as a conscious and intentional undertaking (1999:84, 85; 2003). Elkjaer argues that learning is not a passive endeavor. She expresses concern with the potential loss of intentionality for learners or the ability to actively engaged in purposeful and meaningful learning processes in the situated learning approach. Active participation is required and moreover, 'reflection is a critical component of that participation'. Elkjaer suggests that both acting and thinking are necessary conditions for learning. The emphasis on the individual within the cognitive-individualistic notion of learning does not seem to sufficiently explain intersubjective learning and knowledge necessary for practice-based organizational learning. Thus, from a pragmatic view and consistent with Elkjaer, (1999, 2003) and Dixon, (2000), while learning may occur naturally within an organization, for the learning to be of strategic value within a competitive business environment, some level of coordinated intention would need to be present among actors.

Although 'organizational learning' may be criticized along various lines, I do argue that it also poses benefits for organizations and its members (*cf:* Coopey and Burgoyne, 2000; Easterby-Smith and Lyles, 2003; Dierkes et al., 2003). For example, firms may better realize strategic interests because members have effectively learned practice and members can experience personal growth and development. I argue that

better understanding learning as a social process in light of social and organizational identity tension may facilitate the realization of potential benefits for the firm and its members from the very process of learning. Better understanding might also lead to deeper insights about learning as an organizational phenomenon in particular in practice-based settings.

Social versus Individual Learning Theories

This discussion draws on the Cook and Yanow (1993) paper that presents an organizational learning perspective informed by organizational culture and the Cook and Brown (1999) paper that reveals the epistemological distinctions between knowledge as possession versus knowledge as practice (Easterby-Smith and Lyles, 2003). These perspectives are used in this work since they share close connections and draw heavily on situated learning theory. Possession refers to an objectified notion of knowledge or a view of knowledge as explicit content that can move from one person's head to another's. In contrast, the epistemology of practice means that knowledge is portrayed as actors 'doing things together' and through that experience an actor becomes a full member of a community. Knowledge as practice connotes learning as a social process where actors are continually engaged in the formation of group social identity (Wenger, 1998).

My view of organizational learning is situated in the realm of 'social learning theory' (Elkjaer, 2003), or what has been typified as a 'practice-based approach' (Nicolini, Gherardi and Yanow, 2003), 'situated learning', (Lave and Wenger, 1991) and 'learning as cultural processes' (Cook and Yanow, 1993; Henriksson, 1999; Yanow, 2003). As a pragmatist and symbolic interactionist, my preference is for the

term *social learning theory* because the term distinguishes a connection with the field

of social theory, while conveying the context for learning within intersubjective lived

experience of everyday life. This approach to learning aligns well with the study of

social identity and learning. My perspective of organizational learning is consistent

with Lave and Wenger's (1991: 53) ideas that, "...learning involves the construction

of identity", because the learner becomes a different person in relation to the system

of relationships within which the learning takes place (Coopey and Burgoyne, 2000:

870).

Furthermore, I define learning as being different from the view that stems

from situated cognition which emphasizes the individual as they become a full

member of a practice (Lave and Wenger, 1991). The practice based/situated view of

learning and knowledge then, does not separate learning from what people do in their

everyday practice. This perspective is connected to social learning theory, which

itself is the subject of a theoretical divide. One group of authors contends that social

learning is founded as a historically informed socio-cultural process (Blackler, 1993;

Engeström, 2001). Another group suggests social learning is a construction of

intersubjective social interaction among co-participants (Lave, 1993: 17; Elkjaer,

2003). Elkjaer (2003: 45) puts the distinction this way:

> ...two views of context represented in social learning theory in organizational
> learning literature. The two understandings of context are whether context is a
> historical product of which persons are a part, or whether context is
> constructed as persons interact.

Symbolic interactionist theory, is consistent with Elkjaer's latter conception of

social learning theory in that interactionists understand meaning, hence the substance

of learning, as something made intersubjectively as people engage in everyday

activity. Further, this view is closely aligned with the perspective of learning as 'participation'. Lave's (1988) earlier work stems from a situated cognition perspective which presents learning as a process where ideas are exchanged in an attempt to solve problems through an active engagement. In this view dialogue with others in the community establishes and produces meaning systems among learners (Ghefaili, 2003). However, the concept of learning as situated cognition poses two limitations that arise in conditions of transformational change.

First, because change affects the context of the community in respect to its situation or action repertoire, it has a bearing on the community's sense of self. Change provokes identity inquiry at the community level. Issues of 'who are we?' and 'who should we become?' are of equal consequence as the social person's inquiry as to their sense of self as part of the community that is experiencing a change. Situated cognition as a bedrock precept of situated learning does not adequately deal with the discontinuity at the level of the community's identity because of its focus on the individual becoming a full member of a practice in a setting where change happens only at incremental levels. Change in the practice repertoire is one thing but change that has implications for the essence of a community's practice, such as the type experienced when transformation occurs, is another. Situated learning theory is largely silent on change of the latter type.

Second, situated cognition emphasizes an interaction scope within the community's boundaries. Transformational change can have wide-ranging effects on the constellation of communities (Brown and Duguid, 1991) which make up the firm (Pettigrew et al., 1992; Burnes, 2005). The emphasis on learning as a function of an

actor's becoming part of a community does not adequately explain the idiosyncratic actions that take place at the level of the community as they attempt to navigate in conditions of transformation. These complex processes, while locally contingent, are inherently social, since a community operates as part of a wider constellation of social systems in organizations (Brown and Duguid, 2002; Wenger, 2003). Consequently, the level of analysis at the individual level can only relate a partial understanding of what identity and learning means for a in conditions of contextual change.

At the same time, context provides a historic reference for making sense out of the present. Interactionism posits that in this way the past or historic context does not *cause* acts in the present, rather the past is used to *define* present action and action depends on the current situation. Once action takes place it then becomes part of our past (Mead, 1934; Charon, 2001). Consequently, learning is situated in a context of time, place and situation through practice. Hence, as an interactionist, the conceptualization of social learning theory that I adopt fits with the notion that while the past is important as a sensemaking cue, the past on its own is not an entirely viable construct on which to base present action. This notion draws on Fischoff and Beyth's (1975) study, which showed that people consistently overestimate the predictability of past events, once they know how they turned out. As well, Lanzara's (1983) findings support his claim that, "In a world which has suddenly become turbulent, unreliable, unpredictable, and where the value of the 'precedent', once indisputable, is becoming of little help for present and future action". This is particularly significant in an organizational context when considering the turbulent, changing nature of environments and the need for dynamic adaptation.

Learning in this conceptualization may be defined in the context of social learning theory as, "...the acquiring, sustaining, or changing of intersubjective meanings through the artifactual vehicles of their expression and transmission and the collective actions of the group (Cook and Yanow, 1993: 384; see also Weick and Westley, 1996; Corley and Gioia, 2003; Elkjaer, 2003). It is similar to Nelson and Winter's (1982: 63) assertion that, " 'knowledge' is an attribute of the firm as a whole" and, "...not reducible to what any single individual knows". This learning orientation follows on a cultural approach or 'situated meaning' for actors engaged in organizational learning activities, thus the group social process as learning and not the individual is the primary level of analysis (Cook and Yanow, 1993).

By emphasizing learning as a process whereby an actor learns to become part of a community in relatively static conditions that only involve incremental changes does not seem to deal with the ambiguity and discontinuity that communities experience in contexts of major change. To conceive of learning as bound by incremental change (Gherardi et al., 1998) suggests that community's fail to experience higher order forms of learning necessary to undergo transformational change, which contradicts the dynamic capabilities associated with communities of practice as interactive constitutions (Brown and Duguid, 2002; Yanow, 2003). Further, like Coopey and Burgoyne (2000: 872), I conceive of learning as, "a broad concept, concerned not so much as an exclusive pursuit of knowledge acquisition and protecting intellectual capital, as with understanding who we are and what potential we have to contribute to our own and other's development". Finally, this orientation of learning is consistent with symbolic interactionism since in this perspective people have images of themselves that are shaped (and shape) meaningful social interaction.

These images influence how meaning is assigned and how people engage in action though an ongoing process of definition (Prasad, 1993:1404).

Interconnectons Between Organizational Learning and Change

To this point I have presented an image of organizational learning and change as complex constructs. I argue, in line with some authors, that the two constructs are inextricable and that organizational learning can facilitate change (Salaman and Asch, 2003; Burnes, 2004). Further, change can lead to learning. For example, Dixon (1999) cites Friedlander (1983: 194) who says 'Learning is a process that underlies and gives birth to change. Change is the child of learning'. Dixon (1999: 3) states that, "Change is preceded by organizational learning when, for example, an organization...envisions a desired future toward which it chooses to strive. Organizational learning can lead to change which can lead to more organizational learning". Salaman and Asch (2003: 167) suggest that certain approaches to learning that draw on existing organizational resources and capabilities and employ collective, dialogue-based processes as, "...collective responses as new knowledge is invested in new organizational patterns or routines...". Further, following on Pettigrew and Whipp (1993), Burnes (2004: 301), states that, "...collective learning is one of the main preconditions for sustainable change". These views which describe the potential for learning as an enabling process of change is consistent with the approach I take in this project. As such, it requires that I adopt an integrated perspective of the two constructs to make sense of organizational learning and change. I view learning and change as complex interrelated constructs.

The literature is inconclusive on what learning to change and learning from change means. Various reasons are offered for the different ontological and epistemological frames such as who are learning, the individual or the firm, and whether change more appropriately a matter of adapting to a turbulent environment or exploiting existing capabilities. From this analysis of the literature to this point, it is clear that learning is an important organizational capability (Eisenhardt and Martin, 2000; Zollo and Winter, 2002). While difficult to facilitate, organizational learning in the context of change can enlist a cultural capacity for action and based on mutual benefits for both actor and organization, engender a collective commitment to an organization's goals, and not only to its rules (Salaman and Asch, 2003). Similarly, Moss-Kanter (2003: 243) notes that a capability for organizational learning facilitates change because companies with an infrastructure that supports learning tend to have 'strong communications across functions', which facilitates widely shared information between firm actors and from external partner relationships. She suggests that without such a supportive infrastructure, the full potential for importing knowledge and ideas from external relationships and sharing lessons within a firm, limits learning and the capacity for stimulating change. My research, however, examines SOI tension as a mediating factor, which may prevent or facilitate organizational learning in particular, in situated contexts where members are experiencing major change.

Situated Learning and Identity

Lave and Wenger, (1991: 53) state that, "…learning involves the construction of identity" as a learner becomes a different person in the context of the relationship

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systems within which learning occurs. Coopey and Burgoyne (2000) suggest that the social identity-learning relationship is constituent within the 'hermeneutic, interpretive' approach and cite Addleson's (1996: 35) conception that it is, "...how people constitute their understanding to explain organizational problems and how they are solved". Coopey and Burgoyne (2000) note that this treatment of learning resonates with Lave and Wenger's (1991: 33) perspective on, "the relational character of knowledge and learning...the negotiated character of meaning, and the concerned nature of learning activity for the people involved". Seen this way, learning takes on a pragmatic orientation as people deal with problems and dilemmas of everyday work life, and as they engage in solution seeking interaction. Coopey and Burgoyne (2000: 872) note that in this mode of learning, "We are caught up in a lifelong quest for identity, a narrative-of-self, created only by reference to others"...

> Hence, 'learning' is the broad concept, concerned not so much with knowledge acquisition and protecting intellectual capital, as with understanding who we are and what potential we have to contribute to our own and others' development
> This conception of learning falls within what certain authors refer to as

'practice-based' (Nicolini, Gherardi and Yanow, 2003), 'situated learning', (Lave and Wenger, 1991; Elkjaer, 2003) and 'learning as cultural processes' (Cook and Yanow, 1993; Henriksson, 1999; Yanow, 2003). The orientation of organizational learning in this thesis draws on the situated approach (Lave and Wenger, 1991). Lave and Wenger's (1991) theory of situated learning is a conceptual social framework for understanding how learning processes take place in firms as legitimate peripheral participation. It challenges the assumption of knowledge as solely something that is learned cognitively and contests the notion that learning is the reception of knowledge as a process that is separated from engaging in social relations. They propose that learning takes place through a process of participation in communities of practice and

that participation is at first legitimately peripheral but that as engagement and complexity increases so do levels of participation in a changed state of identity (Lave and Wenger, 1991). A significant aspect of situated learning is that a newcomer begins to identify with a particular community as he or she engages in practice through a process of legitimate peripheral participation. Legitimate peripheral participation refers to a dual construct. Legitimacy is concerned with *access* to practice including tools, artefacts and technologies *in place* (Lave and Wenger, 1991).

Here if an actor only ever engaged with proxies for action or uses tools of a practice as substitutes suggests a lack of competent practice as compared to a full member of a community who continuously engaged with actual tools and technologies that are necessary for 'different levels of learning' in a context of an institutionalized journey (Gherardi et al., 1998:279). 'Periphery' denotes a 'path' to practice as a newcomer moves from the outside boundary into the core of practice through a process of engagement and joint action with actors with different practice-based experience (Lave and Wenger, 1991; Gherardi et al., 1998: 279). Identification is mutually constitutive at various levels, including at the level of the social person in relation to the community and *amongst* communities. However, situated learning theory makes sparse mention of the social identity of a practice or attendant influencing effects from significant reference group(s) or communities on a target community of practice's social identity. Instead, the situated learning literature focuses on the individual's identity as he or she becomes a full member of a community of practice (Lave and Wenger, 1991; Gherardi et al., 1998; Wenger, 1998).

In social identity theory conceptualizations, reference groups are shown to influence peoples performance perceptions and evaluative criteria, when communities invoke social comparison and self-categorization as in-group members compare themselves to other groups. These social processes are nested in the constituent elements of social identity theory and refer to situations when members of a particular group compare abilities and outcomes against those of another significant group (Turner and Oakes, 1989; Ellemers and Rink, 2005). As social entities (Gherardi et al., 1998), communities of practice would be subject to comparison, categorization and identification (Tajfel and Turner, 1986). Yet situated learning theory emphasizes the 'individual-community' aspect of the social dimensions *within* communities of practice as the individual becomes a full member of a particular community (Brown, Collins and Duguid, 1989; Lave, 1993; Lave and Wenger, 1991; Nicolini et al., 2003). As I will argue, in situations of major change, the emphasis on the individual 'in community' excludes the important impact and attendant effects on a particular community from the constellation of communities and groups within the broader social system in which that community operates. These comparative aspects of identity formation and maintenance are amplified in conditions of change (Ellemers and Rink, 2005). The perspective adopted in this thesis proposes that communities of practice do not operate in isolation from other communities or the broader organization of which they are a part. This conception argues in favour of a community of practice as a social collectivism, which makes meaning through action, and symbolic representations of the world through ongoing relations within and outside its boundaries (Brown and Duguid, 1991, 2002; Nicolini et al., 2003). Thus, social identity for a community of practice as influenced by both individual members and a collective sense of identity. I will propose that this social production of identity

is as important as an actor's personal identification as he or she engages in practice, yet this aspect of identification has not been sufficiently considered or empirically supported in the situated learning theory discussions.

Situated learning theory is rooted in paradigms which emphasize perspectives and interests in cognition, thus in its early inception the theory was referred to as situated cognition (Resnick, 1987; Gherardi et al., 1998; Brown et al., 1989; Weick, 1995, 2001). Cognition centres on an individual's knowledge. Brown, Collins, and Duguid (1989) argued that knowing and doing are mutually constitutive and reciprocal. In their conceptualization of situated cognition, knowledge is situated and progressively developed through activity. They termed this process 'cognitive apprenticeship' (1989: 37). Greeno and Moore's (1993: 50) argument that, "situativity is fundamental in all cognitive activity", reinforces this perspective. Central to this theory is the contention that participation in practice constitutes learning and understanding. Situated cognition views knowledge as developed through interaction and social relations within practice-based communities (Brown et al.,1989). Although much of the writing on situated learning more recently blends learning and knowledge as cognitive and social processes, this early work might have influenced cognitive theories away from a similar cross fertilization where theories focused equally on developing knowledge while developing social identity. Rather than emphasizing cognition in situatedness, or Lave's (1997) notion of social persons in community "knowing about", social identity theory with its interactionist roots, also conceives of identity formation as a construction of a whole person as community member and of the social identity of that community.

Limitations of Situated Learning

A pluralistic approach to a more balanced emphasis on cognition and social identity formation within community settings also shifts the focus on learning in relation to communities of practice. It argues for a different perspective of "situatedness" and what constitutes interaction. This broadened view is consistent with Barab and Duffy's (2000) argument, which reflects what Lave (1997:67) referred to as *situated social practice*. In this conception, there are no boundaries between the individual and the world; instead, "learning, thinking, and knowing are relations among people engaged in activity *in, with, and arising from the socially and culturally structured world*" (Ibid.) [Italics in the original]. From this perspective, both meanings *and* entire identities are shaped by and shape an experience. Intersubjective interaction here, constitutes, and is constituted by, all of the components—individual, content, and context with no delimiting boundaries between the development of knowledgeable skills and the development of identities. Both co-arise as actors participate and become central to a community of practice. Because social identity transcends the personal and the social to include the constellation of communities and groups in relation to an active community, this conception also helps to enrich what is meant by the term "situated" in situated learning theory (Barab and Duffy, 2000).

The term situated can be understood as having two meanings. First, it can reference the notion of proximal relations, which are integral to practice-based settings where learning practice, and by extension, learning identity takes place. This treatment of situation emphasizes location or place (*in situ*) and practice as an ongoing set of actions central to the interests of the community. I suggest this view

tends to be a dominant characterization of situated learning in the extant literature

(E.g. Lave and Wenger, 1991; Gherardi et al, 1998; Gherardi, 2006).

A second view of situatedness takes into account a community's history, intentions and multiple, evolving identity. It represents situations as 'state of affairs' or a 'set of circumstances' where context is central and a community learns its practices both from within and among the constellation of other communities in the social system of a firm. In this view, a community is influenced by practices within its boundaries, and also by those from outside, as it engages in practice and negotiates conditions of change. Broad patterns of action within a community's social system as well as specific episodes are taken together as the contextual framework for practice. This perspective assumes ongoing change and, sometimes change that necessitates transformation, rather than assuming the primacy of a situation as defined in its 'moment-by-moment particulars' (Nardi, 1996:46).

A problem arises with the first conception in that it implies a static orientation for a community of practice. It infers that communities activity relations are exposed to little variation from the broader circumstance in which a practice operates (e.g. repairing photocopiers, Orr, 1996; or processing insurance claims Wenger, 1998) from outside its boundaries. For instance, Brown and Duguid (2002:105) reference Orr's (1996) study of photocopy repair technicians as one where the reps, 'developed a collective pool of knowledge and insight on which they drew. Where, then, the reps may have had similar cases of tools, their knowledge in some way resembled the pool of parts they held collectively. All contributed from personal stock, and there was a great deal of overlap, but each had his or her strengths, which the others recognized

and relied on'. While there are clear notions of community learning and collaboration, this view of situatedness emphasizes an internal focus. Hence, in this view the 'present situation' is prominent with little influence from actors redefinition of the practice situation through processes of interaction and identification as influenced by broader activity patterns with adjacent communities. In this example, sparse mention is made in Orr's research about the constellation of communities the reps engage with such as engineering or manufacturing. Change is emphasized as change within practice in incremental ways. Communities in Orr's study are focused on improvement to practice and process and relatively little attention is paid to change that might affect the practice itself. For example, photocopiers in that era were experiencing large-scale growth at a time when technology was shrinking the size and improving the performance of the machines (Kipnis and Huffstutler, 1990).

A reoriented view of situation and interaction combines the newcomer's individual identity, as he or she becomes a full member of practice, with a community's identity as it becomes co-produced within the constellation of adjacent communities in the organization. It shifts the emphasis from exclusively situated cognition to a knowledge and social identity characterization, which transcends the personal-newcomer versus social-broader system boundaries. Major change triggers the salient features associated with this expanded view but frequently, the literature deals with communities of practice without exploring their experiences in contexts of transformational change (*cf.* Gherardi et al., 1998). Finally, this view suggests that legitimate peripheral participation on its own is an insufficient framework to explain identity negotiation as a process of learning when communities experience transformational change, because it is implausible that as social constitutions,

communities would be exempt from in-group/out-group categorization and comparison effects - foundational constructs of social identity theory.

Lave and Wenger's (1991) situated learning theory argues that learning a practice is situated, which involves becoming a member of a community, 'thereby understanding its work and its talk from the inside' and where, (in reference to Wenger's (1998) study), 'knowledge traveling on the back of practice (was) is readily shared' (Brown and Duguid, 2002: 126). Thus, situated learning theory is characterized as interaction among community members where learning is an outcome of members engaged in practice and processes of ongoing relations who acquire and create new knowledge. Assuming legitimate peripheral participation is truly enacted, this conception positions learning as a conflict free and ongoing outcome of practice relations. For example, Brown and Duguid (2002) reference Gate's (1995) study of computing engineers where one engineer states that, "There was amazingly little argument or fighting". The authors elaborate on this point and suggest that in these communities of practice, "...people involved ignored divisions of rank and shared, "...a common working identity" (Cited in Brown and Duguid, 2002: 127). This view implies that if all of the requisite characteristics of situated learning are properly performed, not only is practice conflict free, but learning is an ongoing outcome as communities of practice engage in activity routines. Further, it ignores the potential where, because of social and organizational identity conflict, knowledge flows may be withheld. Asymmetric power relations within and between communities and other social entities, including the broader organization, is a distinct aspect of situated learning (Gherardi et al., 1998). Power and conflict also underpin the argument made by various authors that identity-based conflict can *impede*

organizational learning (Brown and Starkey, 2000; Weick, 2001; Child and Rodrigues, 2003).

Finally, Lave and Wenger's (1991) emphasis on situated learning in apprenticeship communities of practices or pedagogical settings is decentred in this thesis. Communities of practice in this work are contextualized and located in hierarchical settings that are consistent with many aspects of formal organizational structure (Boddy, 2002). Everyday human experiences, like being appointed to a new position, or moving work locations, might reveal connections between social identity and change. Social identity as a multiple, evolving construct is both mediated by change such as a new role or life change and also serves to mediate change. People 'become' who they are in the newly changed role or situation and thus actors become 'supervisor' or 'teacher'. Social identities, as such, are reinforcing. When a person assumes the identity of a group he will work towards maintaining the identity of that group or community (Martin, 2002), which in turn influences sense of self. This conception of how identities are learned and how learning reinforces identities is consistent with Orlikowski's idea that, '...identity is an ongoing accomplishment, enacted and reinforced through situated practices' (Orlikowski, 2002:270). Orlikowski's notion of reinforcement through situated practice is significant in this work particularly because it accounts for a way to link the acquisition of social identity and its maintenance *through* a process of learning. Highly salient social identities are subject to erosion if an actor ceases to be engaged in ongoing practice relations (Stets and Burke, 2000).

In contrast, identification that is ongoing and maintained through intimate practice serves to reinforce salience. Hence, as actors acquire identity through situated practice, they also reinforce that identity through social relations that also involve processes of learning. A collective learning approach founded on proximal relations, where people are doing things together over the course of time also implies the use of greater levels of tacit knowledge (Brown and Duguid, 1991; 2002). Consequently, learning approaches (individual – collective) and the mode of knowledge (explicit – tacit) can serve as ways to understand how social identity can be reinforced in the context of practice relations. However, the next section illustrates that these relationships are underrepresented in the organizational learning literature.

Gap in the Organizational Learning Literature

To this point I have argued that learning organizational identity is both practice-based (Wenger, 1998) and in situations of social and organizational identity-based conflict and tension, also process-based. I have also presented versions of transformational organizational change, which is linked to advanced forms of organizational learning, such as double-loop learning (Salaman and Asch, 2003; Burnes 2004). I discussed that while different writers make strong links with social identity, organizational learning and change, each element is widely debated and the subject of divergent views. The extent of the divergence also suggests that a holistic understanding of the relationship and dynamics between the concepts is also low and research on explanatory potential contingent on the combined interrelationship of these factors is also scarce.

Dierkes et al., (2003: 11) state that, "...the most comprehensive and direct contributions to organizational learning are to be found in management science". Since organizational learning is discussed in the social sciences, management and business journals, I conducted a search of two databases that reflect these various disciplines[8]. According to its description on the Lancaster University Library site, Academic Search Premiere is the world's largest multi-disciplinary database containing more that 4,500 publications with backfiles to 1975 for over one hundred journals.

The second database, Business Source Premier is described from the same source as the world's largest full text business database with nearly 8,350 scholarly business journals and other sources with coverage that includes virtually all subject areas related to business as far back as 1922. I conducted basic searches in both databases for organizational learning, organizational learning and identity and organizational learning and social identity. Then I searched for these terms as linked concepts with organizational change. I also reversed the word order to account for variance in the way that titles may have been catalogued. The following table shows the results as number of 'hits', the vast majority of which are made up of journal articles.

Table 3.1 – Database Comparison Showing Number of Items Containing Identity or Social Identity in Relation to Organizational Learning and Organizational Change

Database	Organizational Learning	Organizational Learning and Identity	Organizational Learning and Social Identity	Organizational Learning, Social Identity and Organizational Change
Academic Search Premiere	698	6	0	0
Business Source Premiere	2896	59	9	7

[8] Search conducted 26 September 2005.

Conference paper titles are the second most popular item. Although meant only to provide a sense of the relative amount of discussion in the literature, I can conclude from this examination that first, organizational learning is an important topic in the broad context of management and social science literatures. The large number of 'hits' demonstrates that 'organizational learning' is a subject at the centre of extensive writing and debate. For example, organizational learning was the core subject of two recent major compendia. Together the two handbooks devote 74 extensive chapters to the topic (see Dierkes et al., 2003 and Easterby-Smith and Lyles, 2003). One interpretation of the low number of hits for 'social identity' 'change' and 'learning' could be that the subjects might not be of significant interest to scholars. However, the hits that refer to the combined topics are taken from journals such as 'Academy of Management Journal' and the 'Academy of Management Review' and based on their standing in the management field, journals such as these do publish articles of high interest to scholars.

Because of their view of learning as a social and practice-based process, different authors argue that organizational learning can be an effective capability to aid an organization in navigating and making sense of organizational change (Pettigrew and Whipp, 1993; Salaman and Asch, 2003; Burnes 2004). However, as the database review shows, in these discussions on situated learning and organizational change, connections with SOI are mostly implied, and there is little reference in the organizational learning literature to the association between learning, SOI and transformational change (Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Ullrich et al., 2005). Consequently, I propose that a gap exists in the literature

concerning these interrelated topics and in particular, on the implications identity tension holds for organizational learning.

Conclusions

This chapter presented a discussion of the main literatures that relate to my project. Because organizational change, organizational learning and social and organizational identity are broad complex topics, I attempted to focus on the key aspects within the literature that are germane to the phenomenon of interest. Overall, it reviewed the relevant literatures to summarize existing works on learning and social identity, critically evaluated the work on learning and made some conclusions about the gap in the literature that I argue exists and what this research may contribute in relation to that gap. Social identity is revealed as an important mediating factor in organizational learning, yet there is a divergence in perspective about the implications for learning in light of SOI-based conflict (Brown and Starkey, 2000; Child and Rodrigues, 2003; Corley and Gioia, 2003). Divergent views may be seen as a single step in the evolving journey of exploring identity and learning and perhaps illustrative of the deep and profoundly complex nature of these constructs, (Albert et al., 2000). On the other hand, the difference of opinion suggests that the scholarly community is not entirely consistent on what it means for learning when organizational members experience identity conflict.

Further, as the discussion on the divergent perspectives relating to individual-cognitive versus social learning and knowledge as object as opposed to process shows, much of the focus in the learning literature has to do with the act of learning

and its outcomes. This emphasis risks freezing learning and knowledge as things to be examined or potentially as ends in themselves. I argue that rather than adopting separate learning and knowledge paths (individual-cognition versus social-practice-based), an interactionist paradigm opens the space for understand the relational properties that could shed light on the implications for learning in conditions of SOI-based conflict because it transcends the individual-social polarization. I propose that the practice-based view is a well-suited approach in which to study learning and identity interrelationships since identity itself is a socially constituted product. By only focusing on individual-cognitive learning approaches of social phenomenon emergent research findings may be difficult to empirically connect, which could diminish explanatory power. I argue that giving greater prominence to identity as a mediating factor of learning offers the prospect of illuminating how learning comes about during times of change and uncertainty.

Second, because identity is learned through practice (Lave and Wenger, 1991; Wenger, 1998, 2003), and since knowledge results from practice (Cook and Yanow, 1993; Brown and Duguid, 1991; Orr 1996; Brown and Duguid, 2002), learning practice suggests an intimate affiliation with the learning of identity. At the same time, knowledge is contested and potentially the source of SOI-based conflict, as members struggle for knowledge legitimacy, particularly as known practices are subject to organizational change (Law and Lodge, 1984; Brown and Starkey, 2000; Tsoukas and Mylonopoulos, 2004). However, discussion about communities of practice in contexts of change is scarce. Major change is significant for organizations. It is a condition that is internally driven and also adaptive. It is experienced frequently in today's competitive business environment (Child and Rodrigues, 2003;

Corley and Gioia, 2003), transformational change, it seems, is not widely discussed in situated learning or practice literature. For example, Gherardi and colleagues (1998: 281) state that, "In communities that do not undergo major 'revolutionary' changes consequent on the subversion of their system of practice, the curriculum tends to change incrementally over time, without it having to be made explicit". This quote raises two corollary issues. First, what does happen to community practice, its situatedness and learning when major change presents itself? Second, as various authors argue, incremental responses are insufficient to deal with negotiating transformational change (Burnes, 2000; Salaman and Asch, 2003; Burnes, 2004), a condition rarely considered in the situated learning field.

The community of practice literature, however, posits a positive view of negotiating change within communities. As discussed earlier, in Brown and Duguid's (2002: 143) most recent book on the subject of learning in theory and practice, in relation to the capacity for change within practice-based communities, the authors argue that, "Changes can propagate easily". Thus, research that sheds light on how communities of practice do deal with new identities as they adapt to change proposes a better understanding how communities of practice learn social identity transition in the face of transformational change.

Third, an emphasis on the individual becoming a full member of a community with little recognition of the important impact and attendant effects on a particular community from the constellation of communities and groups within the broader social system only partially conveys the social world in which that community operates. Communities of practice do not operate in isolation from other communities

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or the broader organization of which they are a part. Communities experience ongoing relations within and outside its boundaries (Brown and Duguid, 1991, 2002; Nicolini et al., 2003), but situated learning theory focuses on the social person becoming a community member and the social identity of the community is largely absent from discussion and debate.

Greeno and Moore's (1993: 50) argument that, "situativity is fundamental in all cognitive activity", reinforces the dominant emphasis on situated cognition, and its part as an originating element of situated learning perspectives. Because of its role as an underlying framework of situated learning theory, particularly in the theory's formative days, situated cognition may, partially explain the apparent ontological predilection for emphasizing cognition at the expense of social identification (Resnick, 1987; Brown et al., 1989; Weick, 2001). A different view of situatedness contrasts situated cognition and focuses equally on developing knowledge while developing social identity. A more balanced emphasis on cognition and social identity formation within community settings also shifts the focus on learning to where meanings *and* identities are shaped by and shape an experience.

As I discussed earlier, the literature is inconsistent on the main factors that either aid or limit knowledge transfer. Certain theorists (von Krogh, Ichijo, Nonaka; 2000), focus on the knowledge type, (tacit or explicit). Brown and Duguid (2002: 150) also discuss knowledge characteristics as sticky or leaky or the degree to which it can be canonical or noncanonical (Brown and Duguid, 1991). Other writers focus on the situatedness or proximity of actors involved in the transfer process (Sole and Edmondson, 2002), as an enabling or inhibiting characteristic while still others on the

method of transfer as well as the retention or curation of knowledge (Davenport and Prusak, 1998; Dixon, 2000). Here, social processes that mediate learning, knowledge creation and transfer are included with the various discussions that emphasize knowledge and its attributes. With this dual emphasis, social factors that may serve as a basis for creating and transferring knowledge may be considered as important as the knowledge itself. Social identity theory bridges the personal and the social to include the constellation of communities (Brown and Duguid, 1991) and groups in relation to an active community, this conception also implies an enlarged notion beyond the current meaning of the term "situated" in situated learning theory. Learning as process in communities is argued here as a particularly well suited lens to use to study these processes since it focuses on social dynamics involving the co-construction of learning and identity.

Fourth, legitimate peripheral participation (Lave and Wenger, 1991), assumes that new members' knowledge contributions will be treated fairly and will not be subject to identity sanctions by higher status members (Sparrow, 1998; Fenwick, 2001; Berkeley-Thomas, 2003). Moreover, knowledge in use and in practice can be seen in this conception as expressions of value and importance which infers that learning identity could facilitate or impede a group's potential for knowledge acquisition and transfer because of knowledge legitimacy issues (Law and Lodge, 1984; Brown and Starkey, 2000). Lave and Wenger's (1991) situated learning theory portrays learning as a process of legitimate peripheral participation. In this conception learning is positioned as relatively free from conflict and as an ongoing outcome of practice relations as communities of practice engage in activity routines. Power Relations are largely ignored. Communities are thus represented as

specialisms operating in relatively stable conditions. For example, Brown and

Duguid (2002) reference Gate's (1995) study of a community of computing engineers

where a member states that, 'There was amazingly little argument or fighting'. The

authors suggest that in these communities of practice, '...people involved ignored

divisions of rank' and shared, '...a common working identity' (cited in Brown and

Duguid, 2002: 127).

This notion of communities as free from power relations runs in contradiction

to the interactionist precept of learning as identity negotiation (Strauss, 1978). Power

and identity tension here are not marginal but rather, central to the ongoing social

relations of learning and identity formation (Contu and Willmott, 2000). Further,

various authors, (Brown and Starkey, 2000; Weick, 2001; Child and Rodrigues, 2003)

maintain that organizational learning can be impeded because knowledge flows may

be withheld in situations of social and organizational identity tension. Withholding

knowledge is a distinct function of power relations, yet power relations within and

between communities and other social entities, including the broader organization, as

a distinct aspect of situated learning (Gherardi et al., 1998) is underrepresented in

presentations of situated learning theory.

Fifth, situated learning theory was contextualized in apprenticeship

communities of practices or pedagogical settings particularly during its early

evolution, which influenced its formation and development, however, much of

today's management literature is concerned with understanding social processes of

work that are contextualized and located in hierarchical settings that are consistent

with many aspects of formal organizational structure (Boddy, 2002). Research that

orients the theory in a hierarchical setting such as a high reliability organization promises insights into different sets of social relations, patterns of action and organizational settings, which in turn suggests an enriched understanding of situated learning theory.

Sixth, this investigation of the literature suggests that the relationship between organizational learning and identity-based conflict is underdeveloped. Thus, it is also likely that there is a shortcoming in understanding identity and identification as means by which social persons act on behalf of their group or the organization as organizations evolve and change. Fiol (1991, 2001, 2002) asserts, organizational identification is important for the coordination of action. At the same time, she suggests that strong identification might bind members and thus prevent them from making change. Fiol (2002) recommends an identity transformation model to exploit the advantages of strong organizational identity while assuring situated and flexible identification. Her model, however, does not discuss the fact that social and organizational identities are learned (Tajfel and Turner, 1986; Lave and Wenger, 1991; Engeström, 1991). This review shows that understanding organizational learning and its attendant effect on social and organizational identity tension and transformation is underresearched. This gap is particularly relevant for understanding advanced forms of learning, such as double-loop, since these forms underpin an organization's capacity to implement transformational change (Burnes, 2004). Some authors consider that learning is a performance enhancing dynamic competence, (Teece, et al., 1998; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Winter, 2003). Better understanding actions surrounding social identity as a factor that either

impedes or facilitates learning implies that insights can be gained for making organizational learning *available* to be put into practice.

Seventh, because symbolic interactionism focuses on processes of interaction, and since it seems that it was not employed in the four featured studies on social identity and learning discussed earlier, the use of this theoretical approach proposes insights into complex, multidimensional social constructs like identity-based conflict and organizational learning. Further, Hogg and Terry (2000), argue that a lack of process-oriented research is one reason that the literature is inconclusive on the impact of social and associated impacts on change and learning. A processual approach implies the potential to better understand group identification and learning since its approach calls for research of organizational settings and social processes (SOI and organizational learning) as they evolve over time.

Finally, my argument that a gap exists in understanding a key social process that directly effects organizational learning (Brown and Starkey, 2000; Child and Rodrigues, 2003; Corley and Gioia, 2003; Rothman and Friedman, 2003), – an important firm-level capability (Eisenhardt and Martin, 2000; Zollo and Winter, 2002) is consistent with Child and Heavens' (2003) argument. The authors maintain that, "Given that organizational learning is a socially constructed process, surprisingly little attention has been paid to the relevance of how organizations are socially constituted in terms of different groups and their identities". Along this line, Child and Rodrigues (2003: 536) argue that, "Variations in the configuration of group identities, and in their compatibility with what the organization stands for (organizational identity), may well contribute to differences in organizational learning performance".

My arguments are consistent with the view that a better understanding of identification and its implications for learning might contribute toward reducing a potential constraint for learning in a context of organizational change. Better understanding how organizational identities are learned can also aid with garnering the advantages of strong organizational identity such as coordinating action when identities come under threat, while mitigating against organizational rigidity as a result of strong identification. Different authors recognize social identity as an important factor in learning (Brown and Starkey, 2000; Child and Rodrigues, 2003), yet only scarce coverage is given to the pragmatic aspects of how management might better understand the implications for organizational learning in a context of change in light of SOI tension. As Ellemers and Rink (2005) argue, management actions can be informed because by understanding identification and its causes one might be better able to predict associated consequences. Hence, better understanding the relation between identity-based conflict and learning suggests a prospect for informing action and resolving problems associated with putting learning into practice.

This chapter set out to discuss social and organizational identity, organizational learning and change. The examination of the respective literature leads me to suggest that while in their own right each topic is widely discussed and debated among scholars, relatively little research is carried out on the subjects as combined, interacting and interdependent constructs. Moreover, this investigation has shown why relations between organizational learning and SOI are significant interrelated concepts and in turn *why* it is important to study them as well as the factors that mediate their manifestation. In the chapter that follows, these notions will be

discussed in light of *how* these factors may be studied and explain the methodological

approach I utilized to achieve this objective.

Introduction

The previous chapter reviewed the key organizational change, organizational learning and social identity literatures, which underpin my research. My choice of the methodology to investigate these interrelated constructs is founded on the basis of three considerations, which are, the research question, fit with design and my philosophical orientation of symbolic interactionism (SI). As Easterby-Smith et al., (2002: 27) contend, consideration of philosophical positions that underpin methods and, design, is a central feature of the research activity. As such, methodology may be taken to be as much about philosophy as it is about research utility. In consideration of this emphasis on the importance of philosophy I begin this chapter by setting out an explanation of my theoretical paradigm. SI was discussed as a theoretical construct that frames my project in the previous chapter. In this chapter I discuss SI as 'method'. I then discuss the key questions that were used to orient the selected methodology. These questions include; who were involved in the study as participants, how data were collected, and how collected data were interpreted.

Research Philosophy

There are at least three reasons why philosophical issues should be involved in a research project (Pak, 2000). First, philosophical issues help the researchers identify the research design appropriate for the study so that they can determine what

data to collect, where to collect them, and how such data should be interpreted in order to provide answers for the problems under study. Second, philosophy helps to clarify the strengths and limitations of different methodologies and enables researchers to decide which method is best for the problems to be studied. Third, involving philosophical issues helps the researcher to adapt research designs according to the constraints of a particular subject and discipline.

Easterby-Smith, et al., (1991) identify two major traditions of research methodology in social sciences -- positivism and phenomenology and suggest that it is important for the researcher to examine the nature of the problem under study before deciding on a methodology. In general, research methodology can be classified into two major approaches: quantitative research and qualitative research (Creswell, 1994; Denzin and Lincoln, 2000). Each approach adopts different assumptions of ontology, epistemology and human nature (Morgan and Smircich, 1980; Becker, 1986; Mason, 1996; Denzin and Lincoln, 2000). Quantitative research is founded on positivism, which maintains that objective reality exists independently of and external to the social actor. These studies emphasize the measurement and analysis of causal relationships between variables by means of statistical tools. Qualitative research, on the other hand, tends to be built upon phenomenology and related approaches such as ethnography and grounded theory which are more likely to regard the social world as being made up more of names, concepts and labels used to create the reality. Qualitative methodologies are consistently used in the social science disciplines, particularly sociology and anthropology. Qualitative researchers employ 'a nonmathematical analytical procedure' (Strauss and Corbin, 1998) to interpret social phenomena. They seek to produce understandings on the basis of rich,

contextual and detailed data rather than to discover surface patterns, trends or correlation (Mason, 1996). A divergence in ontology and epistemology between quantitative and qualitative research approaches has significant implications for research design. Because of dissimilar ontological and epistemological assumptions, quantitative and qualitative research methods differ fundamentally on the basis of what can be constituted as data, where to collect them and how they should be handled (Easterby-Smith, et al., 1991).

For my project, a number of reasons support a qualitative research approach. Van Maanen (1988) in Easterby-Smith et al., (2002:85) define qualitative techniques as, "an array of interpretation techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world". Further, these approaches are not very effective in understanding social processes. As some writers point out, quantitative methods are ineffective in understanding the, "…significance that people attach to actions; they are not very helpful in generating theories; and because they focus on what is, or what has been recently, they make it hard for the policy-maker to infer what changes and actions should take place in the future" (Easterby-Smith et al., 2002: 42).

Suitability of Qualitative Research Approach

It is argued here that, for the purposes of this study, quantitative research methods, with their emphasis on measurement, are not appropriate for organizational learning research in a practice-based context (Cook and Yanow, 1993; Nicolini et al., 2003). As argued in Chapter 3, the locus of organizational learning that is most

appropriately employed in this research is an approach that is practice-based and symbolically mediated through social interaction. Organizations learn when members in and through practice collectively make sense of the situations in which they find themselves. I refer to this as *learning social and organizational identity*. Learning is therefore seen primarily as a process that is founded on and informs action. Learning as a social process underscores the concept that even when thinking on one's own, history, context and what has been learned through past social experience comes into play (Blumer, 1969). Thus the position I assume in this work is consistent with various writers who argue that the process of learning identity poses difficulties when characterized as exclusively a solitary act, since actors learn through interacting with others (Blumer, 1969; Prus, 1996; Wenger, 1998; Ervin and Stryker, 2001). The meanings and knowledge in people's minds are social rather than individual products because of a person's history, which is steeped in social experience (Prus, 1996; Charon, 2001; Snow, 2001). The process of organizational learning involves complicated interactions among multiple actors which quantitative research methods are often unable to measure (Lantis, 1987). Further, quantitative research methods tend to employ broad measurement practices such as assigning value to particular variables in order to generalize findings across different contexts (Waters, 1997). Rich and complex data from intersubjective social action cannot be captured in any appropriate degree through the use of statistical methods. Consequently, any meaningful explanation in relation to social process is therefore sacrificed (Pettigrew, 1990).

Moreover, learning founded on interaction happens continuously in practice and evolves over time but quantitative strategies tend to measure causal processes that

occur over time while generalizing their conclusions based on observations made at only one time (Babbie, 1995: 95). This makes quantitative approaches inappropriate for researching situated learning processes in light of organizational change. Further, quantitative approaches that employ surveys and questionnaires present problems when a researcher is attempting to capture the richness and subtlety of social relations (Pak, 2000). Also, because intersubjective human lived experience occurs at both group and organizational level, as Waters (1997:3) suggests in his description of the human experience of pain, "…there are no numbers you can use to describe it".

Another reason to choose a qualitative research methodology for this study is that quantitative research approaches emphasize the objective role of the researcher and postulate that the researcher should be separate from the subject under study. My role as a PowerCo employee made it impossible for me to be 'objective' and detached from the experience under study since in PowerCo I was part of the processes of change that I discuss. Consequently, my status as an employee rendered it implausible for me to be objective and detached from the setting and, hence, unable to fit into a central condition that underpins quantitative approaches. As discussed in the previous chapter, social identity is a discursive social process that is comprised of self-concept and through reflective endeavor, invokes identification with significant members of activity like a community of practice (Lave and Wenger, 1991; Wenger, 1998). To assist with understanding social identity, it is necessary to establish personal relationships to distinguish people from others, and to get to know them (Moingeon and Ramanantsoa, 1997). In other words, to achieve deep insights it is necessary to have mobility within the organization to gather different perspectives (Easterby-Smith, Thorpe and Lowe, 2002). As an employee, that level of access and

mobility is more feasible from within the organization than attempting to gain such a level of access as an outsider. My role as an employee in one HRO familiarized me to particular cultural sensitivities, language and processes, which facilitated research in the comparison organization.

Morgan and Smircich (1980), argue that many social scientists have recognized the limitation of using quantitative research. They claim that "Historical change, contextual fields of information, (and) processes through which human beings engage in symbolic modes of discourse, create their reality, and project themselves from the transcendental to more prosaic realms of experience", (1980: 498). Moreover, Prus (1996: 8-9) asserts that researchers using data from experiments, surveys and other quantitative practices are concerned with, "…uncovering and specifying the structures, forces, or conditions that (they assume) cause people to act in this or that manner…they typically portray human behavior in terms of dependent, independent, intervening and control variables". In contrast, interpretivists argue that people cannot be studied in the same way as objects and that, in order to study human action, a methodology is required that is attentive to those differences (Ibid.). Interpretivists view human group life as an active process of ongoing constitution by people interacting with others. Sociologists and organizational theorists who hold this perspective identify open-ended interviews and participant-observation as the main methodological procedures (Prus, 1996; Hammersley and Atkinson, 1983; Brewer, 2004; Waddington, 2004). These methods, which underpin the interpretivist approach, however, are subject to criticism by positivists. Some researchers who adopt positivist research approaches argue that the interpretivist orientation is unscientific because interpretivists emphasize the meanings that people attach to their

actions and that these meanings are not easily counted and statistically processed (Prus, 1996: 9). In response to these criticisms, writers on symbolic interactionism (Blumer, 1969; Prus, 1996; Charon, 2001) as an interpretivist approach, hold to the tenet that human lived experience is itself 'rooted in people's meanings, interpretations, activities and interactions' (Blumer, 1969; Prus, 1996). To ignore the interpretive dimension of people's lived experience is to miss the essential substance of the very subjects under study: the micro-level social processes of SOI, organizational learning and change. Further, the view that reality is socially constructed, (Berger and Luckmann, 1966), posits that it is not possible to study and understand an intersubjective human experience (such as organizational learning) by using quantitative research methods such as questionnaires and statistical inference (Easterby-Smith, Snell and Gherardi, 1998). Furthermore, the patterns under the interpretive framework of interactionism carry an 'emancipatory' implication for the modern management workplace. (Denzin: 2001:5)

According to Babbie, (1995:280) one of the key strengths of field research, which more typically yields qualitative data, is the comprehensiveness of perspective it gives the researcher. The field researcher may recognize nuances of attitude and behaviour that might escape researchers using other methods. By going directly to the social phenomenon under study and observing it as holistically as possible, I concur that one can develop a deeper and fuller understanding of it. This mode of study, then, is especially appropriate to research topics and social studies, such as this project that appears to defy simple quantification. My focus is to better understand what it means for organizational actors' learning when their social identity conflicts with the organizational identity. To explore this question, therefore, I employ

qualitative methods and an interpretivist approach, which is informed by a symbolic

interactionist perspective.

Symbolic Interactionism as Method

Symbolic interactionism is an appropriate theory and method to use in the

investigation of processes such as social and organizational identity (SOI) and

learning as it is considered by some authors as the, 'only truly social psychology'

because it is neither totally positivistic, nor subjective, and thus it opts neither for the

primacy of the individual nor for the epistemological dominance of society (Kando,

1977; Forgas, 1979: 56). Consequently, because SOI is also at the intersection of self

and group, symbolic interactionism is an appropriate theory to employ to provide

insights into the 'ongoing, dialectic, fluctuating' nature of SOI as a social interaction

process (Forgas, 1979: 59).

SI focuses on social interaction (Prus, 1996; Pettigrew, 1997). Within the SI

tradition, participant observation and interviews are the preferred research methods

and consistent with a concern with meaning and action, behaviour is studied at two

levels. "Symbolic interactionists study behaviour at both the interactional or

behavioural level and the symbolic level (symbolic meaning) that is transmitted via

action", (Locke 2001: 24). Interactionists as researchers must enter the worlds of the

people they study in order to understand the situation from the subject's point of view

and to observe first hand what the subjects find meaningful and how they make

meaning (Blumer, 1969; Prus, 1996; Charon, 2001). Prasad (1993) notes that

symbolic interaction is not solely concerned with investigating symbols. She argues

that rather symbolic interactionists are primarily concerned with the study of human meaning as it exists in symbolic domains and as it is constituted in meaningful action (1993: 1403). Interactionism was conceived in opposition to the dominant positivist agenda that viewed social interaction as a process that could be observed in the same way as other physical objects and that could be analyzed using counting practices. Interactionists see human everyday life as an ongoing constructed process where pragmatic actors act in relation to the actions of others. Pragmatic actors are not enslaved by the actions so as to respond automatically, but rather, interactionists see a negotiation process as the basis of elected action as people engage in everyday experiences.

I subscribe to Blumer's perspective on symbolic interactionism and I also share Denzin's (2001) ideas on interpretive interactionism that pertain to the use of memos to record my thoughts and as an aid for reflection, which I believe facilitate the representation of both the views and interpretations of the study subjects as well as my own. Symbolic interaction is particularly appropriate for studying SOI and organizational learning since they are 'inseparable' constructs, 'intricately implicated in each other' (Lave and Wenger, 1991: 113, 115) and both are socially enacted and symbolically represented in communities of practice (Wenger, 1998).

Weick suggests that HROs in which reliability is a more pressing issue than efficiency often have unique problems in learning and understanding. He argues that if these problems are left unresolved, organizational performance can be adversely affected. Weick believes substitutes are needed to replace learning by experience which cannot be a feasible option in HROs and proposes that imagination, vicarious

experiences, stories, simulations and other symbolic representations of the effects of technology need to be instituted in place of trial and error learning (Weick, 2001: 330, 331). Other authors also contend that symbolic representations of identity are deeply anchored as representations of culture (Prasad, 1993; Hatch and Schultz, 1997), thus social identity change seems to have more to do with socialization processes than simply a desired image or incremental change in activities. Nonetheless, according to Reicher, many of the studies in the social psychology field are, "...in danger of creating a view of the view of the human subject that reflects the limits of our method", (2005: 553). Reicher's analysis suggests that a strict regime of quantitative research to explain social and cultural phenomena reduces research to a methods-before-questions research approach (Reicher, 2005).

My approach is consistent with the views expressed by Moingeon and Ramanantsoa (1997: 383) who argue that, "To know identity of a person (or group) is to be able to identify him or her- to distinguish him or her from others and to recognize him or her (or them) as a unique individual(s)". This means that a research approach that solely employs hypothesis testing or statistical counting practices that characterize quantitative research approaches would not afford the opportunity to understand the intricacies of why group identity, as a generic social process, is so crucial to organizational learning (Prus, 1996; Pettigrew, 1997; Child and Heavens, 2003). Moreover, to study SOI in a way that potentially contributes to both the management practice of implementing organizational learning and change processes and better understands the implications for learning in view of identity-based tension means a methodology that enables both empirical and practical analysis (Bryman and Bell, 2003). However, because none of the four SOI/organizational learning studies

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discussed above used symbolic interactionism, any explanatory potential that may be derived from employing this approach has not been realized. In the next section, I turn to the research design that I employed as methods in this research.

Research Design

The research is longitudinal and employs participant observation, semi-structured interviews and study of corporate documents. Data gathering using these methods occurred over different time intervals and different periods. Each of the methods are discussed in turn in the following section.

Participant Observation

During the period from November, 2000 until mid – 2005 I began active observation sessions first as described in PowerCo and then in 2004 and 2005 in GenerCo.

Table 4.1 - PowerCo Observation Sessions

Firm Initiative (presentation, discussions or planning sessions)	Corporate Incentive Program	Electricity Market Rules and Rules Amendment Process	Budget and Corporate Budget Process
Year			
2000	2	7	1
2001	2	3	3
2002	5	1	3
Total Observation Sessions (N=27)	9	11	7

I used planning and development meetings for three major corporate programs as opportunities to observe the top management team and various other administrative and professional groups (Table 4.1).

My time as an employee of PowerCo also enabled opportunities to observe control room operators and the groups involved with the merger of PowerCo and TransmiCo. The first phase of the merger took place from November 2002 until June 2003. Over this time, I was able to observe a full-range of employees in PowerCo and TransmiCo who performed various roles including, human resources, customer service, finance, engineering, market operations and information technology during the course of their daily activities. In particular, I observed meetings of 'function team' or groups that were constituted to examine and recommend new combined practices for the integrated company. I observed five function team meetings and since these meetings were a primary element of the organizational change process to learn the intended organizational identity, I will describe these meetings in more detail in Chapters 5 and 7. Observations varied in length and the frequency and subject of these observations are shown in Table 4.1. Sessions in the control rooms of PowerCo and GenerCo lasted for about one hour each. During these times I would watch operators at their consoles and in their everyday interactions with their shift colleagues. I observed PowerCo control room operators on seven occasions. On one occasion, I was able to observe an entire 12-hour night shift at PowerCo and during this period shared coffee breaks and 'lunch' in the adjacent control room kitchen.

Because GenerCo's control room has its kitchen located in a separate room, my chats with operators took place mostly off-shift. I observed GenerCo operators on two occasions each lasting about one hour and was able to follow up on my observations with subsequent interviews. Because I was least familiar with GenerCo, I tried to structure interviews with different people on a single day. This afforded an opportunity to 'stay on' and observe receptionists, assistants, manager meetings and

technical workers as they took coffee breaks during meetings in the company cafeteria. I observed everyday work practices for each of the three study groups in both companies and over the study period observations ranged from what Prus (1996) describes as observation through participant observation in my role as researcher in GenerCo and my early role as employee and researcher in PowerCo.

Ultimately, and when I left the employ of PowerCo to study full-time, observation shifted to a more focussed 'observing participation' as defined by Tedlock (1991). To try and minimize discomfort for participants when I was observing, when people asked about my study I said that I was comparing organizational processes between the subject's firm and 'the other' company. As with Prasad (1993), I found that people became even more conscious of my presence if I took notes during observation sessions. As a remedy, I wrote field notes away from the research setting. Perhaps because of my experience in the industry and my familiarity with power stations, control rooms and organizational office environments, and again like Prasad, I was able to blend into the background during many of the observations. I found people open and forthright as they carried out their daily activities. I believe they would have acted in the same manner regardless of my being there (Prasad, 1993). Language is considered a core symbol for interactionists and in-depth interviews are a major research procedure (Blumer, 1969; Prus, 1996; Charon, 2001).

Interviews

I was able to gain access to carry out my research first, as an employee of PowerCo, and eventually as a researcher in both PowerCo and GenerCo. I consider myself fortunate that in return for ongoing feedback and update meetings with

management I was allowed to interview employees in both organizations from a wide cross sectional range. This afforded an understanding of issues and meaning making throughout the hierarchy and functional roles in both companies. I consider the interview data as especially significant as it conveys people's experiences and how they make meaning in different situations in their own words (Fontana and Frey, 2000). Altogether I interviewed 59 employees from both companies. Table 4.3, which follows, shows the makeup of the respondent groups in terms of functional role and organizational membership. PowerCo merged with another company and my research included employees from both organizations - PowerCo and TransmiCo. Interviews lasted for about one hour on average. Some interviews took almost two hours while other follow-up discussions on specific topics lasted perhaps 30 minutes. Table 4.2 shows the number of times I interviewed different subjects and the frequency with which I interviewed the same subject on a different occasion.

Table 4.2 - Interview Frequency

Company	Number of Times Interviewed			
	1	2	3	4
PowerCo	19	5	1	-
GenerCo	13	3	-	2
Totals (N= 59)	32	8	1	2

I pre-arranged each interview and met in different locations but mostly in or near the workplace. For example, in the nuclear power stations, I conducted interviews in training rooms, meeting rooms, offices and in the cafeteria.

My interview style, while ethnographic, which prompts for examples from past experience, could be described as 'meaning-centred' (Prasad, 1993:1406). Prasad describes this approach to interviewing, as semi-standardized and semi-structured but with no fixed set of questions and no specific sequence. I invited participants to share

meaningful experiences of the organizational change in relation to their learning the intended identity. To facilitate this style of interview, I asked questions that ranged from the 'big picture', institutional variety, to those which asked about, everyday experience at the micro level of social practice.

All of the interviews were recorded and I transcribed each of them as a way to reconnect with the vocal resonance of each interviewee. Listening to an interview enabled me to recall emotion, points of emphasis for the interviewee and the vocal personality that comes with listening to rhythm, pauses and repetition – all of which enhanced my understanding of the respondent's meaning making. I read transcripts many times in an attempt to discern respondent meaning. Although when my project started I had no goal to try and 'balance' group representation and I carried out interviews with participants on an 'as available' basis, I employed theoretical sampling as data were collected and as the work evolved. This approach means that sampling is directed through an iterative process of data collection and analysis, which stimulated me to sample more purposefully (Strauss and Corbin, 1998; Goulding, 2002).

Tables 4.3 and 4.4 illustrate the number of interviews I carried out on the basis of different group membership – administrative (A), management (M) and professional-technical (P-T).

Date (D/M/Y)	Subject's Occupational Title	Interview Number	Time With	PowerCo or GenerCo	Classification
Table 4.3 Interview Record - **Legend** - Classification: A = Administrative; M = Management; PT = Professional/Technical
11/06/02	Director EMS	1	1	P	A
14/06/02	Financial Controller	2	1	P	A
24/07/03	Financial Controller	3	2	P	A
23/08/02	Director Operations	4	1	P	PT
13/12/02	Director MS	5	1	P	M
01/04/03	Sr. Legal Counsel	6	1	P	M
14/04/03	Sr. Legal Counsel	7	2	P	M
12/05/03	CIO	8	1	P	M
21/05/03	Director HR	9	1	P	A
14/05/03	CFO	10	1	P	M
20/05/03	Director ETS & IT	11	1	P	A
27/06/03	Director Market Design & Ops.	12	1	P	A
02/07/03	CEO	13	1	P	M
16/03/04	Station Director	14	1	G	M
23/03/04	Media and Communications	15	1	G	A
29/03/04	Director EMS - Operations	16	2	P	A
29/03/04	System Controller	17	1	P	PT
29/03/04	System Controller	18	1	P	PT
30/03/04	Manager – Outage Plan. & Sched.	19	1	P	PT
30/03/04	System Controller	20	1	P	PT
30/03/04	System Controller	21	1	P	PT
30/03/04	System Controller	22	1	P	PT
01/04/04	Manager System Operations	23	1	P	PT
02/04/04	System Controller	24	1	P	PT
20/04/04	Fuel Route Specialist	25	1	G	PT
26/04/04	Senior Operation Technician	26	1	G	PT
26/04/04	Station Director	27	2	G	M
26/04/04	Manager, Maintenance	28	1	G	M
26/04/04	Work Management Manager	29	1	G	M
26/04/04	HR Manager	30	1	G	M
26/04/04	Technical & Safety Manager	31	1	G	M
26/04/04	Plant Maintenance Technician	32	1	G	PT
25/05/04	Outage Manager	33	1	G	PT
08/06/04	PA Station Director	34	1	G	A
08/06/04	Communications & HR Admin	35	1	G	A
08/06/04	Senior Control Room Operator	36	1	G	PT
08/06/04	Operations Manager	37	1	G	M
08/06/04	Control Room Operator	38	1	G	PT
15/06/04	Control Room Operator	39	2	G	PT
29/06/04	Communications Coordinator	40	1	P	A
13/07/04	Media and Communications	41	2	G	A
30/07/04	HR Manager	42	2	G	M
27/10/04	Senior Control Room Operator	43	1	G	PT
05/11/04	Media and Communications	44	3	G	A
15/05/05	Control Room Operator	45	3	G	PT
22/06/05	Manager Technical Projects	46	1	P	M
30/06/05	Customer Service Representative	47	1	P(T)	A
08/07/05	System Operations Engineer	48	1	P(T)	M
18/07/05	Customer Service Representative	49	2	P(T)	A
21/07/05	Technical Project Specialist	50	1	P	PT
22/07/05	Technical Specialist	51	1	G	PT
24/07/05	System Controller	52	2	P	PT
24/07/05	Technical Project Specialist	53	2	P	PT
27/07/05	Media and Communications	54	4	G	A
04/08/05	Business Analyst Corporate Serv.	55	1	P(T)	A
06/08/05	Control Room Operator	56	4	G	PT
10/08/05	Financial Controller	57	3	P	A
15/08/05	Senior Control Room Operator and Outage Coordinator	58	2	G	PT
19/08/05	Outage Project Coordinator	59	1	G	PT

Document Analysis

I analyzed annual reports, operating procedures, customer information brochures, community environmental and shareholder financial reports were carefully examined. I analyzed the key messages in relation to learning, mentions of intended identity (image) and steps each organization took to manage its change process.

Table 4.4 - Company and Group Classification

Company	Administrative	Management	Professional/Technical
PowerCo	12	8	12
GenerCo	6	8	13
Total Interviews (N= 59)	18	16	25

These documents helped me to understand each company's history, identity career (Weick, 2001) and the conception and construction of their desired image (Goffman, 1959; Berger and Luckmann, 1966). Moreover, the documents enabled me to gain an understanding of the organizational discourse in the form of company formal communication. In GenerCo's case, I compared and contrasted the more formal style and language to publications, which carried a local resonance and tone, which were developed at the station sites. I also considered the messages that were developed for external audiences and examined annual reports and community relations environmental documents. Although I do treat a few references made by top management as 'quotations', I use them mostly to illustrate the corporate sentiment and to a much lesser degree to reflect personal views. The volume of data collected and interpreted is shown in Table 4.5.

Table 4.5 - Volume of Data Collected and Interpreted

Data Collected and Interpreted	Volume
Total Documents (Interview transcripts analyzed, memos, collected document 'sets' analyzed)	133
Non-memos	109
Memos	24
Interview Transcripts	59
Number of Transcript pages	1032
Nodes Coded	113
Number of Interpreted Concepts	96
Company documents analyzed	41

As my study evolved I became interested in interviewing and observing three community of practice clusters which I label administrative, management, and professional-technical groups. I use this assembly in the same way Wenger (1998: 126) references a 'constellation of practices' or Brown and Duguid (1991: 53) discuss an organization as 'community of communities'. Wenger argues that communities of practice cannot be extracted from the broader social context in which they operate. His notion of a constellation characterizes the focus of my analysis, that is, groups of communities of practice within and across two organizations. Thus, 'groups of communities of practice' in both case firms are the unit of analysis as shown in Table 4.6.

Table 4.6 – Groups of Communities

Constituent Group	Community of Practice	
	GenerCo	PowerCo
Administrative	Human Resources, Secretarial, Corporate Communications, Health, Safety and Environment, Project Finance and Management	Finance, Information Technology, Human Resources Corporate Communications, Secretarial, Customer Service
Management	Station Director, Top Management Team (Figure 2.1)	Chief Executive, Top Management Team (Figure 2.2)
Professional-Technical	Control Room Operators, Operations, Maintenance, Fuel Specialists	Control Room Operators, Operations, System Maintenance and Support

The administrative group is comprised of community members whose activities are frequently related to organizational policies or business activities. Members of this group include specialists and professionals who perform roles in human resources, finance, communications and customer service. They include a range of actors up to senior management levels. Members of the management communities of practice include the executive officers and leadership team, project managers, department heads and directors. This group consists primarily of members whose duties have to do with the management of the organizations. They customarily direct work and make decisions to hire, advance or release staff from the firm. Finally, the professional-technical communities of practice is made up of members who often hold credentials or certification as engineers, operators or, in some cases, maintenance technologies. Most members of this group require an intimate understanding of technical systems and members' roles range from operations management to control room operators and plant floor technicians.

I selected this group classification for the various communities of practice because it is most closely connected with the subject of my study for various reasons. First, managers institute significant change to adapt to their perceived shifts in external conditions. Making these changes in turn frequently requires change to the organizational identity (Corley and Gioia, 2003). To bring about their intended change, managers institute ongoing structural and sensemaking interventions that have implications for all employees (Smircich and Morgan, 1982; Gioia and Chittipeddi, 1991). Then, employees who perform operational functions are engaged everyday in activities that are mission critical (Weick and Sutcliffe, 2001) and thus learning identity is tied to the performance of core organizational functions. Next,

organizational members in the administrative roles engage in activities and take actions that are necessary for 'collective mind' (Weick, 2001). Moreover, to some degree, all employees will be impacted by their common organizational identity. Finally, all of the groups cluster into respective communities of practice. The management group, for example, met weekly and although they might be considered as loosely coupled in comparison to the tightly coupled control room operator shifts, the group's history, structure, common practice and identity fit Wenger's (1998) definition of practice-based communities. The administrative group, however, is somewhat set apart and may be more appropriately considered a constellation of communities of practice. This group shares features of 'networks of practice' (Brown and Duguid, 2002: 141), because of its make up and its regular interactions with co-located communities of practice.

Gherardi (2006: 57) argues that while learning also means a concurrent development of social identity, '...the relationship of social identity to organizational learning is still largely unexplored'. Drawing on Child and Rodrigues (2003), she asserts, however, that in order to study these complex social phenomena, different levels such as group, organization and networks have to be examined. For these reasons the three groups (in both GenerCo and PowerCo) are the subjects of focus in my study. I also tried to achieve some degree of balance between group representation in each study organization, as well as between gender and role.

Figure 4.1 – Group Research Approach
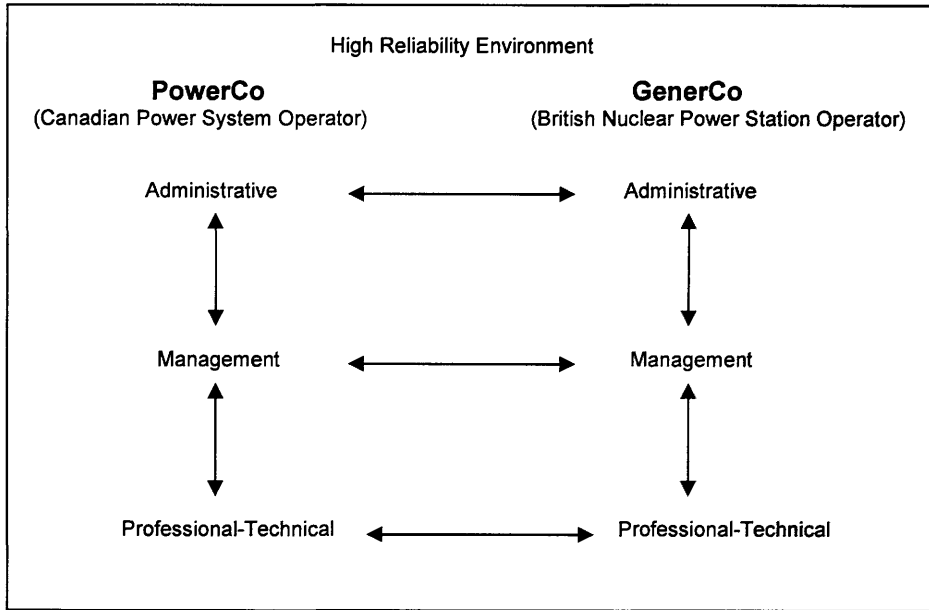
Since grounded theory is the research approach that corresponds with my worldview

and presents the best fit for my project, I considered that it would be important to

study interaction between different groups contextualized across different

organizations to facilitate constant comparison. As the subject of my enquiry has to

do with what it means for actors learning when they experienced social identity

conflict with the intended organizational identity, I required a setting where I could

examine the generic social process of learning intended identity as it unfolded. This

design approach depicting their comparison relationships is shown in Figure 4.1.

Organizational theorists suggest, organizational change has a catalytic effect

on the production of SOI tension when organizations set out to change identity as part

of their adaptation process (Brown and Starkey, 2000; Weick, 2001; Child and

Rodrigues, 2003; Corey and Gioia, 2003; Rothman and Friedman, 2003). Change is

also is an integral element of my methodology approach. Change is used both as a

lens and also as a 'moment in time' in which to examine the social process of identity-based conflict in relation to organizational learning. Change is a lens because it amplifies a context for identity-based tensions when managers decide to introduce an organizational identity that is different from the existing social identity. Organizational change also serves as a time snapshot because it underpins the necessity for learning a new identity (Child and Rodrigues, 2003).

High reliability organizations are selected as the study locations because through the lens of change these organization types magnify the apparent tension. Practices associated with the existing or 'old' organizational identity must be maintained whether organizational members' social identities are aligned or in conflict with the intended company identity. Actors' practices and management's emphasis in the study firms – one an electric grid operator and the other a nuclear power generating station operator – cannot detract from the safe and reliable operation of their respective systems. Switching from practices and identities associated with the intended identity at the expense of the existing practices may subject members and the public to potentially catastrophic risks of errors.

Data Gathering and Interpretation

My study involved three rounds of fieldwork, the first of which involved participant observation of 27 presentation sessions, which enabled observation of interactions between the leadership group and staff functional representatives. In addition to observing the study participants, between June 2002 and July 2003, six director-level senior managers and a representative from each of the seven functional areas that comprised the PowerCo top management team were also interviewed. The

second round of fieldwork took place during the first half of 2004. This round concentrated on mostly community of practice members whose roles involved technical and operating functions. The final round occurred during the second half of 2004 and into 2005. I used mostly semi-structured interviews with GenerCo community of practice members who worked in administrative areas. Multiple methods were used to collect and interpret data including interviews, participant observation, use of reflexive memos and coding company documents. Data were interpreted using a three-part process. First, I wanted to understand the various communities' material and symbolic representations of their social identities. I utilized a classification system developed by Prus (1996) to understand how actors invoke identification with a relevant community.

This approach is consistent with other theorists who argue that in order to access an understanding to social identity different social levels and identity over different situational circumstances is necessary (Child and Rodrigues, 2003; Gherardi, 2006). Identity strength, or salience is used to understand importance and commitment to social identities. Second, I analyzed actors expressions of the organizational changes they just experienced and the impacts of the changes on their normal practice. This analysis afforded a view of what the change meant to practice routines since a power station might go through a major corporate change but that change could have little effect on the daily activities of a practice. As such, there would be little need for communities to perceive a threat to their practice-based activities from the organization's intended identity. Finally, I interpreted the data as expressions of whether new practices had been adopted because learning practice forms a social identity.

Figure 4.2 - Analysis Process

Interviews
Participant Observation → 113 Concepts
Company Documents

Research Question
(Social Identity Theory)

↕ Underlying Source
(Properties)
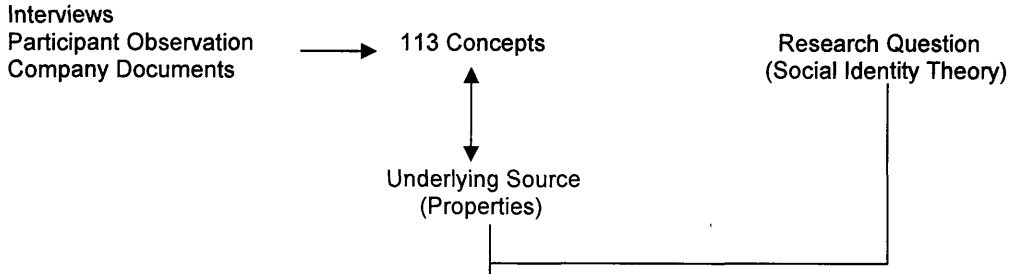
Social Identity	Organizational Learning	Organizational Change
(Salience & Commitment predicts invocation of group identity over organizational intended identity – signals identity-based tension	(Social identity is learned – Learning reinforces social identity and signals whether current identity is maintained or intended organizational identity is learned)	(Significance on firm and on practice or low or no impact on current social identity – signals 'urgency' and 'importance' of need to adopt intended organizational identity)
Loss Social Affiliation – Affiliation Secure Social identity salience (L)–Salience (H) Soc. Identity Commitment (L) – (H) Soc. Ident. Reinforcement (L) – (H) Soc. Ident. Judged against technology – knowledge/experience	Prior knowledge dominant – New Knowledge Legitimate knowledge Explicit – Tacit Individual learning – Collective Separate learning – Situated Knowledge Withheld – Transferred Knowledge Lost (leak) – Acquired (stick) New Knowledge Subdued – Created Learning Intended Org Ident. (L) – (H)	Culturally insignificant – significant Impact on practice (L) – (H) Incremental – Transformational Social Identity Top-Down – Continuity Negotiated Magnitude on organization (L) – (H)

Symbolic Representations of SOI	SOI Reinforcement Culture and access to learning SOI in group practice	Significance of Organizational Change

Core Category Analysis

SOI tension
❖ Social identity representation
❖ Current social identity degree of intensity (salience and commitment)
❖ Degree of reinforcement with current social identity
❖ Process of introduction of intended organizational identity

Organizational Learning
❖ Knowledge acquisition or loss
❖ Knowledge transference or retention
❖ Knowledge creation or preservation

Organizational Change Impact
❖ On practice
❖ Significance and magnitude for firm

This segment of the analysis provides a way to understand the extent each group learned new practices, and thus it partially explains how they jointly constructed a social identity that aligned with the intended organizational identity. This analysis approach draws on the constant comparison method of grounded theory and is shown in Figure 4.2.

In Chapter 3, I discussed some of the criticisms leveled against studying social identity from the viewpoint of different philosophical traditions. These views also imply that because identity is an evolving, multiple and dynamic social production, methodological problems are also introduced since the phenomenon by its nature is difficult to analyze. I employ the following metaphor as an explanation as to how I approached this problem.

A basin can be filled to contain 'warm' water in three different ways. The cold water can partially fill it and then hot water can be introduced until the appropriate balance of 'warm' temperature is achieved. The same result can be accomplished by doing the reverse, first partially filling the basin with hot water then bringing in the cold. Finally, both faucets can be opened simultaneously to realize the desired temperature balance. Essentially, achieving 'warmth' is a blending process that can be done by hierarchically introducing 'hot' or 'cold' or by bringing the temperatures together at the same time. In itself, 'warmth' is a relative understanding, but also one that can be shared by different people as it is different from hot or cold. Finally, to understand warmth suggests understanding intensity, in this case temperature.

Similarly, identities can be understood as expressions of self in social settings and as adoption of a practice community's norms, language and unarticulated assumptions. The identity of a social person (self) can be distinguishable features of interaction and expressed in language. A social person's identity could also be understood relative to the essential community characteristics like a 'fun' group or a 'serious' group (practice identity). The dimensions of self and practice as making up social identity are shown in Figure 3.1. Thus, social identity can be understood in dimensional terms like hot or cold. And similar to the example of 'warmth', to analyze identity also can mean understanding its intensity. A parallel may be drawn with understanding evolving and multiple weather conditions through the use of temperature. Stryker (1980:60,62) refers to the intensity of identity as a 'hierarchy', that is invoked based on levels of identity salience and commitment, which influence people's choice of which identity to enact in different social settings. Identity intensity is a key notion in the analysis approach in this work (Burke, 1980). I represent identity intensity as levels of salience and commitment.

I attempt to address the problems of analyzing identity by studying its intensity as expressions, records, and actions in everyday work life before and after a major organizational change. I map this intensity in Chapter 6 as a way to trace what might be happening to the essential features of actors' identities and to try and understand the factors that play a mediating role in how actors in communities choose to enact actions consistent with their selected identity. In this way, the rich contextual features of identity come forward even though they are in a continual process of change and in some cases are multiple and perhaps in conflict.

Grounded Theory

Glaser and Strauss (1967) conceived grounded theory as a contrary

methodology to the positivist hypothetical deductive approach. Grounded theory is

intrinsically linked to symbolic interactionism since it emerged as a way to study

intersubjective interpretive insights through tracing the formation of action in the way

'action is actually formed' (Blumer, 1969; Locke, 2001). Glaser and Strauss's early

combined work spawned the practice of generating theory from research that is

'grounded' in data. The authors formulated this approach as an alternative to the

dominant mode of scientific enquiry in social science at that time, a positivistic

approach, which relied on hypothesis testing, verification techniques and quantitative

forms of analysis. Grounded theory is, "derived from data and then illustrated by

characteristic examples of data" (Glaser and Strauss, 1967: 5). It assigns meaning to

data through the use of constantly comparing across units and across contexts (Locke,

2001). Grounded theory aims to approach the data inductively and without a

preconceived framework and it rejects the idea that knowledge is 'out there' to be

discovered and that the knowledge can be retrieved via objective means without

contaminating the knowledge through the process of uncovering it (Strauss and

Corbin, 1997). It is *pragmatic* in the sense that it regards theory not as a

representation of truth but as ideas that will prove workable and useful. Thus theory

is considered useful by increasing understanding and to some extent applicable in

making predictions.

After they developed grounded theory, Glaser and Strauss grew apart

significantly in their personal conceptions of the essentials of the theory and how it

should be operationalized. Essentially two camps emerged - as proponents of either Glaser's approach to grounded theory, or a more recent evolution of the original work that was conceived by Strauss and Corbin (1998). One significant variation between Glaser and Strauss's approach to grounded theory research is the treatment of data analysis. Glaser's approach to grounded theory is resolute in its focus on the data. Charmaz, (2000) makes this point citing Glaser who says, "Categories emerge upon comparison and properties emerge upon more comparison. And that is all there is to it" (Glaser, 1992). In contrast, Strauss and Corbin (1998) offer several steps that are to be employed in data analysis. This is considered a significant variation in the approach to operationalizing grounded theory. Glaser considers the Strauss and Corbin approach 'forces' into theory through the use of stringent analytic frames that he suggests move this version of grounded theory towards a positivist 'counting' practice (Glaser, 1992). Strauss and Corbin, however, approach the data analysis question pragmatically and use their systematic ways of coding to generate what they consider as applicable, workable and useful theory – two dimensions of the criteria for grounded theory evaluation (Charmaz, 2000).

Further, Glaser's preoccupation with the data-emergent theory process engenders narrowness on the data potentially at the expense of the broader frame of the social process under study. As discussed earlier, in a research approach that considers a generic social process the researcher should take into account the history, relations with other systems and groups that interact within its network (Strauss, 1959; Prus, 1996; Pettigrew, 1997). This view is aligned with the views of Strauss and Corbin (1998: 11) who contend that, "The analysis of a setting must not be restricted to the conditions that bear immediately on the phenomenon of central

interest". Finally, within an interpretivist symbolic interactionist frame, social reality is making meaning based on one's own acts and the acts of others. For theory to 'emerge from the data' is to suggest that in some automatic way, the data will assume meaning. Meaning can only be ascribed to the data from interpretation. Meaning therefore is constructed as an interpretive act. Data in this view hold no meaning until an actor assigns meaning to them Glaser's ideas on data coding are founded on the notion that systematic comparison is enough for the emergence of theory.

On the other hand, Strauss and Corbin (1998: 97) offer a treatment of axial coding which they view as a process of putting "data back together by making connections between categories and subcategories. Through this process, Strauss emphasizes the importance for grounded theory to retain 'cannons of good science' such as replicatablility, generalizability, precision, significance and verification. While this approach may place Strauss in more traditional quantitative doctrines, Glaser's preoccupation with solely making systematic comparison of the data is at odds with Maines' (1993) argument that data are narrative constructions and Bond's (1990) premise that they (the data) are reconstructions of experience; they are not the original experience itself (Denzin and Lincoln, 2000).

Moreover, Locke (2001) has argued that the difference in approaches lies more with the researcher's philosophical orientation and worldview than with the way data are processed and analyzed. She contends that Glaser's approach is consistent with a positivist orientation for its emphasis on discovering theory 'out there' over Strauss and Corbin's (1998) interest in maintaining openness to evolving concepts that emerge through a continuous process. Foremost among the criticisms leveled at

grounded theory is the notion that grounded theory methods are insufficient to respect

subjects who are interviewed and portray their stories. In response to this argument,

Strauss and Corbin (1998: 280) state that 'grounded theory requires that the

interpretations and perspectives of actors on their own and others' actions become

incorporated into our own (meaning researcher) interpretations' (Locke: 2001: 12,

13). Lowenberg (1993) also suggests that the 'grounded theory approach may be

appropriately located within the interpretive paradigm', (cited in Locke: 2001: 12). A

research strategy such as grounded theory will facilitate the understanding of the

subjective meanings involved in people's expression of their interpretations of

symbols and objects that form their experience.

Researchers who subscribe to Glaser's approach, which refrains from data

analysis procedures, have criticized the Strauss and Corbin data analysis course of

action, which employs a more rigorous data interrogation framework (Goulding,

2002). Glaser's approach also runs in contradiction to the idea that a researcher has

experience in the social process under study or that the researcher's views can be

influenced from the extant literature particularly during the early stages of a project. I

find this notion impractical because it seems unlikely for a researcher to carry out a

project with no previous socially situated experience. Moreover, in contrast to

Glaser's *tabla rasa* conception of analysis, Parry (1998) cautions that researchers

should have some preset idea of their study in order to effectively perform their

fieldwork. Furthermore, Locke (2001: 34) distinguishes between *a priori* theorizing

and argues that:

> ...this does not mean, however, that researchers should embark on their
> studies without the general guidance provided by some sort of orienting
> theoretical perspective. It does mean that they should bring preconceived
> constructs and hypotheses to their data gathering and analysis.

Use of the Literature

Contrary to Glaser's view that the researcher should remain unaffected by previous writing on a subject, other grounded theorists (Parry, 1998: Locke, 2001) advocate having a rough idea of possible variables related to the social process under study. Aside from past experience, the extant literature is an important source for becoming acquainted with potential theoretical frameworks and understanding the various perspectives different authors hold on a subject. I consulted the literatures on organizational learning and knowledge, organizational change and social identity among others throughout my study. At the same time I was cautious to use the literature as a source and not to set the direction for my project. I found that an iterative approach of gathering data, consulting the literature, and writing ideas and reflexive memos to consolidate my thinking helped me to retain openness to other ideas and information. In this way concepts and categories are used to formulate insights into grounded theory and not the literature on its own. The resulting 'grounded theory' is such because the theoretical framework evolved from the data itself explains the social process under study (Pak, 2000: 128).

My approach to using the literature is consistent with Strauss and Corbin's (1998) assertion that full immersion into all of the literature beforehand, a tactic often followed by quantitative researchers, is not necessary or advisable. In this study, I used the literature as Straus and Corbin suggest in three ways: as a secondary source of data, to stimulate the formation of questions and to confirm findings as supplementary validation (1998: 51). I considered the literature on organizational learning from the perspectives of communities of practice (Lave and Wenger, 1991; Brown and Duguid, 1991; Wenger, 1998) culture (Cook and Yanow, 1993) social

learning (Bandura, 1977) and sensemaking (Weick, 1995; 2001). I also followed the lead of Prus (1996: 149) as a source for stimulating questions and in particular his method for studying social identity as a generic social process.

As such, I am not employing grounded theory in the strictest sense but rather a version of grounded theory that employs the Straussian orientation of the constant comparison method. I take this stance because of two issues that emerged with using either the original 'Discovery' version (1967) or that of Glaser's. First, as promoted especially by Glaser, I find it implausible that a researcher can entirely suspend his or her personal history, experience or knowledge of relevant theories until the late stages of their research project. I used the literature in the circular way described earlier to 'tip off' ideas but I consistently attempted to validate the literature in the data that I collected. I found that I especially consulted the organizational literature at the beginning of my project. I discovered that the body of knowledge on individual learning did not coincide well with the phenomena I was investigating and that group learning in its own right is often subsumed into the community of practice literature. The literature, then, served as both a source and as a check against my ideas throughout the study. At the same time I attempted to be sensitive to Strauss and Corbin's (1998: 52) caution that an over dependence on the literature can 'hinder progress and stifle creativity'.

Second, 'pure' grounded theory is associated with the researcher fragmenting data by coding it into increasingly smaller units. I believe my appreciation for context and my sense of the research participants' social world would suffer as a result of continuously reducing data into discrete chunks. Isolating units of data as with pure

grounded theory approach would have forced me to investigate either micro, single voice and social person whereas the methodological approach I selected enables micro *and* macro, single *and* multiple voices and social person *as well as* group. This is particularly important since groups are the primary units that I studied. To address this issue, I used the Straussian version of constant comparison informed by grounded theory and not the pure or Glasserian models. I employed this methodological approach together with symbolic interactionism. As a method, interactionism transcends the dichotomous orientation of studying solely 'individual' or 'macro sociological process' through its focus on a social self, which mediates both worlds. SI cannot theoretically or methodologically divide a social person from their group. Although different versions of 'grounded theory' have emerged, Locke (2001) argues that grounded theory continues to be particularly well suited to organizational research for at least two reasons. First, grounded theory facilitates links to practice by increasing understanding of organizational situations. Second, because grounded theory is an open-ended approach to generate theory from data, it can facilitate theory building in areas that have not been deeply researched by others. Hence, grounded theory is uniquely suited to probe the underlying qualities of organizational learning, social and organizational identities as ambiguous and complex social phenomena.

Data Coding Process

Grounded theory inductively builds theory from the study of the 'phenomenon it represents' (Strauss and Corbin, 1998). The theory generating process is recursive, and evolving. It is not straightforward, but rather cyclical, and at times, disorganized and confusing. However, the iterative nature of grounded theory generates provisional concepts, categories and themes, which serve to open a researcher's

'theoretical sensitivity' as different concepts, and categories are compared to others (Glaser and Strauss, 1967; Strauss and Corbin, 1998). This interplay between comparison, gathering data and formulating categories and concepts forms the basis of the constant comparative method (Glaser and Strauss, 1967), which serves to 'ground' a theory in the data. As such, grounded theory is particularly useful when, as was the case with my project, little empirical research is available on the subject of what identity-based conflict means for group organizational learning.

As with qualitative research generally, I gathered a large amount of data. I wrote extensive field notes and examined 34 different corporate documents that ranged from extensive reports, confidential work procedures to reports and information brochures. Altogether I developed 24 memos and I analyzed 59 interview transcripts. I used memos, which range from short notations to capture my thoughts during fieldwork, to a few pages of text as an aid to reflect on the evolving nature of respondent comments. My approach to the data collection was to first observe broad interaction. Once I discerned patterns in action, for example, how control room operators in a nuclear station handled alarms, I followed up with subsequent interview questions. Data collection did not always follow the observer-interview pattern and at various times the sequence was reversed as one approach sparked something that I pursued with the opposite approach. Interviews account for the largest amount of data in this study and the data from observations, document analysis and reflexive memos serves to supplement the findings and also served as support for reinforcing insights or triggering new ideas. This approach is consistent with Mason's contention that gathering data from different sources can compliment each other and also helps to more fully reveal findings (Mason, 1996; Pak, 2000).

Respondent's Voice

As I analyzed the data I found that interview respondents spoke with different voices. In some cases respondents spoke in the first person and discussed their individual views on a subject. Other respondents referred to their group and in the third person alluded to 'things we do' or 'everyone here would say'. Finally and mostly with management respondents, representations of their managed group were offered. Management group respondents sometimes refer to 'using your judgement' or 'checking your procedures', yet they were discussing how they saw their group members doing tasks, not necessarily how they would perform them, since they did not often perform the tasks of those they managed. I took all of these voices as genuine expressions of meaning and interpretation. At the same time, I exercised caution to ensure quotes were legitimate in their context. I used an approach where subjects had to be in a position of first-hand knowledge before they could be considered 'legitimate' commentators on another group.

Data Referencing

Some authors suggest 'concept cards' (Glaser and Strauss, 1967; Prasad, 1993) are a useful and effective as a way to analyze and code data. However, with over 1,000 pages of just interview transcripts the large volume of data influenced me to use NVivo software as an analysis tool. I developed a referencing classification to more easily identify the mode of data collection, and to be able to identify a respondent's actual quotation. This identification technique also allowed me to differentiate between interview, participant observation data or data from a company document. I also wanted to have ready access to the original source as I coded and interrogated the data across contexts. First, each data reference is labeled as to the

data collection method. Then, a number is assigned which signifies the sequential order of the data element. Next, the letter 'P' to designate PowerCo or 'G' for GenerCo points to the particular study organization. Finally, the letter S for 'section' denotes the paragraph, page number or NVivo section code. Thus, as an example, [Interview 27G-S9] indicates the twenty-seventh interview that took place with a GenerCo member. The 'S' or section number nine enables tracking to the respondent's actual quotation in the NVivo database. Similarly, [Co-Doc 18P-S(p)45] indicates the eighteenth in the sequence of company documents from, in this instance PowerCo, is being referenced, and in this example, the quote comes from section or page 45.

Data were fragmented and coded against 113 nodes (See Figure 4.7). In total, 94 concepts emerged from the data and were clustered along dimensions and then categories to both illuminate the data meaning and to try and keep my analysis of the data open and transparent. Strauss and Corbin (1998) note that axial coding is a process that relates categories to their subcategories. Coding is focused at the 'axis' of a category (1998:123). I used axial coding for the main categories: organizational learning, social and organizational identity and organizational change.

Axial codes for organizational learning included knowledge types: tacit and explicit, and collective versus individual learning approaches as linkages between different forms of social exchange and identity orientation (Flynn, 2005).

Table 4.7 - Node Categorization of Concepts

Organizational Change	Organizational Learning (intended identity)	Identity (formation, management & salience)
• Example of Conflict of Logics • Future State Logics • Identity Change • Implications of Change – Professional-Technical • Implications of Change – Management • Implications of Change – Administrative • Pressures From Environment • Resistance to Change – Cultural • Resistance to Change - Operational • Organizational Change • Organizational Change / Transformational • Organizational Change / Leader as impetus • Organizational Change / Communities of Practice or individual as impetus • Organizational Change / Environment as impetus • Organizational Change / Incremental • Institutional Theory / Industry as agent for change • Key Organizational Challenges • Key Organizational Challenges / According to employees • Key Organizational Challenges / According to leaders - managers • Conflict With Old & New Objectives • Permanency of Organization • GenerCo Case. Outage • GenerCo Case. PII - culture change initiative • PowerCo Case. Control Room Competence • PowerCo Case. Three Proposed Initiatives	• Identity Conflict - Learning Implications • Learning Enabled - Continuity • Learning Impeded - No Continuity • Learning Types • Learning Types / Double Loop • Learning Types / Adaptive • Learning Types / Generative • Learning Types / Single Loop • Knowledge Types • Knowledge Types / Tacit • Knowledge Types / Explicit • Human and Technology Conflicts / Technology as a barrier to learning • Legitimization of Knowledge • Legitimization of Knowledge / How knowledge is constituted & legitimized • Legitimization of Knowledge / Locus of creation • Legitimization of Knowledge / Power and control over 'what is knowledge' • Institutional Theory / Industry legitimizing knowledge • Institutional Theory / Mimetic or unique actions • Sources of Learning • Sources of Learning / Exogenous • Sources of Learning / In practice - tacit • Sources of Learning / Codified sources - explicit • Being a 'Maverick' • Being a 'Maverick' / In non- legitimate knowledge transfer • Being a 'Maverick' / In learning • Culture of Fostering New Learning • Culture of Fostering New Learning / Indogenous • Measuring & Monitoring • Measuring & Monitoring / As a barrier to learning & Knowledge • Measuring & Monitoring / Places boundaries on learning & knowledge • Measuring & Monitoring / Value of learning & knowledge • Fostering Learning & Knowledge • Fostering Learning & Knowledge / By leaders - managers • Fostering Learning & Knowledge / By other sources • Fostering Learning & Knowledge / By employees • Frequency of Learning & Knowledge • Frequency of Learning & Knowledge / Employees • Frequency of Learning & Knowledge / Leaders • Power From Expert Knowledge • Staying Sharp and Being Away • Document for Protection not Learning	• Adaptive Identity Change • Identity Form, Maintain, Reinforce • Logics Alignment and Support • Social Capital • Social Capital / Value to individual • Social Capital / Value to constituency • Social Capital / Trust • Organizational Capability • Organizational Capability / Environment adaptation • Organizational Capability / Resource-based view • Risk • Risk / Tolerance - level • Risk / Interpersonal risk from advancing new proposals • Risk /Industry level • Human and Technology Conflicts • Human and Technology Conflicts / 'Engineering-out' human judgement • Human and Technology Conflicts / Unequivocal faith in technology • Identity and Context in Communities of Practice • Identity and Context in Communities of Practice / Barrier to change • Identity and Context in Communities of Practice / Confusion when being changed • Identity and Context in Communities of Practice / Defining characteristic • High Reliability Culture • High Reliability Culture / Implications for organizational Culture • High Reliability Culture / Role in relation to change - innovation • High Reliability Culture / Defined in action – practice • Organization Culture • Organization Culture / Who defines 'culture' • Organization Culture / Culture as an instrument • Organization Culture / How organization makes sense of mission • Institutional Theory

I followed a version of Prus's (1996) generic social process approach and his social identity dimensions that include; acquiring perspectives, achieving identity, being involved and doing activity, experiencing relationships and forming and

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coordinating association (Table 4.8). I also coded for actors' symbolic representations of identity and charted multiple expressions of these social identities. Finally, I utilized axial coding to study the meaning actors made of the organizational change. This involved coding the groups' interpretation of the impact of the change endeavor on their foundation practice. The themes were then integrated by comparing a second set of data incidents to the conceptual categories.

Table 4.8 - Identity Analysis Framework (Prus, 1996)

Sequence	Dimensions
1. Identity Formation – Initial emergence	**Acquiring Perspectives** - previous experience, ideas, information
2. Identity continuity and intensification – evidence identity is maintained, made more consistent and strengthened	Achieving identity - practice - qualification & training - functional role Being involved and doing activity - time - resonance for 'old days' and 'old timers' - experience 'time in the chair'
3. Discontinuity and dissipation – evidence identity is diluted by some organizational phenomena – in these cases culture change endeavors	Experiencing relationships - different episodes & extreme situations - 'knowing' in practice - camaraderie
4. Possible reemergence – signs identity continues or has been subsumed into some other identity	Forming and coordinating association - group boundary establishment and reinforcement - actions to enhance group prominence - earning stripes for new operators

The organizational change 'episodes' (GenerCo productivity enhancement initiative's fleet-wide approach and PowerCo's corporate merger) are employed to bring to light group learning of intended organizational identity in situations of SOI tension. As well, the episodes serve as mechanisms for comparison across the organizational contexts in relation to 'identity-search' versus 'identity-ascription' (Simmons, 2001). Enabling processes that facilitate actors' search of social identity characterize identity-search. Identity-search processes are necessary to modify social identity in situations where high identity salience exists, that is, a high probability that

actors would invoke a certain social identity consistent with the group identity (Ervin and Stryker, 2001; Ellemers and Rink, 2005). Put this way, identity-search is a form of learning. In contrast, identity-ascription entails a situation where often little or no choice is offered for groups but to become immersed in a setting where an intended identity prevails. Power-based interests work to control group affiliation. The social or organizational identity in this situation is not learned but ascribed by those who possess power. In the case of PowerCo, I use the example of learning a new operational planning process in the context of an organizational merger. Each of the merged organizations, PowerCo and TransmiCo had a hand in the previous electric grid operation planning process. Each company was required to enact a unique set of actions within the process. When the two organizations merged it became necessary for organizational members to learn a new process and collectively enact that process as foundational to the organizational change.

For GenerCo I use the adoption of new practices within the maintenance outage activities in light of the organization-wide culture change process. GenerCo management respondents indicate that it is necessary to institute a wholesale change to the organizational culture in response to the organization's financial difficulties. Management contends that without such a change, the company risks long-term survival. A key aspect of this process is the adoption of 'fleet-wide' practices. This means that instead of unique ways of doing things in each power station, certain practices are to take place across the 'fleet' of power stations located throughout the country. Management documentation refers to the efficiencies of the 'fleet-wide' processes. Consequently, this organizational change requires members to learn new practices as a replacement for their current way of doing outage maintenance.

Over time, as data categories were subjected to constant comparison, they became more discreet and selective. The resulting unifying themes point to what it meant for organizational members learning when their social identity conflicted with the intended organizational identity. Ultimately, through continuously comparing the data across contexts, I began to see repeated patterns in the study participants' discourse and actions. As my interest is centred in organizational learning in a group context I compared these final themes across the six groups that I studied. I took this repetition as reaching data saturation (Strauss and Corbin, 1998), since no new concepts seemed to readily emerge.

Trust and Confidence in Methods and Data

Bryman and Bell (2003: 35) state that an issue of significance and relevance for qualitative studies is one of trust and confidence. Trust and confidence touches a qualitative project at the level of the research 'parts' for example the appropriate selection of methodology for the research question as well as the 'whole' or the claims that are ultimately made from interpreting what the data mean. In this study I use the parallel constructs of 'credibility' to relate to trust or what quantitative analysts might consider validity. I use 'dependability' to parallel confidence or what is termed reliability in quantitative vernacular (Bryman and Bell, 2003; see also Hammersley 1992[9]). To address potential issues of credibility I employed two different treatments. First, I used data triangulation (Easterby-Smith et al., 2002: 133). Data triangulation is a procedure whereby using multiple methods of data collection generates different accounts of social reality, thus increasing faith and

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[9] Hammersley uses 'plausible and credible' as terms to denote validity of an empirical account.

credibility in the data. In this project I employ participant observation, interviews and company documentation as data collection methods (Table 4.9). Second, to further increase levels of credibility, I provided various research participants with copies of transcripts to ensure I had captured their expressions and meaning accurately. I also tested my impressions with representatives at different stages of the project to ensure my interpretations were grounded in their understanding of the organizational world's I studied.

Table 4.9 – Data Triangulation

Data Collection Method	Source
Participant Observation	Actors and group actions
Interviews	Expressions of self, others and other groups
Company Documentation (formal record)	Expressions of organizational action (what is planned or has been done)

To address possible issues of dependability, I utilized NVivo (version 1.1) as a technology to both aid with data coding but to equally help me keep track of the large volume of data that I gathered. This way I could 'audit' records to ensure I had accounts of transcripts, persons interviewed, observation sessions, frequency of interviews with a group member and the like. Tables 4.3, 4.4 and 4.5 are examples of record keeping throughout the various phases of my project. Finally, to increase levels of dependability with the data, I quantified respondents' mentions of the key categories (Table 4.10).

I use three different points of emphasis to support my data analysis. With each point of emphasis I use extracts of data to represent actors' multi-vocality. As shown in Chapter 6 discussion of data analysis is presented in tables as the essence of

the actors' meaning. I use this data to assign a relative weighting level. Finally, I

arrange these levels on a matrix which focuses on one of the three points of emphasis.

Table 4.10 – Respondent's Reference to Central Categories

Central Categories	PowerCo			GenerCo		
	Management	Administrative	Professional-Technical	Management	Administrative	Professional-Technical
Social Identity Representation	√√√	√√√	√√√	√√√	√√√	√√√
Social Identity Salience	√√	√√√	√√√	√√	√√√	√√√
Collective or Individual Learning	√√√	√√√	√√√	√√	√√	√√
Tacit or Explicit Learning	√√	√	√√√	√	√	√√√
Impact of Change on Practice	√√	√√√	√√√	√√	√√√	√√
Degree of Intended Organizational Identity Learned	√√	√√√	√√	√√	√√√	√√
Number of Interviews	8	12	12	8	6	13

Legend

√√√ - over half   √√ - half   √ - less than half

The first point of emphasis is social and organizational identity. This is shown

as actors' expressions of the current (pre-change) SOI as well as levels of salience and

commitment. Second, actions and cultural processes that maintain and strengthen

SOI. Finally, I analyze actors' conceptions of the significance of the organizational

changes that each firm is experiencing at the level of normal practice and work

routines and for the firm overall. The combination of the analyses illustrates the

degree of SOI alignment-misalignment between current social identities and the

organization's intended identity associated with each firm's organizational change.

The degree of SOI tension is then compared to the extent each group learned new

practices which underpin the particular change endeavor in PowerCo or GenerCo.

The analysis logic draws on social identity theory's precept that with high levels of social identity salience, commitment and reinforcement, actors are more likely to invoke actions that are consistent with the current social identity than learn an intended organizational identity (Stryker and Burke, 2000). I make theoretical claims in Chapter 9 based on these categories. Some quantification of data in qualitative research, such as frequency tables (Table 4.10) is consistent with approaches used by various researchers who argue that qualitative researchers sometimes employ a limited amount of quantification in their projects such as frequency tables (*cf:* Silverman, 1984, 1985; Miles and Huberman, 1994; Martin, 2002). Silverman (1985) argues that some quantification of findings from qualitative studies can help reveal insights and make clearer the generality of the phenomenon being studied. Although I used some quantification I am cautious to try and use it only to attempt to reflect research participant's ways of understanding their social worlds (Bryman and Bell, 2003: 472).

Evolution of My Role as Researcher

When my project began I was an employee of PowerCo. My research interest was sparked when I was asked to become involved with a process of change – to merge PowerCo with another firm. Just before the change process commenced, an external management consultant told me that over 60 % of all corporate mergers failed. I became interested in why some mergers were successful, while others failed to achieve the merger objectives. During the project's earliest stages, I was a member of PowerCo's senior management team. I am conscious that as an employee my identity likely affected how participants responded to my interview questions and

there was a possibility that they might 'self censor' their comments. At the same time, being an employee provided me with first-hand insights into individual, group and organizational issues and actions for a company involved in the electricity industry. Easterby-Smith, Thorpe and Lowe (2002) assert that when the researcher needs to become completely immersed in the everyday lived experience of the situation, it is appropriate for them to be an employee. The authors argue that, "…sometimes it is the only way to gain the kind of insights sought", (2002: 110). I found that because of my five-year affiliation with the organization and my familiarity with the people in the study, I could understand a range of social interactions first-hand, from interpersonal subtleties to overt expressions of legitimate power (Parker, 2000).

My time at the company and previous time spent in the industry also equipped me to understand communication between actors, its modality, the use of jargon and the language of everyday life which as Berger and Luckmann (1966) note, serves to make sense of the situation and engender meaning. I commenced my research as a participant observer. My role facilitated a participant-as-observer role since I engaged in day-to-day activities of the firm, built and established relationships with those I observed and made clear my role as researcher by making presentations to the organization's decision makers and with those who agreed to participate in my study. As my project evolved I left the organization's employ. Nonetheless, I realize my role as an employee has implication for colleagues whom I interviewed or observed. Equally important, as Bryman and Bell (2003: 27) state, my role and prior 'knowledge, experience and attitudes' influenced not only how I saw things but also *what* I saw. I attempted to manage this in various ways.

First, I tried to moderate my role and function and adopt more of a researcher role by interviewing as much as I could in neutral settings. While I carried out observation in the actual place of work, I interviewed in meeting rooms, cafeterias or nearby restaurants a way to de-centre my role as an executive manager. I often conducted interviews on Fridays. Fridays are considered more casual in the organizational cultures where I worked and people often dress and act more informally than during other days in the workweek. Second, I used multiple data collection methods, which included interviews, participant observation, company document analysis and reflective memos as a way to cross check emergent themes, concepts and categories. My orientation progressed from less structured observation to a more focused observation as my exposure to the cultures and members of both the British and Canadian study organizations increased. As such, I could better understand emergent themes, practices and symbols that were most relevant to my study. My time as an employee of PowerCo assisted with my understanding of what Goffman (1963) calls 'role embracement' a situation where members publicly embrace the ideologies embedded within a social situation as an authentic expression of their experience as members (Kunda, 1992: 106). My observations could then be oriented towards what I though was going on within group actions in relation to what I observed.

As my project evolved, I was able to 'carry over' certain aspects of my understanding in the context of the British firm since it also operates in the electricity industry. Consistent with institutional theory (DiMaggio and Powell, 1983), certain isomorphic features cross over organizations in the same industry. In this case, I found similarities in structure, culture and at the level of individual actors, what

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people found as important characteristics, which contributed to shaping their social identity. Further, my relocation to England also helped increased my understanding of national culture, language and norms. This evolution in my role as researcher is consistent with Angrosino and Mays de Perez's (2000: 677) conception of ethnography. The authors discuss focused observation and the necessary inclusion of interviewing because the 'experience of the ethnographer gained from direct experience' serves as a guide to help determine what is of relative importance to a specific organizational culture. This evolving understanding also aids in making sense of research findings as they emerge.

Ethical Considerations

Participant observation and interviews may be considered intrusive methods of data collection as they directly involve the researcher with the subject (Bryman and Bell, 2003). I was concerned about various aspects of the participants' worlds and in particular, issues of anonymity and privacy. I wanted to ensure that if someone decided to participate in my study his or her job would not be jeopardized. I made a commitment to each participant that their identities would not be disclosed to anyone in their organizations, other organizations or in any of my research writing. Before I engaged in an interview with a subject, I explained the general nature of my research was to understand how groups navigate in a context of change. I did not detail the aspects organizational learning and social and organizational identity, however, because I did not want to lead the subject. I also made clear this same general research interest to the managers of the power grid and nuclear power stations in our correspondence and conversations about gaining access to the station and control

rooms. In relation to my ethical treatment of the study, after receiving approval to conduct the research from PowerCo's chief executive officer, I made a presentation to the executive team about the aims, subject matter and potential impacts of my study on the organization and for the members who decided to participate in it. I received the executive team's support to conduct the study. I took the same approach for GenerCo. I first met with the station director, the senior-most member of the twin facilities I wished to study. I provided him with a summary document of my research interest and received his approval to proceed and his agreement to be interviewed. This served as a sanction for my project and for the head of communications at the joint stations to provide me with assistance in making contact with others.

Throughout the process, I shared transcripts and discussed my research with participants who were interested in continued involvement. I provided 23 agreement letters to interested research participants. These letters outlined my treatment of confidentiality and that involvement in the study was at the volition of each participant. I made offers to share the participant's individual transcripts and different participant transcripts were made available. Finally, during meetings, I shared progress reports with both companies as the study evolved.

Conclusions and Methodology Limitations

This chapter began with the argument that methodology is as much about personal philosophy and worldview as it is about fit and appropriateness for a particular research project. A symbolic interactionist orientation informs an understanding of group lived experience and meaning making. SI has been criticized

as inappropriate when researching macro social processes such as organizational change in response to business environment adaptation (Du Gay, 1996; Giddens, 1997; Haralambos, 1980). For example, Giddens (1997) argues that SI is open to criticism since it focuses too much on the micro-level scale. Haralambos (1980) further claims that SI ignores the wider social context in which particular situations occur.

Haralambos's criticisms, according to Denzin (1992) are similar to Manford Kuhn's (1964) and John Lofland's. Kuhn argues that SI problems are mostly to do with operationalization and that, 'It is most difficult to establish generalizations valid for human behavior without methods wherewith to make precise checks on initersubjective perceptions of events", (Kuhn, 1964:78, quoted in Denzin, 1992: 48). Lofland (1970), cited in Denzin (1992: 48), expands on these ideas and suggests that, "… if interactionists were to use an implicit or explicit paradigm of strategic analysis, they could articulate generic types of strategies…such a move would permit the 'construction of generic and comparative theories of strategic construction'" (1970: 45).

These views are contested on various grounds by authors who make recent cogent arguments. Dennis and Martin (2005), for example, demonstrate that criticizing SI as exclusively a micro process theory and method is misguided. They point to the rich history where SI has transcended the philosophic dualism of structure-agency, voluntarism-determinism and micro-macro concepts. It is precisely because of SI's pragmatic tradition of examining real-world situations of human activity and understanding which seek to empirically overcome dualism. These

duelist debates, they argue, construe tangential and circular depictions of theoretical polemics which detract from understanding and meaning making. The authors cite SI's rich research tradition that transcends micro and macro sociology.

As one example, they present Becker's early work, which found that schools organized on the basis of subcultures of a heterogeneous society tended to operate in such a way that members of subordinate groups of differing culture did not get a fair share of educational opportunities. As a result, chances for social mobility were compromised (Becker, 1955: 103 in Dennis and Martin, 2005: 201). The authors trace Giddens apparent shift, when in the 1980's Giddens (1987, 214, 215) suggested a need for, 'an adequate account of the nature of …the ways in which meaning is produced and sustained through the use of methodological devices', a consistent feature of SI.

According to Dennis and Martin (2005: 194), around the same period, feminist writers also developed themes around the nature of gender in discourse and ways 'macro' phenomenon such as patriarchy needed to be understood in terms of everyday activity and experience (*cf.* Smith, 1988). Moreover, Dreyfus argues that much of Foucault's work derives from his explorations of, '…everyday practices of individuals and groups…coordinated so as to produce, perpetuate and delimit what people can think, do and be' (Dreyfus, 2003: 32), (see also Mills, 2003: 34). Thus, deciding which approach makes the most sense in understanding the phenomenon of interest in the context of a research question is a far more coherent way of tackling these theoretical issues.

Table 4.11 - Steps to Address SI Criticisms

Methodological Criticism	Attempt to Address in this Research
SI focuses on micro-processes and cannot explain macro phenomenon	Trace micro-level social processes in the context of macro-level change in the study organizations business environment
Difficult for SI to establish generalizations valid for human behavior without methods to make precise checks on initersubjective perceptions of events	SI methods of participant observation and interviews are augmented with study of company documents. This triangulation, using a grounded theory approach, affords a deeper, contextual understanding of multi-vocality (respondents self expressions, expressions of others compared to observations and to the organization's formal representation in corporate documentation).
SI ignores wider social context	Context of organizational culture change that relies on learning intended organizational identity is study focus. Social and organizational identities are central features of an organizational social context.
Implicit or explicit paradigm of strategic analysis, could articulate generic types of strategies and permit the construction of generic and comparative theories	Grounded theory's constant comparative method and Strauss and Corbin's (1998) 'techniques' is such a strategic analysis.

Interactionists do see relevance to macro sociology within SI as a methodology. In contrast to functionalist sociology, which privileges the large-scale social system as stable and as the organizing framework that explains social life, interactionists see interpersonal action as a constantly fluctuating, ongoing process of social construction where these actions collectively produce macro-level action. Therefore, interactionists see society as the net construction of the collaborative production of actions. Some writers have elaborated on various aspects of on the symbolic interactionism perspective. For example, Locke, 2001: 25) raises Denzin's (2001) 'reformulated version of symbolic interactionism' that underscores a researcher's own interpretive acts and develops this school of thought along more postmodern lines. Denzin argues that symbolic interactionism should become more reflexive and interpretive, hence he introduces the term 'interpretive interactionism'. (Denzin, 2001: ix). In the context of my project I attempt to deal with the major criticisms of SI as a theoretical underpinning and method of my project by employing

the constant comparison method of grounded theory. Grounded theory affords a robust process to collect and interpret data. It is particularly appropriate as a method where little extant literature on the subject interest exists and is well suited for grounding a particular theory in data, which led to its emergence. I outline the steps I took to address the methodological criticisms aimed at symbolic interactionism in Table 4.11.

Since learning and practice are inextricable (Lave and Wenger, 1991) and because social and organizational identity is constructed and reinforced through learning, I selected the generic social process of SOI as a key theoretical framework. Theorists hold opposing views on whether SOI based conflict enables (Corey and Gioia, 2003; Rothman and Friedman, 2003) or impedes (Brown and Starkey, 2000; Weick, 2001; Child and Rodrigues, 2003) organizational learning. My investigation of the literature revealed that studies along these lines concentrate on a dominant dichotomy; either learning is impeded or it is facilitated in situations of SOI tension. I also remain open to the prospect that other possibilities beyond the 'impeded' or 'facilitated' outcomes may arise.

I have argued that this subject remains essentially under-investigated. Further, studies that do tackle this line of enquiry remain largely at the theoretical level of analysis. Theory building that considers the implications for organizational learning in light of SOI tension implies a better understanding of group learning in the context of strategic change. According to Lyles and Easterby-Smith (2003: 645), research on organizational learning that analyzes both process and theoretical development is,

"the single area that will have the greatest impact" in the wider research and writing on organizational learning.

I acknowledge various limitations of this methodology. The prime limitation is the ability to interpret meaningful ideas across different contexts. As study sites PowerCo and GenerCo are distinct in terms of technology, type of business, age, size and profitability. This presents an issue pertaining to generalizability or the application of ideas generated in one site applying to the other (Easterby-Smith, Thorpe and Lowe, 1991). To offset this, I attempted to develop 'data density' (Locke, 2001) by collecting a large and varied amount of data to make possible rich, multidimensional category development. I also tested my understanding of data with study representatives to ensure I had taken their meaning of a concept in its intended context. I also discussed my evolving findings with members of each organization as a test for transcontextuality (Prus, 1996) and to see if the actions and discourse of one organizational group held consistent meaning for the same group in the other company. Two related limitations have to do with the study findings as they evolved from the use of grounded theory. Grounded theory proponents argue for the creation of new insights from the generation of rich, thick data (Strauss and Corbin, 1998). The tenets of constant comparison research methodology are employed because of its systematic approach and usefulness in building theory and 'grounding' that theory in the collected data. This approach also lends itself to understanding contrasts. In this project, contrasts are represented as learning being impeded or facilitated. At the same time, I attempt to remain open to other possible outcomes. I also attempt to be cautious about understanding identity by compartmentalizing it into tidy packages that

are fixed for actors and that explain a whole series of social relations when it is such a complex and dynamic social process.

Constructing theory about the investigated phenomenon is the main concern for researchers. Studying only two organizations might be construed as a limitation since the quality of any theoretical contribution would be based on such small representativeness of concepts. I attempt to address this by studying clusters of communities that collected into six groups with similar work functions. The next related limitation along this same line involves the extent to which concepts can vary dimensionally having studied only two sites. In both instances of this potential limitation theory generation could be perceived as restricted because the study involved just two sites. I would argue that in contrast to quantitative approaches that concentrate on statistical generalizability, theoretical sampling addresses these potential limitations. Rather than study sites as the intended generalized sample, I looked for instances where the concepts of SOI and organizational learning were present. These were manifold, rich and, I believe, meaningful for the actors involved, so while the study findings may only generalize to the case sites I explored, variation in the complexity of the actors' identity experiences as they learn in contexts of change are generalizable to other settings (Dougherty et al., 2004). Constant comparison of these incidents across contexts and by drawing on the relevant literature further facilitated theoretical generalizablility. In the next chapter I will present the results of the study findings for GenerCo and PowerCo.

Chapter 5
Acquiring Identities and Impacts of Identity Tension on Situated Learning

Introduction

The previous chapter discussed the methodological approach that I adopted to present actors voices as they engage in micro level social processes in response to the macro business environment need to adapt to change. This chapter presents results of the data gathered from GenerCo and PowerCo. The purpose of this chapter is to introduce social and organizational identity as constructions and processes in actors' everyday life experiences. It also serves to present and illustrate the concept of identity tension.

Data were primarily gathered in three ways. Interviews provided a rich and contextual description of the actors' social worlds. Participant observation was also used and fieldnotes were made following observation sessions. I used a memo process whereby I captured reflections and ideas for areas of enquiry in subsequent interviews. Finally, I analyzed company documents as written expressions that codified the organizational understanding or impressions of that understanding. Evidence is presented in such a way as to capture multiple voices to facilitate various representations of meaning. Each group – administrative, management and professional-technical member expressions are represented in turn. For example, these may include an actor's impression of their own experience, a manager's

expression about group members or the broader organization. As well, different contexts are presented. I approach the presentation of the data from the 'general' to the 'specific'. In this way the data express the everyday life experiences of various actors in community at first in a 'within' community emphasis. Later, I introduce specific examples of organizational change, which narrows the social process of identification as communities engage in wider 'across community' social systems. First, group expressions of their current social identity are presented. Second, quotations that characterize actors understanding of the intended organizational identity are shown. Finally, the organizational change that each organization introduced is presented as a context in which social identities may be understood in relation to how actors interpret and learn the intended organizational identity.

GenerCo Organizational Identity Formation

The Institute of Nuclear Power Operations (INPO) [10] was formed after the Three Mile Island accident when in 1979 nuclear contaminated gas and water from Unit 2 was released into the atmosphere in Pennsylvania, United States. INPO was created to establish industry standards against which all American nuclear power stations are measured. Regular inspections, training, information sharing, event analysis, evaluation and accreditation make up INPO's key activities. INPO is the United States centre for the World Association of Nuclear Operators (WANO). WANO was instituted after the 1986 explosion at the Chernobyl nuclear power plant. Located approximately 80 miles north of Kiev, Chernobyl nuclear power plant had four reactors. In the process of experimentation on 'reactor four' a number of safety

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[10] Industry Association data (INPO and WANO) from World Nuclear Association Web site http://www.world-nuclear.org.

procedures were ignored. An out of control chain reaction created explosions that caused more than 30 immediate fatalities and the high levels of radiation necessitated the evacuation of 135,000 people. WANO is international in scope and like INPO, its member organizations share operating experience information by collecting, trending and disseminating nuclear plant performance data in key areas. The data is gathered to make up a set of quantitative indicators of plant performance which various industry managers use to benchmark their respective plant performance. Ostensibly and according to both the INPO and WANO nuclear plant safety, reliability and more recently, plant efficiency are the ultimate industry goals.

Organizations like INPO and WANO not only provide industry performance statistics, in line with institutional theory (DiMaggio and Powell, 1983) according to respondents, they also serve as reinforcing mechanisms for organizational identity within the nuclear industry. For example operations manager at GenerCo's Station Coast, Ivan uses INPO performance as a way to classify performance, status and standing. He describes this without having to name the company he refers to.

> *...we had a guy who is an ops manager who came from an American station, I'll not tell you the station but it's an INPO One station and has been for about the last seven years. So pretty good...pretty good station. [Interview 37G-S10]*

Industry organizations not only provide a performance level, their progress reports are also used by managers to pursue more desirable aspects of organizational identity. For example, Station Coast director, Donald describes how outside credibility serves as a greater influence in helping to establish performance levels that are consistent with top performer's identity. He says:

> *You could look at Station Coast and we could say, the guys here could say, I could go out to them and say, 'We still need to do this, that and the other'.*

And they could say, 'Well actually, look where we've come from. Haven't we come a long way? We're doing really well', ...what WANO does is they come in ...and get a feel for the standards that things are being done out on the plant against...a reference document of what the standards should be. And ...it's always about striving for continuous improvement, so you can never actually get there...I mean we're on a journey, we are improving and ...somebody coming in from outside says... and if it's just one message after another this is the gap here, this is the gap there, it makes people realize, 'Ya. We still have some way to go'. [Interview 14G-S10]

Finally, organizational identity in the industry is also influenced by virtue of being a 'high reliability' organization (HRO) and in particular in the nuclear industry. For example, Station Coast director, Donald says:

Staff identify with site more than with company in the order of first their shift and operating area then the station and last, the company. Also more identification and connection with the nuclear industry [Interview 27G-S2]

Further GenerCo Station Coast control room operator and outage coordinator Michael, puts it this way:

I have...stronger allegiance to and a sense of responsibility being in the nuclear industry and we tend to monitor what goes on part uhh...that goes for places like [Station Name] and [Station Name] (locations where recent nuclear safety incidents have occurred) and obviously if something happens in that arm of our industry...like we tend to feel it a bit more acutely. [Interview 58G-S4]

Social Identity Formation

Social identities are formed as a combined construction of self-concept and group membership. Tajfel (1972) conceives social identity as an individual's knowledge that they belong to a group and that they place certain emotional and value significance in being members of that group. Interest actors place in positive self-evaluation is made possible by comparison with other groups which provides a basis for motivating differences between social groups (Abrams and Hogg, 1990). High

salience attributed to a group identity results in high levels of commitment to that identity (Ervin and Stryker, 2001). Since identity is learned through practice as an actor becomes a full member of a practice (Wenger, 1998) when a company institutes an intended identity organizational members can elect to either learn the new intended identity or remain steadfast, clinging to the group or practice-based identity. Members who refrain from transferring their knowledge or engaging in new practices that are necessary for learning the intended identity will interrupt the learning process (Child and Rodrigues, 2003). In contrast, the tension between the intended organizational identity and the current social identity may serve as a catalyst for sparking learning precisely because it forces difficult questions like, 'Who are we?' and these questions in turn produce requisite critical reflection and group learning (Corley and Gioia, 2003). In the next section I discuss each group and their respective identity in turn.

Administrative Social Identity

I studied administrative group employees at GenerCo which included personal assistants, human resources and corporate communications staff from different groups in Station Coast and Station Peak. Respondents seem to refer to their identity as either their occupation or, like the management group, align their identification with that of the organization. Members of this group that have long service with GenerCo also relate to the 'keep the lights on' (KTLO) identity although this characterization was expressed less frequently than with the P-T function workers. For example, HR training specialist, Mitchell who has, 'been with the company a long time', says:

> ...*if you talk to anybody in the industry they think that they are keeping the lights on, ...keeping hospitals, incubators or whatever ticking over. Doing the job. [Interview 54G-S2]*

Members of this group also refer to their actual work as identification. For example in discussing her routine activities, HR specialist Margaret describes,

> ...changes...causes more recruitment, manpower lists to change, and you get this new thing and it needs to be communicated out to everybody and we have to have these workshops and all the information has to be done for the different workshops. [Interview 35G-S22],

In relation to her recruitment activities she explains,

> ...put an advert together...inundated with applicants...interviewing and put him in there [Interview 35G-S122].

Administrative group member identities appear to align with their practice of bureaucratic processes. For example, in HR processes, Margaret ensures forms are properly completed to 'record MCP' [a type of personnel documentation] for such things as vacation time [Interview 35G-S79]. In terms of identity reinforcement, as with the other groups, administrative group shares outward appearance in the form of dress as a group affiliation strategy. For example, GenerCo Station Coast administrative assistant, June is not required to wear a uniform yet she does. She says:

> They do document typing and I think they have their own uniform. They...they're contractors. Katherine and I, we buy our own, but we buy the same thing so we look alike. [Interview 34G-S 48]

According to Oakes, Haslam and Reynolds (1999: 64), like language, a person's dress is a key part of identity as it, 'designates in and out groups and establishes modes of categorization'. Categorization, comparison and identification produce patterns of similarities and differences across social contexts. Moreover, dress and identity is reinforced through socialization. A primary location for groups spending time socially is the power station cafeteria. The following field note

describes my observation of how dress and socialization combine to establish relationship boundaries for groups.

> *Everyone sitting in a group at each table seem to be dressed the same. Coveralls are worn but the tops are rolled down and tucked into waistbands. White short sleeved shirts are seated at that table. An all-girl table along the other side features uniforms just like the one worn by the Station Director Secretary. I cannot see mixture among any of the uniforms. It is almost as if what you wear designates where you sit. [Fieldnote 17G-S3]*

Identity is also reinforced for this group and others because of the high number of partners that work at the station. Respondents suggest that because of the number of partner relationships work identity can spread into homelife. For example, June indicates, *"...my partner works here too...so...he's a team leader, in maintenance" [Interview 34G-S86]*. Further, she says:

> *It's amazing. Out of the six girls I have lunch with, there's only one who's married to someone from off site. (laughs). Everyone else's partner works here. Catherine's husband. There's quite a few. And more than that. [Interview 34G-S 88]*

Management Social Identity

Various concepts and categories emerged from the data that help to explain how social identity is formed, reinforced and the meaning identity holds for different groups. Management in GenerCo's nuclear stations Coast and Peak hold compatible roles. Each individual is responsible to the Station Director for various activities such as operating the station, maintaining and engineering processes as well as human resources, safety and training. At Station Coast, for example, the management group is made up of seven people who meet at least weekly with the station director. This group takes part in station planing meetings and regular topic specific meetings that have to do with industrial relations or the health and safety committee. Group members may make contact with their counterparts at other GenerCo stations via

weekly telephone conferences. Their focus is largely on their particular area and they meet regularly with their supervisors to review progress against performance indicators or project milestones. This is a key group that bridges activity between the station director's corporate role and their areas of responsibility. The group of seven is made up mostly of white male engineers. Two women are members of this group, Jane, responsible for human resources and Gail, who manages health, safety and environment.

When I questioned this group on their career history, various managers describe their formal qualifications. For example, Station Peak operations manager, Irving says:

> *My background is five years on shift operations. Before that I was actually in maintenance for four years or so in conventional planning so I was group head of what was the planning group at the time the names have all changed now due to management stuff. Prior to that, I actually left college with a physics degree. I was a physicist by trade came into the industry as a trainer [Interview 37G-S5]*

Similarly, as an expression of her self-identity Gail introduced herself by explaining *"[my]...background is as a reactor physicist in the [name of nuclear power generation technology] fleet"* and then she described the different international locations where she worked for GenerCo. *[Interview 31G-S2]*

Other managers, who tended to be long-term employees, discussed the 'old days' and how those times shaped their identification. These views referenced notions like 'earning one's stripes' and 'cutting one's teeth'. Managers who subscribe to this identity type saw GenerCo in previous decades as a more complex and demanding place. Finally, this group seemed to share a common trait of 'working their way up the ladder'. Managers who hold this identity contend that training took

the form of 'trial by fire' over the classroom and control room simulation variety that

is dominantly used in recent times. For example, Ivan, the Station Coast operations

manager said:

> *Because when I was on those reactors...because I was a reactor operator, I*
> *was a control room supervisor and I was the shift supervisor, so I've done*
> *every job over there in years gone by. When this plant first went (on-line), its*
> *reliability was virtually nil. It was tripping and starting up and tripping and*
> *starting up. You know, we'd have four trips in four days. So we'd have lots*
> *and lots of experience how to deal with those things. And as the plants*
> *become more and more reliable, the opportunity to pick up that experience is*
> *becoming less and less. And that is difficult. And the things that spring into*
> *my mind for consideration under certain criteria, may not spring into other*
> *people's minds. [Interview 37G-S52]*

This expression of identity is similar to the P-T group who tends to identify

with their current role, having often worked their way up to control room operator.

This tendency seems particularly prevalent depending on the length of service a

person has with GenerCo. The longer the service, the more it seems they report about

their identity as a part of their present job. When asked to describe how as

management they see themselves, or how the staff perceives themselves, there seems

to be little inseparability between their personal identity and the organization's. Some

management members refer to staff identity and the organizational identity but don't

often speak about their self-concepts. Other managers attribute the organizational

roots as a regulated public utility as a strong influence in their social identity. For

example, maintenance manager, Peter identifies with the utility industry, which

Helms typifies as stable environments, with strong hierarchical management traditions

and where incremental change prevails (Helm, 2003). Further, Smart et al., (2003)

consider deeply embedded core values in high reliability organization staff as design

features that typify regulated utility organizations. Peter commented that:

> *Our history is rooted in the public utility industry which is close to the civil*
> *service so change is incrementally based. On an incremental approach, "if*

you don't do anything wrong you don't need to do much right...[Interview 28G-S6]

Station director Donald 'depersonalizes' his self identity and defers to the organizational identity. He elaborates on the organizational identification of stability and predictability. He says:

> *So we're a base load generator. The requirement to be a base load generator is to be predictable. If you're going to start up or shut down, it's to start up and shut down when you say you're going to. [Interview 14G-S4]*

Another concept that emerges is shown by managers' identification with 'saving the company'. GenerCo is experiencing serious financial difficulty and as will be discussed in more detail later, is implementing a major cost savings and productivity improvement initiative to try and rectify the situation. Because of the gravity of this circumstance, managers report that ensuring the survival of the company is important work. Human Resources manager Jane says, *"This is our last chance to get it right" [Interview 41G-S2(b)]*, whereas maintenance manager Morris, contends that, *"Management's problem to fix involve being close to going into liquidation as a company", [Interview 29G-S10]*. The situation also serves to both reinforce management's identity for doing the important work of saving the organization and differentiating the management group from others. Along this line Jane suggests that, *"We can't seem to get through to staff we might go bust." [Interview 30G-S2]* and Morris says, *"We could loose 50 jobs but not hundreds, so there is no burning bridge there", [Interview 29G-S6]*.

Safety and environment manager, Gail, also sees employees' failure to acknowledge the financial problems as a differentiating factor in identities. She comments that the, *"...them versus us' is not personal. It's a faceless problem."*

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[Interview 31G-S4]. Gail also refers to the differences in social identity differences

between organizational members who work in professional-technical areas like

chemists who she says is a group that is more like management. She points out the

difference between the professionals as:

> *Professionals here like to be appreciated and to be in an intellectual*
> *environment with technical credibility. They're not bothered by an outward*
> *image. [Interview 31G-S4]*

Professional-Technical Social Identity[11]

P-T members refer to their social identity as linked with 'keeping the lights

on' (KTLO). Moreover, they equate KTLO as a source of pride that they refer to

when speaking to friends and neighbours outside of the industry about their function.

P-T workers include people who perform fueling duties, maintenance and operations.

P-T staff references their job in producing electricity as a mission to denote the sense

of importance they place on the role electricity plays in peoples' lives. Technical

specialist Kirk, who has worked for over 25 years, mostly as a GenerCo maintenance

technician explains that:

> *...there is a huge amount of pride within the organisation. I like most of the*
> *staff appreciate that we provide a service in terms of electricity to the people*
> *of the UK. For myself, "keeping the lights on" is exactly what we try to do. So*
> *"keeping the lights on" is what we do, it's our job. [Interview 51G-S1]*

Here the act of keeping the lights on is seen as a service to benefit the public.

It is a source of pride and synonymous with 'the job'. Identification in the P-T

function community of practice is learned and reinforced through joint action

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[11] While I studied communities of practice in the fueling group, maintenance, operations and control room operators and provide data from interviews and observations, the control room operators data forms a slightly larger set. Control room operators in the British firm are also more compatible with the control room operators in the Canadian organization. Grouping these communities of practice into 'like' functional groups and drawing frequently on the close connections within and across communities of practice enables understanding across contexts.

(Blumer, 1969; Brown and Duguid, 2002). As with other P-T activities, learning identity occurs concurrently with learning the practice of control room operations.

Michael, control room operator and outage coordination offers a variation on the 'keeping the lights on as a public service' theme. He contends that nuclear power generation is an important environmental management strategy and that harmful carbon dioxide emissions are reduced using this technology. He suggests:

> I...stronger allegiance to and a sense of responsibility being in the nuclear industry...And it's a belief that we have a part to play in the role of reduction of CO_2 emissions and I say that is probably a stronger uhh...element of it that working for 'supplying electricity' you know. Because electricity...industry as part of privatization is being so ...divided. So...we now, we are divided along well...our means of generation. [Interview58G-S29]

GenerCo control room operators also refer to the importance of tacit knowledge styles as they carry out their work routines. Consistent with Polanyi's (1966) depiction of tacit knowledge, P-T workers are unaware that they possess and navigate with this type of knowledge in the first instance.

> ...there are three teams on shift. And it does tend to be hell for the lads. It's the engineers, the lads (Op Techs), and the fuel route lads. And I don't know how it works in other industries but here probably 20 years ago, on the mess room doors, we had senior mess room and junior mess room ya, for the engineers (senior room). And that was this...if you want an engineers job, you're going to have to move because we don't employ people from the shop floor as engineers. But those were the institutional barriers and it's better but the people barriers are still there. [Interview 36G-S32]

The data also show discrepancies in the type of knowledge valued and used between control room operators and leaders. Leaders show a distinct preference for emphasizing explicit knowledge over tacit knowledge. For example, when Station Coast operations manager Ivan, responds to how power station control room operators handle alarms, he says:

What normally happens is they receive an alarm on some system and usually the alarm has a procedural reference next to it, so you get out the procedure and look at the procedures so this alarm is generated by such and such a thing and it will ask various questions in the procedure. [Interview 37G-S8]

When asked about how alarms are handled in practice, a different picture emerges. No mention is made about first consulting procedures as the main source of sensemaking. Rather social relations that inform tacit knowledge are referenced as a primary device for how alarms are handled. GenerCo Station Peak control room operator Robert explains that:

Again, we'll fall back to a group discussion. This is quite often the scenario that...um...through all the best intentions, procedures, some procedures don't necessarily fit the alarms and the scenarios. It's trying to tell you a picture but it's a computer, it doesn't recognize all the dynamics of it. So as a team, you'll sit back. You'll look at the alarms that you've received, you'll look at the plant indications that you've got...and then you'll formulate some sort of conclusions to what you think is going on. And then satisfy yourselves of the corrective action that is required. [Interview 38G-S32]

Although some managers acknowledge the merit and benefit of tacit knowledge in practice, there is little consistency among them in how tacit knowledge may be integrated into control room operating repertoire. The following excerpt shows this incongruity. I asked station Coast Director, Donald this question:

I'm trying to think of a situation where there's an alarm, and there is nothing in the book [of procedures] on that? [Interview 14G-S40]

He responded with:

There can't be one. [Interview 14G-S41]

When I asked Station Coast senior control room operator and outage coordinator Michael the same question, he replied:

...there's always something that's going to catch you. Always something that's going to catch you. If that plant was one hundred percent predictable in its performance, I'd agree with you completely, but it isn't. There is always something. Off the wall. That nobody's thought of. And the trouble is that you've got lots of plant interacting. And the way it interacts...the permutations and combinations are just too big. You just can't...you can't document it. [Interview 36G-S42]

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Consistent with other research that highlights the symbolic representation of language and meaning in social processes, (Prasad, 1993; Postmes et al., 2005), my observations and interviews show that language is a key means of establishing identity in the P-T group. P-T staff, in particular, engage in language that demonstrates control over high hazard and complex technical systems. Control room operator Robert, refers to, "you've got a plant in distress" for a technical problem on the station *[Interview 38G-S20]*, and "It's a time in the chair issue", for control room operating experience *[Interview 38G-S52]*. He also talks about carrying out "the post-trip actions…to maintain cooling in the box" *[Interview 38G-S 54]* in reference to shutting down a reactor to maintain nuclear safety.

P-T Members Identity Reinforcement

Control room operators everyday work necessitates that they spend long hours in close quarters and sometimes in extreme situations. This way of carrying out practice serves to reinforce identification. Various respondents indicate that keeping the lights on is synonymous with plant reliability and the control room operators comments illustrate the closeness with which they carry out their reliability tasks. For example, senior control room operator and outage coordinator, Michael says:

> *Some days it's very close. You…especially over a weekend you see more of them at work than you do your family. Shifts are all different encounters they're all different encounters they are. You could say at GenerCo they're broken down into A, B, C and D shifts. 'A' shift, for example is known as the planet. Because it's like living on another planet when you're there. And then there's the knitting shift which is 'C' shift, because they're all boring and quiet. So they do have their strong traits. And it's surprising that it doesn't matter how many characters come and go but the shifts don't change much in character…. The shift identity stays fairly stable. [Interview 36G-S44,46]*

Leader of the Station Coast maintenance department, Peter defines the concept

of reliability in the following way, *"Delivering reliability means ensuring the plant*

operates at the level of its capability" [Interview 28G-S2].

One common method in the industry to measure reliable performance is by

calculating and comparing a power station's 'load factor'.[12]   The following chart

represents GenerCo's Station Coast and Station Peak load factors in the years 2002

through 2004.

Table 5.1 Station Coast versus Station Peak - Load Factor[13] Comparison

Year	Station Coast	Station Peak
2002 – 03	78%	85%
2003 – 04	63%	89%

As shown in Table 5.1, Station Peak outperforms Station Coast considerably.

At the same time, the following excerpt from a Uranium and Nuclear Power

Information Centre briefing paper shows that performance levels at both GenerCo's

Station Coast and Station Peak are significantly lower than other nuclear stations of

the same age in countries such as Finland, Japan, USA and South Korea. While in the

comparison year 2004, only Station Peak achieves levels similar to average

performance, the report suggests that current year (January 2005) average

performance is at about 90 per cent load factor with leading countries performing in

the high 90's range.

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[12] Load factor is calculated by comparing each station's 'reference unit power', or what each generator
is capable of, against its actual performance. The airline industry also uses this term to represent a ratio
of 'available' versus 'filled' seats in the company's airplane fleet.

The briefing paper reports that:

...between 1998 and 2003 there was a [worldwide] net increase of only three reactors (2% in capacity). The rest of the improvement is due to better performance from existing units. One quarter of the world's reactors have load factors of more than 90%, ... In 2004 ten countries averaged better than 80% load factor....[14]

Reports such as these underpin GenerCo leaders' concerns that they need to increase the load factors at their generating stations to levels that are comparable with other industry players. For example, the chief executive comments in GenerCo's year-ending 2004 annual report that:

The challenge for 'GenerCo is to complete the Proposed Restructuring and focus on improving efficiency and reliability in our stations in order that we may compete in the very competitive UK electricity market. Clearly there is much to be done to ensure that 'GenerCo' achieves world class standards of reliability. The Company has already embarked on a number of programmes which are intended to tackle the causes of under-performance and reduce losses from unplanned outages to competitive levels, improve our trading performance and reduce our overheads. In doing so, we are seeking to harness the skills and experience of leading operators in various fields. A major part of the drive is the [PII (name)] Performance Improvement Programme which is central to the operational plans designed to enhance the prospects of the Group. [CoDoc G2-S(p)4]

These increases in performance levels are planned to take place within a challenging environment. GenerCo is not only experiencing financial hardship, which in part, stems from continued changes in its business environment owing to the uncertainty of market pricing and the viable operations of nuclear generators, it is also undergoing a financial debt restructuring. This puts additional pressures on the company to make a profit in order for it to gain a sense of independence from debt holders.

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[13] GenerCo (2003) *Local Community Liaison Council Environmental Report for 2003.* Station Coast and Station Peak power stations.

The exogenous forces that required GenerCo to undergo transformational change started when, as part of a wider industry privatization scheme, the government elected to privatize the company. This means that many major changes to GenerCo's structure and processes including a new situation where the company would be exposed to market pricing versus the monopoly arrangement that was based on fixed supply contracts. Change in GenerCo's operating environment continues through to today as for example the organization needs to consider whether and how new power stations can be brought on stream. The process of dramatic change began with a white paper in 1998 and a second in 2002 when the UK Department of Trade & Industry (DTI) published its plan on managing the country's nuclear legacy (Helm, 2003). Essentially GenerCo is seeing stations in the UK with earlier vintage nuclear technology either currently being decommissioned or soon targeted for that fate. No new plants have been announced as yet. Consequently, respondents express that these are difficult times for GenerCo to navigate in successfully, and at the same time, improve.

Productivity Improvement - Intended Organizational Identity

GenerCo's management is initiating steps to produce a major productivity improvement in their organization. GenerCo's chief executive comments in the year-ending 2004 annual report that:

> *The challenge for 'GenerCo is to complete the Proposed Restructuring and focus on improving efficiency and reliability in our stations in order that we may compete in the very competitive UK electricity market. ...A major part of the drive is the [PII (name)] which is central to the operational plans designed to enhance the prospects of the Group. [CoDoc G2-S(p)4]*

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[14] Uranium and Nuclear Power Information Centre. (January 2005) *Nuclear Power in the World Today*. Nuclear Issues Briefing Paper 7. http://www.uic.com.au/nip07.htm.

GenerCo management indicate that they are pressing for change and that the entire team is focused on instituting significant shifts in the organizational culture. The Performance Improvement Initiative' or 'PII' is at the centre of the organizational culture change process.

For example, Donald, the station director for GenerCo's Station Coast, says:

Our long-term investment is about engineering out tomorrow's reliability problems -whereas today, we're into fire fighting, maintaining and just keeping up with things. ...one aspect of improvement. And that's about plant reliability. The major one that we're focusing on is on people reliability. [Interview 14G-S2]

Jane, the head of the culture change process at the power stations said it was,

"Our last chance to get it right"

She went on to elaborate that, "It is good to see leadership support this. Change comes from the top first". She also said, "There are some skeptics" and employees are "change fatigued" and wonder, "will this actually happen?" To avoid the bad reputation attributed to instituting too many "initiatives" designed to change the culture and company's performance Jane explained, "I try not to use the word 'initiative' because it has a bad name. I call PII a 'program'. She says, *"This is not a negotiation"*, to denote the seriousness with which the company is taking on 'culture change program'. *[Interview 41G-S8].*

As a means to galvanize a future focus, GenerCo launched a new vision statement. Jane describes the process the company used to come up with the new vision. She explains:

...we then looked at well how could be describe the culture in terms of a metaphor and we had a consultant do some work with us and then came up

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with from being the civil service of the energy industry to being the Audi of the industry. So I wanted something where you couldn't have such a class distinction-it wasn't such a personal thing to people, so we came up with from the oily freighter to the naval ship. And we came up with the analogy of you know, a ship being ship shape, state of the art, clean, it had a direction, everybody was proud to work on it and so we tried to develop that theme a bit. That's their indicator, their direction and then the GenerCo values around the outside. A naval compass on one side and a... sort of fleet of ships on the other. And sort of people would see it and will start to identify for themselves, ... you know a pull approach rather than a push approach. [Interview 41G-S8]

Operations manager at Station Peak, Irving describes the PII culture change process 'four cornerstones' as operational focus, human performance, equipment reliability and work management, he says:

The operational focus is what we're doing actually supporting the core business. Human performance the other big one is equipment reliability and work management is the other. So they're like the four key cornerstones of the strategy and that's where the effort is going I guess. [Interview 37G-S9]

The organizational intended identity that management seeks to put in place is detailed in certain company documentation. For example, and as respondents previously indicated, the PII initiative presentation package for employees references the key points of the program as Four Fundamentals:

- ❖ Human performance - focuses on preventing error-likely situations and paying particular attention to areas on which we can improve
- ❖ Equipment reliability – concentrates on corporate and station strategies to ensure equipment is in an optimum state of readiness and in good materiel (*sic*) condition to support safe and reliable operation.
- ❖ Management of work – concentrates on improving the effectiveness and efficiency of all work activities. This increases the focus on safety and reliability...through people understanding the process which has been delivered through role based training
- ❖ Operational focus – concentrates on developing processes and behaviours that will enable the stations to achieve excellence in all phases of nuclear plant operations.

Further, and in addition to the new vision statement, the initiative stresses the 'common organisation structure across the station fleet', as well as "Increased

resource sharing to share knowledge and experience across the fleet". *[Co-doc 3G-S1,3,4,5,6]* In relation to the degree of significance placed on the PII initiative, Station Coast administrative assistant, June comments:

> *Ya uh... I think overall in the company, that's one of the big...station level it's the PII program and the rolling out of that and company-wide, I would think, besides the PII program, it's reliability...and safety. [Interview 34G-S13]*

Employees also express their understanding of 'old' world goals associated with safety and reliability and the new world objectives. For example, fuel route specialist, Tom says:

> *I've felt on the stations, and probably in the company in general, ... that ...we were going too far the wrong way. I don't think people objected to trying to be lean and mean but ...the company has had the wrong focus. At a company level it has been driving for costs and yet it is constantly exasperated at the unreliability of the plant and our failure to deliver our promises. And it hasn't made any connection between the idea of investment and resource and getting the reliability and the ability to deliver on business promises in generation. [Interview 25G-S16]*

As a nuclear power station operator, in GenerCo the action-decision spiral is so tightly connected that any uncertainty calls for shutting systems down. While this is normal practice in the high risk setting of a nuclear plant, some members express concern that shut downs seem to be 'blamed' much more on human performance even though the plant has not been as well maintained as it should have been and it is aging. HR coordinator Margaret, puts the situation this way:

> *...we're trying to do the best we can with the people we've got, with an aging plant with no money being put into certain parts of). So...(laughs) what difference does it make to your confidence statement? Why do we have to put an action plan...together on how we're going to make that mission statement work? And you know, corporately, I don't think they realize what it's like on plants. [Interview 35G-S22]*

However, the emphasis on performance measures and economic indicators underpin GenerCo's intended identity. Not being able to supply contracted amounts

of electricity means GenerCo must make up the difference by purchasing any required volume from the more expensive spot market. Donald, Station Coast director points out that:

> *...when you have a trip ...then we've immediately exposed uhh...600 megawatts to the balancing mechanism. It costs us a lot of money because we uhh...might be contracted to supply that power and we've got to go in...at the drop of a hat to purchase, maybe pay four or five times the amount"* [Interview 14G-S4,5]

Further, some members convey confusion over why certain past practices were not retained and so much emphasis seems to be placed on the new change endeavor. Communications specialist Mitchell, expresses these ideas in the following comment:

> *PII is obviously, quite an American model...um...and I think that kind of followed through. Um...I think it was a reaction to everything we've gone through. I think it was a reaction to say, we've been in a box and what can we do about this. We can't accept the status quo. As was said before, it was a tiny bit about throwing the baby out with the bath water really. Maybe we should have combined PII and some of the good practices from before.* [Interview 54-S8]

Other employees suggest that change must be balanced between the old and new practices. Some argue that funds for discretionary improvements are based in trust relationships between them and their managers. Tom, a technical specialist said:

> *...when it is poking you in the eye it's damned obvious then the money is there. But what isn't there is the act of faith money. A budget that I justify because my business judgement tells me to put some in place to enable people to engage, to believe in an intent to tackle things and to invest in processes and that money is not there. So we get the big scheme money... but we're not necessarily getting the money for the bits and pieces the tools that make the guy's job more straightforward the decent computer terminal, the screen that helps him monitor his unit, that probably is collectively as important as some of the big scheme stuff. Now, I'm sure that I could find a manager to come in and say, "Oh, you're quite wrong". But I'm not. [Interview 25G-S44]*

Further, Michael, a senior control room operator and outage coordinator, expressed that profit is a new concept in relation to the monopoly situation the company came from. At some level he sees a contradiction with profit and reliable operations:

> *People don't think about it. I know the company would have us, "Safe, Profitable and Proud" (new mission statement)...for most of us, it doesn't matter. Profit does not interest us. When we're in the control room, profit does not get a mention - how much we could be taking. [Interview 36G-S54]*

Tension Between Existing and Intended Identities

Jane commented on staff response to the new vision statement. She interpreted the response as follows:

> *We rolled out the new vision statement so employees could see how they could personalize it", Jane said. People like the new vision and they actually want to have pride in the station and the company". [Interview 41G-S2(b)]*

While I take Jane's expressions to mean that people like and can affiliate with the new corporate vision, GenerCo control room operator Morris says:

> *I really think this (names vision) bit – is a thin veneer. You look beneath it – it's a can of worms. There is a real can of worms there. [Interview 36G-S54]*
> Communication specialist Margaret recounts the vision orientation process

this way:

> *Recently, we just had the new vision statement, so everybody had to have a workshop. And a presentation was put forward to tell you how the uh...but each team had to go through the presentation and do a questionnaire afterwards and say how they were going to make this vision work. And I just though what's it mean to me? We're a power station here. And we're trying to do the best we can with the people we've got. [Interview 35G-S22]*

Generating Unit Maintenance Process

The generating unit maintenance process is a lens through which the impact of identity tension on learning may be understood. Maintenance schedules are multifaceted. They first rely on the amount of work that is planned – the things that

must be done in order to maintain regulated operating standards. Second, the schedule must anticipate emergent work. This is akin to only being able to truly diagnose the extent of a problem once a car engine has been dismantled. Electric generating units, once opened, may reveal problems that can have significant impact on the schedule. This is known as managing emergent work. A careful balance must be achieved between taking on necessary emergent work at the risk of postponing planned work until the next outage period (Bourrier, 1996). In the following account, Craig explains that maintenance outages are a careful blend of performing work on schedule, leaving sufficient slack in the system to account for emergent work and doing every task safely. During an interview at the outage centre, he recounts GenerCo's past situation this way:

> *Before ... in the bad old days should I say (laughs), I mean an outage was 20 weeks long - 12 weeks anyway- the average outage was at least 12 to 15 weeks long. ... So it wasn't just about the planning, it was about getting the culture right, getting the focus of the outage right and then getting the plan right.* *[Interview 33G-S2]*

GenerCo's Station Peak outage manager, Craig has the task to oversee this project, deliver it within the schedule and control for accidents. He has developed a new 'outage culture' and this project will operationalize his new approach. This particular outage is planed for 38 days and will involve extensive turbine and generator overhaul work. According to the work plan, activities are carefully sequenced to evolve as the project unfolds. At its peak, however, about 1,000 people will be working on the project. The staff compliment will be made up of about half GenerCo employees some of whom are outage specialists and others are brought in from different areas of the company. The other half is comprised of contractor staff. GenerCo Station Peak outage leader Craig defines his role this way:

My role is very much being out there. ...It's making sure the expectations are being met with regards to safety and quality. I don't focus on the time and I don't particularly focus on the cost, you know I keep my eye on it, but if I focus very much on the safety and the quality, I get the rest. They'll come. With this last outage, it was world class when it comes to safety. You know, 10,000 jobs and 1,000 men in 40 days and not one serious accident. You can't beat that. That was my number one goal and we achieved it. [Interview 33G-S6]

Dan works closely with Craig and the rest of the outage team. He puts the importance of the Station Peak outage this way:

...it's in the station's business plan and high on its strategy...uh...forward strategy, the outages are extremely important because, one, we maintain the plant to a high standard, two, it's the biggest loss of generation cost that goes out of the gate because you're off for a considerable period. You could loose some 20 million pounds of generation in that time plus what it costs to run an outage. So it's high on everybody's agenda. [Interview 59G-S10]

On this Station Peak outage Dan and Craig estimate that with the GenerCo outage in question, 1,000 workers implemented over 10,000 tasks over 40 days without a lost time accident *[Interview 33G-S6; Interview 59G-S26]*. These figures compare to the past performance where Dan and Craig suggest, outages lasted on average between 12 – 15 weeks and sometimes as much as 20 weeks. The new process has reduced outage time from past levels, which took on average 84 to 105 days, and at times as much as 140 days, down to 40 days or from as much as 20 weeks to about 6 weeks.

Craig suggests that trust between GenerCo employees and contractors is essential. He says:

We're in for the long game with these guys - you know with the main mechanical services and welding contractor, [name], we're in a 7-year-plus partnership with them. And we've got an open-book arrangement with them. So they're making a known amount profit. It's open. And in most of our contracts, we're in long-term arrangements. [Interview 33G-S40]

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According to Dan, a deep relationship with contractors is important to the

smooth running of an outage. He says:

> *...we maintain somewhere around one thousand valves on an outage and the valve contractor which is (name) that we permanently pay for a (name) supervisor to sort of live in the outage office and he's part of the team, year in-year out, 365 days a year, lives here with us. And he looks after all the valves and the spares...That has already paid dividends. [Interview 59G-S26]*

Craig describes how trust develops between the company employees and the

contractors:

> *We'll sit down with a contractor for instance and say, "Right, what's your work window. This is the work we need to do. Can you do it?" And they'll say yes or no and we'll agree to extend it or whatever and then there is a handshake on that. That they can do that work, in let's say that four-day window. Now what we expect is that if they don't come back and tell us, then we expect it will happen. Now if they come back and say, "I've got a problem once we've opened something up", we can change things round and maybe give them another day. So it's very much a 'do-what-you-say-you're-going-to-do', when you say you're going to do it or tell us very early on. Well, we've built that trust up in that relationship because we've had the same contractors and the same managers. [Interview 33G-S14]*

Reflexivity is described by Child and Rodrigues (2003) as a key aspect of

social identity formation and reinforcement. Craig describes the process for

reflecting on action this way:

> *We do post-outage reviews in each area. And from that we'll come up with a list of things that we want to do differently - to improve. So we'll build that into an action plan for the next outage. Monday, we start daily meetings at half past 9 and that looks at what's happened in the last 24 hours - were are we going in the next 24 hours. Then we have a review meeting at half past 4. We'll review the actions at 'evening prayers' at half past four as we call it. [Interview 33G-S24]*

SOI and 'Fleet-Wide' Approach

Although the Station Peak maintenance outage process operates on schedule

and recorded a zero lost time accident rate, the process is not universal throughout

GenerCo's fleet of power stations. This practice runs in contradiction to a central

objective of the PII culture change initiative, which states, "...share knowledge and experience across the fleet" as a main tenet of the 'fleet wide approach'. *[Co-Doc 5G-S2]*. Respondents are mixed in their assessment of the degree of adoption of the Station Peak process, however, they consistently contend that the process is not universally accepted in its entirety. They suggest various reasons for the different approaches to maintenance outages. These include different technology, the 'NIHI' (phonetically as 'Knee-high') or 'not-invented-here-issue' and distinct social and organizational identities. Dan, for example suggests that since I began my research at GenerCo, the Station Peak process is being adopted more at other stations. He says, "we've got now generic processes based on more or less what we do at Station Peak", and "out of the specifications we've got, the procedures and specifications, there are probably only two or three out of about thirty that tells how to do an outage that have not yet been adopted. Because these things take time to rattle through the system." *[Interview 59G-S20]*. Dan points out that the stations are different in design and this is the reason for the mixed set of processes over the 'fleet-wide' approach. He says, "...one of the problems you get is that each...or most of the power stations are actually different designs". *[Interview 59G-S22]*. It is not clear, however, whether the magnitude of the remaining 'unadopted' procedures are significant to knowledge transfer about effective outage processes. Dan also acknowledges that:

> *...you've got to imagine that there are sort of, eight different outage managers sitting around a table all disagreeing on what the best process is and all thinking they have the best process and they couldn't possibly change but through sort of consultation and people willing to be flexible and writing the process that doesn't tie them down too hard [Interview 59G-S20]*

When I interviewed Craig, the Station Peak outage manager, he suggested that NIHI refers to an idea that knowledge from outside local sources is of less or little

value when compared to knowledge generated by a local source. He describes the phenomenon this way:

> *So getting rid of the 'not-invented-here' syndrome. And trying to agree on the outage process. Now, I've got to say there's a bit of a split in the company. And you've [names other power stations in the fleet] very much agree on the outage process that we run here. And we're almost all of us, aligned to it. You've then got [names station in the fleet], and they've got themselves into a bit of a mindset. That it's all about minute-by-minute planning. And you've got a little bit of a split in the company that they're going to take us one way, but fundamentally, we're all trying to do the same thing. [Interview 33G-S28]*

Dixon (2000) suggests that NIHI, known more conventionally in management literature as 'not-invented-here-syndrome' is underpinned by cultural forces that work to impede learning, knowledge transfer and translation. Craig offers a view of why successful outage practices are not accepted by other stations in the following way:

> *I think they've just been sold this concept - the successful outage is about absolute planning. That the only way you'll get success is the plan. And I'm saying it's not. That's one part of a successful outage. Getting the right safety culture and quality culture and the 'big picture' is probably more important than trying to plan it by the minute. [Interview 33G-S32]*

When asked about the results of a recent maintenance outage (June, 2005) on Station Coast, located across the road from Station Peak, control room operator and outage coordinator, Michael commented, "Overrun 31 days...problems with (boiler) seals" *[Interview 58G-S2]*. Further, on the idea of transferring practice-based tacit knowledge to Station Coast, best practices and using contractors as partners as Craig indicates is done at Station Peak, Michael remarks:

> *No. They can't. If they [practices] could be easily transferred, we'd be bringing more staff to bolster up the outage from another site. But there is so much site-specific knowledge required to actually run these places that I suspect if it could have been done, it would have been done by now. And we have contract planners come in for the beginning of the stat (statutory) outages ...and it takes a lot of time and effort getting them up to speed. To the point where we said...we recognize with this outage, well, "We won't bother in future". Uh...ideally there should be a set way of running an outage but there isn't. [Interview 58G-S12]*

Other respondents, who perform roles that are separate from the outage process, also describe issues and problems with the 'fleet-wide' concept that is a central feature of the PII culture change initiative. GenerCo fuel technical specialist Tom elaborates on the difficulties of shared practice between stations. He says:

> *The practice that's been developed on and ad hoc basis and its only now, in recent years that we're trying to pull them together. Uh...when you try and pull them together, when you take a fleet-wide view, you see that this enlarges an extremely strong argument that all the problems are essentially the same - a variance of the same thing. And that we've missed these opportunities in the past. We've not managed the problem the right way. But we are where we are. There is now, I think...there's a strong belief across the...certainly the practitioners in the ... fleet that we actually are all dealing with the same issues that the solutions really ought to be common... Uh...but it's hard work to try and move from that which you have that works now...that your working with at 90 percent effort to keep running. It's hard to invest the additional effort to try to converge towards common solutions. It's quite difficult to take on. [Interview 25G-S12]*

Further, communication specialist Margaret explains that with the strong identification at each station, adopting practices from another station, poses issues. She observes that between Station Coast and Peak:

> *The cultures are completely different. And there's rivalry there. And I think there's rivalry anyway, between many of the stations. [Interview 35G-S10]*

Station Coast director, Donald says:

> *Station Coast and Station Peak have different cultures. Station Peak is considered the spoiled younger sister by Station Coast people. And Station Coast staff think Station Peak as the first born and gets all the attention [Station Coast was the first commissioned of the two generating plants]. It's like sibling jealously. People talked about a Station Peak takeover when I came over from Station Peak to become station director at Station Coast. There was a lot of, "That's not how you do it here at Station Coast" [when new processes were trying to be introduced]. At the same time, it's getting better. Now we're operating with quite a few shared services. People talk about their opposite number. It's like sparring. [Interview 27G-S28]*

Finally, Station Coast maintenance leader joked that it was questionable as to whether or not Station Peak even existed even though the stations are located perhaps only 30 metres from each other. He said:

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Is there a second plant here? (laughs) The sister plant for Station Peak is [name] and many will more readily travel 80 miles to [name] that walk across the street and see someone at Station Coast. Some think Station Peak picked all the best people and Station Coast has all the old dinosaurs. [Interview28G-S10]

Section Summary

I focused on GenerCo's micro world in this discussion to aid in presenting research results surrounding social and organizational identity, organizational learning and transformational change, where management attempts to consolidate work practices between power stations. I presented interview data from the three community clusters as groups (management, professional-technical employees and administrative staff members). Where respondents express show social and organizational identity alignment between groups before the culture change their remarks imply SOI tension following the introduction of the 'fleet wide' approach as part of the change process. In the following section I discuss a similar challenge for PowerCo, the Canadian electricity grid operator.

PowerCo Organizational Identity Formation

Various study respondents suggest that PowerCo's organizational identity is embedded in utility company logics (see for example *[Interview 9P-S52]* quotation below. As with most regulated utility organizations of the day, the words 'safe and reliable' were featured in the utility company mission statements that formed the basis of the provincial electricity industry prior to the 1996 deregulation. During interviews, many employees refer to working in at least one of the three regulated utility organizations prior to PowerCo's formation. PowerCo's director of human resources discusses organizational identity as, "...there's keeping the system going,

which (is about) keep the lights on", *[Interview 9P-S52]*, "... you know, make sure supply and demand are met. You know what I mean?" *[Interview 9P-S56]*.

Further, because of the specialized technical nature of the field, employees of the three large utility organizations are a dominant source for populating the major stakeholder organizations that make up the province's 'industry' *[Interview 57P-S52]*. The provinces Department of Energy (DOE) policy on electricity states, *"For electricity, this vision includes creating the right conditions to facilitate an electric industry which is competitive, reliable and sustainable"*. The provincial regulator's mission for electricity includes, *"...ensure that customers receive safe and reliable service"*.

In these ways and consistent with institutional theory, (DiMaggio and Powell, 1983), PowerCo's organizational identity is influenced and in turn influences the provincial industry. Newman and Nollen (1998:39) suggest organizations such as PowerCo frequently hold deep beliefs that are 'rational, adaptive, consistent, and self-reinforcing within their institutional context and reinforces the institutional theory claim that firms in certain sectors are very similar to each other (also see DiMaggio and Powell, 1983; Granovetter, 1985). One of the forces that shape organizational identity is the requirement for compliance with industry performance standards. Various industry regulators and associations including Electric Coordinating Council and the National Energy Reliability Council (NERC) set standards and coordinate activities for compliance with electric grid operations. PowerCo sees this compliance, however, as 'behind the scenes' check and balance rather than a front and centre agency regulator. Although the regulatory agencies have a bearing on identity,

according to PowerCo's operations manager, the logics of everyday endeavor are more about self-control than agency regulation. If, however, self-control does not occur, organizations like PowerCo could face sanctions. Therefore, the agencies are considered important as standard setters and monitors but not as overt controllers of operational activities. Norman, PowerCo head of system control operations, puts the relationship this way:

> ...the NERC compliance requirements and that's ah....that's almost like a liability type of issue. It's not...in my mind, it's not an operational compliance, it's a liability compliance. [Interview23P-S4]

Chief executive, Lawrence is quoted in PowerCo's annual report[15] in a message that discusses the company's philosophy for the 2000-operating year in the following way:

> Part of our job, as the operator of [the] competitive market for electricity, is to set the stages for innovation in the market. This year's report highlights some of the new possibilities in [name] electricity market today and shows where we're headed. [Co-Doc 14P-S(p)4]

Around the same time, in the organization's business plan – a major report, which documents the organization's intentions for the year, chief operations officer, David writes:

> ...we will develop and put in place process/systems to monitor key performance indicators with the objective of operational excellence. These processes/systems will help ensure the market and electric system are being operated in accordance with PowerCo's Rules and Code of Practice...To accommodate changes in the market and the operations of the interconnected electric system, PowerCo continues to enhance and update the rules...i.e. the rules, practices, policies and procedures which govern the exchanges of electricity and the operation of the interconnected electric system...there will be an increased emphasis on the development of the PowerCo Code of Practice. [Co-Doc16P-S(p)10,11]

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[15] At first I questioned the empirical authenticity of using company documents, as they might be no more than instruments of public relations. Having first-hand involvement with PowerCo, however, and being part of the process where four, perhaps five drafts of text are presented to leaders prior to their sign-off, convinced me that these are legitimate expressions of intent and not and independent writer's interpretation of the chief executive's views. Rather, the chief executive takes great pains to ensure the document reflects what he wants presented to stakeholders as he feels he will be judged by his words.

Administrative Social Identity

PowerCo administrative (Admin) or staff function employees construct their social identity both through practice within their community and through interaction with what Brown and Duguid (2002: 141) refer to as 'networks of practice'. The authors consider networks of practice differently from communities of practice (Lave and Wenger, 1991). Communities are developed around things that matter to people who interact around a particular area of knowledge, which gives members a sense of identity as they generate, shared repertoires and resources. Alternatively, networks may hold practice and knowledge in common but network members may not be intimately known to each other. An example of a community of practice at PowerCo involves customer service employees and the operations engineering [Op-Eng] group. Many of the customer service group members have commercial, non-technical backgrounds. However, integrating the electricity supply from a new customer's generator with the power system grid needs a combination of customer service and Op-Eng processes to ensure that both the new generator and the grid are safely connected and installed within regulated standards. Dick is a long-term electricity industry employee who previously worked for one of the public utilities before PowerCo was established. When asked about his social identity, his identification is shown as more closely aligned with the technical part of the community of practice and not the commercial part. He expresses a conception that is similar to the system control operators KTLO organizational identity, even though he is not part of the P-T group. He says:

> *We have elements of free market, competition, commercialism and entrepreneurialism balanced with the social value of providing what has become an essential service for our quality of life, and in some cases, for life itself. [Interview 47P-S17]*

In contrast, networks of practice share practice but are not 'in practice' as a community. Networks of practice hence, 'produce little knowledge', although, '(T)hey can, … share information relating to members' common practices quite efficiently' (Brown and Duguid, 2002: 142). Thus while they do not share in everyday action, they do share in a common, albeit disassociated, practice.

PowerCo administrative workers engage with social networks in similar organizations that operate in different geographic locations. For example when asked whom she learns from and interacts with, market economist, Clare says:

> *...from ah...from consultants and experts in the field and then we learn from reading on studies on specific information, you know like... price sensitivity, you know...so theoretical basis, actual practical basis. It's pretty much all over. We do...we follow the Internet. We follow who is posting what. So everything from the classic standard research to conversations. [Interview 12P-S10]*

Candice is a member of PowerCo's financial group. Her work involves reconciling payments for transactions when market participants buy or sell electricity. Candice calculates monies paid or owing. Her social identity, like Clare's, is constructed, reinforced and aligned as much with her occupational group as with the organizational identity. Again using the contention that identity is formulated through learning (Giddens, 1991; Wenger, 1998), when asked whom she learns from, Candice relates to her identity more as an accountant than as a finance department member or employee of PowerCo. She says:

> *...new knowledge, I'd say is from outside the company and this again, I'd relate it right back to my job. ...I'm trained as an accountant. [Interview 2P-S12]*

Other administrative group members relate concepts of social identity

pertaining to social and economic aspects of electricity. For example, PowerCo

technical specialist Victor notes that:

> *And it has a huge impact politically, socially. It's about people's lives. And I think if you look at the August 13 outage two years ago, it was clear beyond any doubt that the economic losses were in the billions of dollars...10s of billions of dollars, fairly significant for a week's outage, but how do you add up the loss of personal discomfort personal safety and security that you get from electricity? Uh...so it's economic, political and its...uh..personal. [Interview 49P-S12]*

Management Social Identity

Members of the management group express their social identity as consistent

with either Lawrence's or David's version of PowerCo's organizational identity. For

example, system control head, Norman, seems aligned with David's version of

organizational identity. Norman, however, expresses what the organizational identity

is 'about' in terms that are consistent with his areas functions and in with respect to

his role as head of system control operations. He says:

> *On the dispatch desk for instance, uhh...they're trying to maintain their ACE [area control error]. And that's a targeted thing. You know you have to dispatch load up or down. You have to maintain a certain amount of reserves. You're looking at judgment. Quickly, in your mind you can follow the trend of the load. You know what you've got to do. You also have to quickly learn the ahh...characteristics of the various units. How fast they respond. How fast they don't respond. The transmission side [desk] is also an issue. Especially now, we're becoming more and more congested...there are way more 'if' statements... [Interview 23P-S29]*

In contrast to David's PowerCo as 'operator' identity and more in line with

Lawrence's view of organizational identity, chief financial officer, Kirk commented:

> *...one of the things that I find a little striking here is that sometimes we fall back into a utility kind of mindset (laughs) because a lot of us (management team) come from utilities, But you've got to step back and say, 'We're not a utility, we're a service company.. [Interview 10P-S4]*

Management also identify with their professional or occupational identity over the organizational identity. For example, as senior legal counsel, Leo oversees PowerCo's legal issues and although other lawyers work in the company, Leo doesn't deal with them 'in practice'. He identifies more readily with lawyers outside PowerCo. In the following interview conversation he comments that he is concerned with the record keeping process. In the role as 'lawyer' Leo sees that his priorities differ from those of the other executive members.

> *...within the group of seven (Management Team), there would be...ahh... things we all have in common then each individual would have priorities that they would have within their particular area (department). So I think what they may see as a priority doesn't maybe align with what I put forward on the agenda as a priority. And I guess I'm thinking about things like...process. You know... uhhh... I get kidded a lot about you know... forms and that kind of thing and I guess to a certain extent I sort of saw that as one of the uhh... areas where there may have been a bit of a missing in a sort of way [Interview 7P-S14]*

When asked about sources for learning social identity Leo remarks:

> *I really don't have other legal colleagues except ...but I really don't interact with...on a regular basis so it would be learning...that I pick up from other lawyers that I deal with externally or things I've read externally. [Interview 7P-S6]*

Professional-Technical Social Identity

Professional-technical (P-T) workers organizational identity expressions of 'PowerCo as operator' align with their social identity. However, in contrast to being reliable to avoid stakeholder criticism, some members of this group offer expanded comment about the organizational identity and express a different, deeper conception. For example, technical project specialist Victor said:

> *...electricity is economic development and also providing on a personal level...for the person at home some uh...personal comfort. It's light, heat...warmth... for 'Mrs. Jones'... that's why I think keeping the lights on has a different meaning ...it's lifestyle and... socially it's about people's lives. [Interview 53P-S12]*

Some P-T function employees use the every-day language of reliability to characterize their social identity. They discuss reliability as a dominant perspective and 'mission critical' concern, but also as service that requires an obligation on their part. In this context, service as a commitment is referred to as 'keeping the lights on' (KTLO).

In relation to service commitment, PowerCo control room operator Norbert comments:

> *Like, the guys here have a really strong commitment to it...it's providing the service. And I would say that, that's still here with all the guys... It's more than a job... I guess I can sum it up in a few words...it's what I do. I mean that sounds too simple but [keeping the lights on] that's what I do. [Interview 18P-S10]*

Additionally, PowerCo control room operator Mick remarks:

> *I think...yes. I think it's always been...it's always been my...own...my ambition...it's to keep the lights on. [Interview 24P-S33]*

Other P-T function workers who share the KTLO identification raise the importance of being 'time' seasoned. The notion of time and experience is also closely aligned with earning one's stripes, which is done through managing a critical incident. Albert, a 36-year veteran control room operator who came to PowerCo when the company first started recounts how he learned by doing over time and emulates many of the actions as the 'right thing to do' as part of his belief system. He explains:

> *...there is so much in the subconscious that's there that you just do as a result of that guiding you that you'll never get out of a book. I remember years ago a fellow called Ralph that I first trained with and I remember one of the first things [major event] I ever saw, you know the frequency was going this way and the lights were flickering. We were in a hydro plant at the time and the generators are literally vibrating and bouncing under the floor sort of thing and Ralph is just sitting there looking at the screens or the old control panels we used to have the old [names] control board we had eh? (laughs) Aren't you going to do anything, I asked him?*

I'm watching ...I'm going to sit here and watch and see...

So what I learned from that was just to sit back and let it happen. [Interview 17P-S49]

Another P-T group member Norbert, puts the tacit nature of learning identity this way:

The system control room function, it's almost more of an art than a science sometimes. It's funny but you get a feeling that something isn't right and how do you qualify what that is? I remember one time...I was sitting at the grid desk and I had a feeling that things weren't quite right. And the superintendent comes along and he says, "What are you doing?" And I says, "I'm getting ready", I go, "I'm getting ready". "For what?" And he no sooner said 'for what', then we had a line trip. And I went over, closed the breaker and said, "For that". [Interview 18P-S52]

P-T group members sometimes relate learning identity as an apprenticeship. Operators are trained through canonical explicit means but they suggest during interviews that they 'really learn' through practice-based action. Norman as now PowerCo's manager of operations puts learning in practice this way:

And I don't know any way of training that other than putting people into this buddy system right now. You know, there's documentation we can show you, we can describe the technical requirements behind it, the stability you can understand the 'why's' behind it...that's a whole different process than sitting up there and running it. Being able to feel and look at what's happening and make the mental connection that "Gee the voltage is sagging here, here and here, this isn't right, I've got to get this unit on now in order to prevent",... [a system collapse]. That analysis occurs in a guy's head in very short order. It's not a study that develop it. [Interview 23P-S28]

Some respondents regard critical incident experience as another apparent source of identity reinforcement and as a process of indenture for new control room operators. For example, system control room operator Albert, references new operator Kent's experience with a major system disturbance, which resulted in a significant loss of power to a large city in the Province. He commented:

...he [Kent] walked out of here with a splitting headache (Laughs) chewing on Tylenols! [headache tablets] ...that was his first exposure to the kind of stress levels that you go through. [Interview 17P-S27]

Jack, another long-term control room operator also references the 'trial by fire'

KTLO identity. He too comments on Kent's system disturbance experience and in a

similar style says:

And if you look at Kent...this is where the rubber hits the road and he's had some rough nights. He was on when that [name] buss[16] let go. I guess at the end of the shift, he got up, walked out and he didn't even know his name! (Laughs) Theory versus reality time! [Interview 20P-S26]

Language and story telling are used to form and reinforce identification and

language itself is an important symbol of social identity (Sachdev and Bourhis, 1990;

Brown and Duguid, 2002). In PowerCo, system controllers use a technical language

that serves to both establish and reinforce their social identity. For example when

asked to describe a recent system event that resulted in a serious grid outage, control

room operator Jack says:

We had some icing and it tripped off at the [name] substation. Our under voltages kicked in [drop in system voltage] and it [the status of the grid] rocked and rolled. It was due to contamination[17] on the buss. There is no procedure for that. We lost 3 or 400 megs [megawatts] of load [demand] in the [City name] area and that means you've got to get rid of your generation [supply]. So that's it. You know if you're over-generating or under-generating and if you're over-generating, you've got to back off - that's standard. But the transmission system broke apart [tripped off] and some of our SCADA[18] was down and unavailable. So we were blind. [Could not

---

[16] Buss or Buss Bar, is a metal conductor that contains a 'bundle' of high current electric lines for power distribution often to a number of different devices.

[17] In the example given a build-up of ice clung to grit and dust or 'contamination' on the buss and caused the lines to trip (switch off).

[18] Supervisory control and data acquisition or SCADA systems are usually secure computer schemes that provide visibility of a system condition. Various field data are combined through remote terminals, collected via some means of electronic communications and presented to a master terminal. Often data are supplied into the central system and combined into a graphical format. In electricity grids the conditions of substations, transmission lines and breakers for example as well as a host of other equipment can be measured and remotely controlled through the use of these systems. This enables an operator to understand the condition of the component parts and ultimately the overall operating situation.

determine the status of the electric grid using conventional technology 'display screens']. When it's unplanned, you've just got to go with it. [Interview 20 P-S18]

Social identity is constructed through interaction in practice (Blumer, 1969; Wenger, 1998) and explored, reinforced and reconstructed through reflexive processes mediated by socialization (Giddens, 1991: 33). Operations manager Norman, shares his views on how the control room operators construct and reinforce their social identity through both engaging in practice and through social processes. He says:

> *...from sitting with an individual, ...you're seeing the real system operation, what happens and the time frames that you're dealing with. Uhh...you're seeing how an operator deals with situations in real-time; the thought process he goes through and you get a little brain thickening out of this, 'Well if this happens, I've seen this and you can do that'. It's a knowledge transfer that if you don't get it, you're going to be lost. [Interview 23P-S53]*

Norman elaborates on how identity is constructed and reinforced:

> *...when operators get together, when they're with their peer group that's all you talk about. I was in this (situation) and this occurred. Last week this happened. You go for a beer with the guys and it's just that kind of a...that's what I say about the knowledge transfer occurring with the peer group - peer to peer transfer. That's where the stories come out. That's when you get a lot of transfer. [Interview 23P-S59]*

Organizational Merger - Intended Organizational Identity

The merger process is used as a lens through which the impact of identity tension on learning may be understood. PowerCo was established to operate a Canadian province's spot market for pooling and selling electricity to distributors and exporters. The company also operates the electric grid by dispatching generators to ensure a supply demand balance and stable power system. Also as part of deregulation, TransmiCo began operating as a company in June 1998. TransmiCo was responsible for the use of the electric transmission system (electricity

transportation) by electricity buyers and sellers. TransmiCo is responsible for the overall coordination of the transmission system. Its activities including the construction of new lines, ensuring fair system access rates for all market participants, setting standards for safe transfer limits and engineering standards on the provincial and inter-provincial systems, and approving the connection of new generators to the grid.

Where PowerCo was responsible to ensure there was adequate supplies of electricity to meet the demand, GenerCo was charged with making sure the transportation system was available so that power could be appropriately transmitted. In 2001, a government review evaluated the deregulation process and found that overlap and differences in the interests, organizational functions and responsibilities required further changes to the initial deregulation. The duplication of activities on the electricity system operation and planning was identified as an area of specific concern. PowerCo was responsible for ensuring adequate supply for the system from 'real-time' up to seven days. TransmiCo's responsibility to ensure system reliability spanned from seven days up to 20 years. According to respondents, although in concept the notion that it seems reasonable for one organization to be responsible for the 'here and now' reliability of power supply and another for future needs, in practice, issues at the seven-day overlap period led to coordination problems. Further, TransmiCo generated a seven-day operational schedule that PowerCo used to ensure adequate electricity supply for the period. This meant that if PowerCo operated the grid precisely following TransmiCo's schedule, the power grid would need to remain in exact accordance to TransmiCo's plan - unchanged during the seven-day period. This left little room for unplanned outages from mechanical problems at power

stations or adverse weather conditions. PowerCo control room operator Norbert suggested that:

> ...we used to run into problems all the time with who was going to do what and when. Especially at the times for generation planning and transmission planning coordination. ...Their [TransmiCo's] homework wasn't done. [Interview 52P-S2]

Some TransmiCo members, however, expressed concern over the criticism for the confusion over responsibilities. For example TransmiCo system operation engineer, Frank says:

> ...some issues staff needed to get past with respect to earlier interactions between the TransmiCo and PowerCo which carried a level of animosity between certain individuals...I know personally, as one who's probably been around the longest I'm usually questioned on some of the history and at times feel I'm defending some of those actions. [Interview 48P-S1,3]

Kirk, PowerCo financial officer, expressed his concerns as:

> I'm not so sure ...TransmiCo...ever did a good job in...respect (customer service)...the culture there really was a utility culture, like...where, 'We know what's best!' [Interview 10P-S10]

Tension also arises between functional groups as members experience uncertainty in their social identities as a result of the impending merger (Ullrich et al., 2005). Further, Clare shows how learning in practice is often contested between communities – in this example, interpreted as a clash between her identity as an economist and the KTLO identity of operations and engineering. Learning identity occurs as group norms and values are reinforced. She says:

> And it [introducing economic market mechanisms in place of operational and technical techniques to manage the grid] pushed the envelope on the engineering. Because...so it was almost like we were...you know, fending is the wrong word but, invading their comfort zone. You know, they knew how electrons worked. They knew how to keep the lights on. And yet we were saying, 'Well that's not how you keep the lights on in a market'. [Interview 12P-S18]

As PowerCo senior market analyst, Clare explained that conventional economics holds that price can be signaled by diminished supply, whereas in the electricity market, diminished supply could jeopardize the KTLO identity. She states:

Because in their paradigm, umm...reliability is number one. Uhh...quality ...all of that...that's all number one. Anything that jeopardizes or runs any risk to keeping the lights on and system integrity is a problem. Whereas if you're on the market side, you know a good blackout is a signal like anything else is a signal (price signal). [Interview 12P-S22]

In August 2002, the government initiated a plan to merge PowerCo and TransmiCo. The merger meant major change for both organizations. The companies would relocate into a new joint office space. Further, some employees indicate that their jobs would be in jeopardy. Although many functions were unique to each organization, respondents indicate that people did perform like-activities in various areas like human resources, finance and customer service. TransmiCo engineer Frank commented:

Challenges were more so perhaps with respect to dealing with common type functions, such as HR, Finance and IT related functions; clearly here you could eliminate duplication ...the engineering functions or technical areas were less of an issue given that the TransmiCo and PowerCo had some different roles in each case...duplication was not an issue. [Interview XP-S1]

A joint company employee survey indicated that for TransmiCo staff, *"several felt it was actually a takeover not a merger," [CoDoc P9-S96].* The merger also reshaped the organizational management group. The TransmiCo management team was comprised of a Chief Executive, Chief Financial Officer, Director of Commercial Services, Director of Regulatory Services and Communications Manager. The new organization's management team functions are shown in Figure 5.1.

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Figure 5.1 - Merged PowerCo Organization Key Functions

PowerCo Main Functions
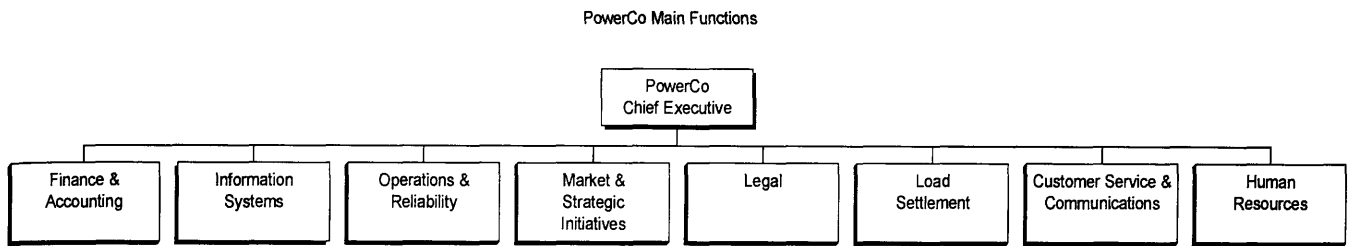
These functions were integrated with the PowerCo management team. A new chief executive was appointed and the only TransmiCo management team member in the new organization was the Chief Financial Officer.

Merger Process

As the functions of both organizations were to be integrated and a new entity established the president and chief executive officer of the merged organization took steps to immediately initiate joining the two companies to avoid, *'uncertainty with employees and in the marketplace' [CoDoc P10- S11]*. The new integrated organization has a different name, vision and mission *[CoDoc P10-12]*, which means that both PowerCo and TransmiCo members are required to learn an intended organizational identity. Regardless of their functional differences, PowerCo and TransmiCo members are intended to be one organization. The CEO appointed an executive responsible for the integration whose mandate was to develop a comprehensive plan *[CoDoc P10-11]*. The merger plan approach involved three key elements that included *[CoDoc P10-12]*:

❖ Engage people involved in a practice from each organization to develop the integrated practice
❖ Ensure all employees in both organizations were enabled to voice their input into how the organizational practices would unfold and evolve
❖ Take actions as quickly as reasonably possible to minimize uncertainty

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A company-wide communications plan was also created to support and coincide with the merger process. The plan was formulated on the main idea that teams of people representing each main function in both organizations would come together and 'deconstruct each function, identify opportunities for integration in the short and long-term, identify barriers and issues with carrying out the work or integrating certain functions and finally, identify functions that were necessary to the new organization but missing' *[CoDoc P10-S14, 16]*.

Prior to doing this work, functional team members were required to seek out employee input, enhance and test their early ideas about possible ways of organizing functions. These individuals were also asked to update staff as much as possible and thus served also as 'a source of information' to supplement formal communications and weekly update meetings with supervisors *[CoDoc P10-S14]*.

In total, 11 'functional teams' teams were established with 32 members actively engaged in a specific practice (Figure 5.2). Each team was comprised of joint representation from PowerCo and TransmiCo. The teams were supported with resources as required to develop their plans on how the new merged organization should look, how practices should be enhanced in the short and longer term and what work could be considered redundant. Rather than laying off individuals outright, major attempts were made to reassign redundant employees to new areas *[CoDoc P10-S18]*.

Figure 5.2 - Merger Process Participants
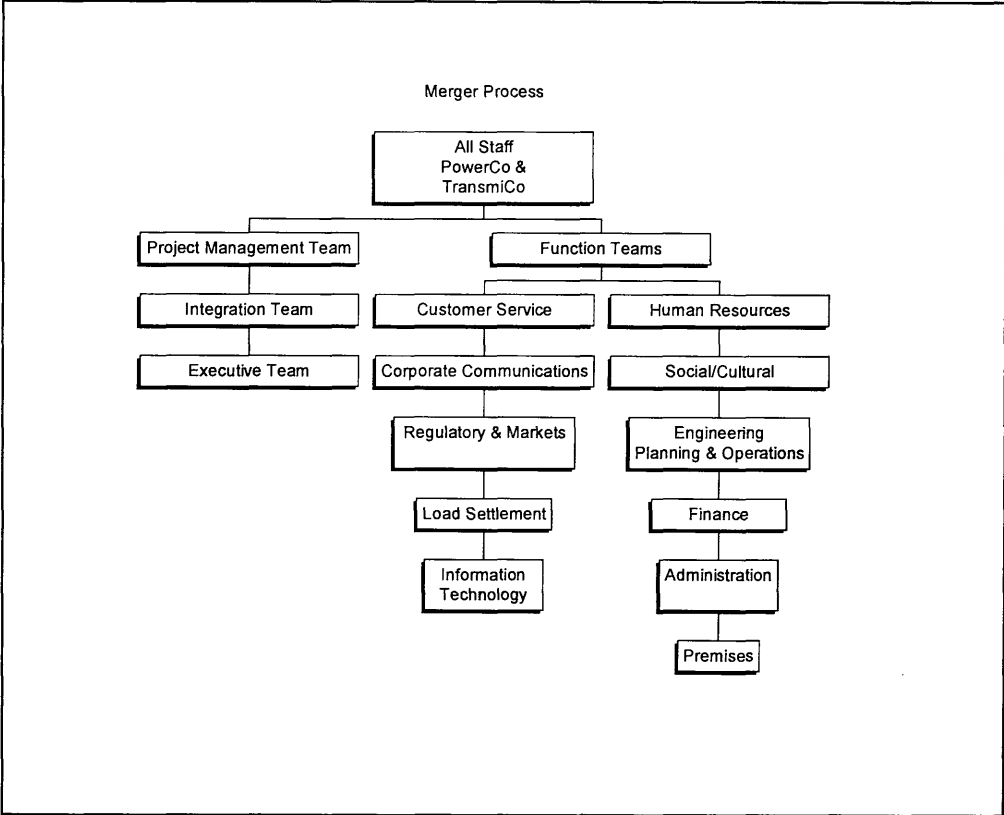
Tension Between Existing and Intended Identities

Employees in PowerCo and TransmiCo have different organizational identities (Ellemers and Rink, 2005). Members suggest strong identification in their respective organizations for KTLO culture before the organizational restructuring and also express tension and uncertainty leading up to the merger. PowerCo's organizational mandate is to operate the provincial spot market for electricity and the interconnected power grid. TransmiCo is responsible for the overall coordination of the transmission system. Merging the organizations means that employees are expected to learn a new intended identity. The process for merging the companies requires a commensurate change in organizational culture and culture changes are said by different theorists to

be based in a process of learning (Schein, 1992; Argyris, 1999; Dawson, 2003; Salaman and Asch, 2003; Burnes, 2004). Teams were comprised of members from both PowerCo and TransmiCo. Their task involved learning how practices might be combined, which practices were duplicated, and what practices were considered necessary but missing.

Function teams also spanned the boundary between their group activity and all other organizational members. This way they brought in ideas and suggestions from others and acted as communication agents to let others know progress and developments. The process mostly handled redundancies by reassigning members to the newly identified roles. Although employees from both organizations expressed views that operational planning was a significant problem area, it would be necessary for members from each organization to plan how best to tackle the activity in the integrated organization. Members from both organizations developed a plan that detailed how the problems would be tackled. The plan set out 15 key steps that would take seven members of the combined team over 25-person days *[CoDoc P10-S16]*.

Frank, one of TransmiCo's operations engineers was more tentative about the new situation and its new 'combined practice' identity. He said, "At times the ongoing challenge remains in dealing with events which happened previously in the old organizations", *[Interview 48P-S1]*. He went on to say, however that,"...merger ...was handled as well as could have been, thankfully to some of the leadership which emerged. Staff were engaged in the process", *[Interview 48P-S2]*. In relation to the knowledge sharing process, TransmiCo project engineer Richard remarked that, "... issues raised were well explained and there was a lot of open discussion." *[CoDoc*

5P-S15].   Other organizational members viewed the merger and learning the intended

identity of the merged organization in various ways. For example, Ellen, TransmiCo

business process analyst suggests that the merger involves the two organization's

previous cultures coming together and a need to create a third, integrated culture. She

comments, *"...there have been three cultures that are all trying to come together to*

create one cohesive one... and it's not easy." [Interview 55P-S17].

> PowerCo Human Resources Director, Donna said:
>
> *They're [the staff] hearing, 'O.K., we're a new world. We're going to do*
> *things differently.' ...this tremendous pressure on them to learn new things*
> *and learn what other people are doing... a whole new group of people and*
> *how do we fit? So they have a tremendous pressure but they are afraid, so*
> *they're watching ... they will bring these folks along if ...we show we value*
> *them in this organization. [Interview 9P-S88]*

Further, TransmiCo customer service representative Dick, also seems tentative

about the new combined identity. He says, *"...words are superficial, it takes time for*

actions to reveal the true leadership values, intentions, etceteras. So things have gone

slowly and this is not surprising", [Interview 47P-S2].

> PowerCo communication specialist Lisa, suggests:
>
> *...there are definitely three types of people in the company now. There are the*
> *people who after the merger still consider themselves an old PowerCo or an*
> *old TransmiCo [person]... and they will always speak that way, no matter*
> *what happens. You've got employees I would say, like me, who I don't*
> *think...I think of myself as a [merged company name] employee. You know,*
> *we've come together. I like the new company. It's a good place. And then*
> *you've got the new people who don't know the history. And walk in with fresh*
> *attitudes and don't have any of the old baggage. So you've got those three*
> *different types of people working here at the moment. [Interview 39P-S80].*

Outage Planning Process

From among the 11 function teams, 'outage planning' emerged as a contentious area of practice for both PowerCo and TransmiCo staff. Therefore, outage planning represents an appropriate context in which to understand conflict and SOI discontinuity (Giddens, 1991) and to investigate implications for learning practices necessary to realize the intended organizational identity. As seen from the interview data presented earlier, respondents from both organizations lay a degree of blame for the overlap and coordination problems, at least in some part, on the 'other' organization. Examples of this tension include: 'who was going to do what and when... Their [TransmiCo's] homework wasn't done.' *[Interview 52P-S2]*; 'Once they gave the information we had to make sure things were consistent...lots of checks and balances...otherwise we could get caught short just at the time of system peak demand. So it was a very inefficient way of doing business.' *[Interview 53P-S2]*; '...earlier interactions between the TransmiCo and PowerCo which carried a level of animosity between certain individuals' *[Interview 48P-S1,3]*.

To explain the nature of the tension requires a brief explanation of the system planning process before the merger. The process begins with TransmiCo providing PowerCo with a seven-day 'ahead' schedule of the provincial electricity requirement. The schedule contained provisions for which transmission lines would be out of service during the seven-day period. PowerCo would use this schedule to plan how it would ensure electricity supply for the upcoming seven days. One respondent suggests that in the same way as a bridge is necessary to connect roadways, coordination is important on the electricity grid *[Interview 57P-S2]*. Having sufficient generation to supply the demand is of no value if the necessary transmission

line to transfer the energy is out of service for maintenance. With PowerCo

responsible for coordinating the timing of generation outages, and TransmiCo the

transmission line outages, coordination problems occurred. PowerCo technical

specialist, Victor puts the problem this way:

> *It was quite different between the groups. TransmiCo used to give us a [operations] plan...uhh...7 days in advance. And we would work with the wire owners (transmission facility owners) to make sure we had the necessary generation and transmission to meet the needs of the system. It was not a very good arrangement. It was very inefficient... things change on a (electric) system over 7 days. Once they gave the information we had to make sure things were consistent...lots of checks and balances...otherwise we could get caught short just at the time of system peak demand. So it was a very inefficient way of doing business. [Interview 53P-S2]*

As part of the merger process representatives from both companies jointly

created a new system outage planing process. In response to his views on the result,

PowerCo technical specialist Victor commented:

> *...the operations coordination became clear. We worked together. Instead of people hanging on to the old ways, now just one party did that planning. So the coordination happened more effectively. And it worked very well...We were unsure at first but we realized after our many discussions in the early days of the integration that we're after the same thing. The discussions made it like setting up a family business. We picked up on what the other guy knows...uh...identified the conflicts with the priority...it was not to be hung up on the old organization's way of planning and coordinating. We invented a new way of doing things...uh...together. [Interview 50P-S4, 6]*

Control room operator Norbert sees the change this way:

> *we get together on in-depth studies, that's a big change and it comes from the will to work together. Plus we've had upgrades on two key lines one in the north and one in the south. These kinds of generation and transmission planning and coordination activities ah...would have been much more difficult in the past. [Interview 52P-S2]*

Finally, PowerCo technical specialist Victor said:

> *One of the ...big change ... was ... the TransmiCo and PowerCo [policies/procedures] were merged into one set of Operating Polices and Procedures commonly known as the OPP. ...a very positive change. ...people uh...more focused on the rest of the concerns how the big picture would work...and they did that together. They sat back and worked things out that*

was a big change from the tentative nature of the past where everybody was looking over their shoulder...uh...worried about the other guy's stuff and not talking enough. [Interview 53P-S6]

Key Similarities and Differences

Various patterns and expressions of similarities in relation to organizational identities emerge from the data. One similarity is the way each management group 'measures' their organization (and organizational identity) against the performance and standards of other firms in their industry. Further, in both organizations a singular feature of similarity is the high levels of social identity salience evident in the expressions of the P-T group for maintaining reliable operations. Managers in both companies expressed equally high social identity salience for reliable operations as a contracted service arrangement. Both groups express deep commitment to keeping the power flowing or the 'lights on', however the groups seem divided on what motivates them to do so. The social and organizational identity alignment is expressed before the organizational changes, that bring both the need to restructure practices and an intended organizational identity.

In the pre-change organizational situation both Management and P-T members SOI for KTLO were aligned, however, most members, especially the P-T groups suggest that their highly salient social identity is now threatened by the organizational changes. In GenerCo, members cite the introduction of fleet-wide practices and in PowerCo the threat to social identity stems from a merged or intended organizational identity. In both firms, work groups experience tension between their respective group social identity and the organizational intended identity associated with the attempt to

introduce combined work practices and the group social identification appears consistent across organizational groups more so than within groups in each firm.

A significant difference between GenerCo and PowerCo, however, is the way each company deals with the need to adapt. The organizational change approach to combine business practices in PowerCo's merger is significantly different from the fleet-wide tact that GenerCo has adopted as the core of their PII.

Conclusions

This chapter presented data in the form of multiple voices, which first expressed various representations of social identity. Actors also expressed how they made sense of the intended organizational identity that became necessary to learn as part of a transformational change initiative. In GenerCo's case the introduction of a firm-wide culture change initiative and in PowerCo's case a corporate merger. In both cases members are required to learn a new set of consolidated business practices. Actors' responses and actions in relation to the business practice consolidation and the resulting tension between social and organizational intended identity provides a basis to make analysis and subsequent interpretations. The analysis process and various interpretations of these data are discussed in Chapter 6.

Introduction

The previous chapter discussed the data that were collected in GenerCo and PowerCo. The data show how social identity is formed and strengthened in 'groups' which, in this study, are analysis units made up of actors in six practice-based communities. Chapter 5 introduced the concept of identity tension as realized by different groups when changes in organizational structure, practices and processes to create an intended organizational identity conflicted with the actors' current social identity. It also presented a framework this chapter follows to attempt to make meaning of the data which dominantly uses actors' stories as expressions of identity, their sense the organizational change and how these social processes impact situated learning in their communities of practice. An example of a major change that intended to consolidate work practices in both firms was used to illustrate how members' enact their constructions of social identity. In both firms, tension between social and organizational identities (SOI) emerged when managers instituted the organizational changes in an attempt to adapt to pressures in their business environments. Group members suggest that their highly salient social identity is threatened by the organizational changes - in the case of GenerCo, because of new fleet-wide practices, and in PowerCo, as a result of an organizational merger.

This chapter further unpacks the data and outlines two major discussions. First, it discusses how actors form and maintain social and organizational identities

and what identity-based conflict means to their situated learning in the two firms. The second part presents my interpretation of the data with a focus on situated learning theory – a major conceptual lens that explains how social processes constitute practice-based learning. This discussion draws primarily on the case studies to present implications for the practice of management, which is outlined in Chapter 7. Chapter 8, continues theory development but focuses on the interpretations informed both from the case findings and from relevant theory for guidance on how interpretive links may be forged to illuminate new theory development. The concluding chapter (Chapter 9) brings the discussions together by presenting contributions from this work relative to social identity and situated learning theory.

Discussion in this chapter cycles between group and organizational level, which mirrors the 'unfolding' of the actual research. For example, the discussion pertaining to the meaning of identity-based tension on actors learning, concentrates on micro-level practices and is oriented around collections of communities as 'groups', and the discussion about firm-level implications deals with the study 'organizations'. Identity intensity (salience and commitment [Stryker, 1980]) is used as a way of understanding this complex and evolving social phenomenon. Various figures are used in this chapter to depict my interpretation of what I observed and how members' expressions account for different intensity levels and I employ social identity theory as an interpretive lens to make sense of the data. I use tables to consolidate actors' expressions and sometimes repeat or use similar quotations to emphasize contrasts and to aid in meaning making.

Taking on an intended organizational identity brings with it a set of new practices, which, according to social identity theory, are likely to alter a group's social identity (Stryker and Burke, 2000). To analyze this condition I examine the level of salience and commitment to group identity in the first instance. Identity salience refers to the subjective value and importance a person attaches to an identity and thus is implicated in the probability that a particular identity will be invoked. (Ervin and Stryker, 2001). According to social identity theory group salience is a reasonable predictor of the probability that an individual will invoke a particular identity (Ervin and Stryker, 2001; Ellemers and Rink, 2005). This aspect of the analysis is included since practice may be considered 'learning identity' and because high salience to a particular identity suggest that social identity and associated actions will prevail over an intended organizational identity (Martin, 2002; Van Knippenberg et al., 2002). Moreover, and following on social identity theory, SOI tension can generate strategies to resist adoption of an intended identity, including those which would impede learning activities necessary for organizational change.

Commitment is defined as the degree to which an identity matters to an individual in relation to certain other people (Charon, 2001: 88). For example, an identity as a teacher may be highly salient, however, an individual might not be as committed to that identity in the presence of a group of gardeners for instance, than perhaps they would at a teachers conference. Where commitment has to do with the degree of an individual's subjective importance for their social identity in relation to the group they encounter, salience reflects the value and significance a person places on a particular identity itself as part of a person's self-concept. As such, identity salience can have an important bearing on role performance. Stryker and Burke cite

Serpe and Stryker's work (1987) which shows that identities are dependent upon a hierarchy where a change in commitment through new social relationships serves as outlets for reinforcing salient identities. Thus, Stryker and Burke (2000: 286) argue that because of a group's self-structure interests, social identities can remain stable across time and situations. At the same time, the authors point out that social identity salience changes when a group is unable to use or find opportunities to maintain commitments because of new social relationships. Hence, social relations shape social identities. Because of the intrinsic connection between social relations and social identity, I introduce social identity *reinforcement* to the analysis approach and as an added aspect of social identity theory.

Reinforcement is represented in the analysis as the extent to which actors employ tacit knowledge over explicit modes of knowledge. Tacit knowledge is implicated in group social process and thus is reinforcing of a group's social identity (Weick and Roberts, 1993; Weick, 2001). My logic with this addition is that high levels of social identity and commitment may become eroded over time if cultural actions to reinforce a particular social identity were low. Thus, a high identity salience and commitment level that is reinforced could be expected to remain at a high level. Major organizational change occurs in the organizations I studied during the course of my research. These changes necessitated a shift in social relations. I used the change incidents to better understand the extent to which members learned new practices associated with the intended organizational identity or elected to maintain their existing social identity. Against this theoretical background, in the next section I turn to the process I utilized to interpret the data.

Data Interpretation Process

In Chapter 3, I discussed the approach I took to make meaning of the data, which involved three core categories. First, I employed an interpretative approach to understand actors' identities and the relative salience they had for them in relation to the organizational identity before and after the organizational change. Second, I analyzed the data relative to social mechanisms that serve to reinforce the actors' identities in order to interpret the potential commitment communities may have for their identities over time. Third, I interpreted the data in relation to expressions of the impact the change had on normal practices to learn how committed actors were to these identities. This aspect of the analysis attempts to address the potential where members perceive learning new practices as being irrelevant because although the change was important for the firm it could conceivably have little effect on practice routines. Finally, I interpreted the data in terms of actors expressions of the extent they claimed they learned the new practices which were essential to produce the intended organizational identity and therefore the organizational transformation. These interpretations are understood as various levels of intensity and thus lend themselves to constant comparison because they are formed from expressions of importance and relative value actors' place on their identity hierarchies (Stryker 1980). The level of learning the intended identity illustrates the extent to which actors engaged in learning the combined practices that are central to each firm's transformational change.

I coded data in relation to three core categories, organizational learning, social (and organizational) identity and organizational change axially, that is, against other concepts as interpretive frames. Strauss and Corbin (1998: 123) refer to this process

as axial coding because codes centre on the axis of a category. Goulding (2002: 73) elaborates on this idea by explaining that this process of coding gives rise to a category on the basis of the specific conditions that contextualize it in the first instance. In grounded theory approaches, concepts are said to possess properties or underlying causes and these causes vary in intensity (their dimensions) (Goulding, 2002: 124). Axial coding approach to data interpretation might be seen as a linear process, however, as I became more deeply involved with the data I would describe the process as somewhat circular.

My approach is consistent with generic processual sociology (Prus, 1996; Pettigrew, 1997) and the precepts of constant comparison (Strauss and Corbin, 1998, Goulding, 2002). The interpretation process went back and forth frequently in a circular pattern between interview data, literature, other data sources and across organizational contexts. I analyze the essence of the various actors' meaning by arranging the comparisons on a matrix, which focuses on one of the three following points of emphasis. These include representations of current social and organizational identity, strength (salience and commitment) and maintenance of that social identity and actors' impressions of the organizational change at the level of normal practice and work routines. The analysis logic draws on social identity theory's principle that with high levels of social identity salience, commitment and reinforcement, actors are more likely to invoke actions that are consistent with the current social identity and resist learning an intended organizational identity. Social identity research holds that actors who have high salience for a particular identity are more likely to consider it important and invoke actions that are consistent with that identity (Stryker and Burke, 2000; Ervin and Stryker, 2001).

Identity Clusters

Because I use an iterative approach, which involves a circular style of data analysis, patterns emerge from the data first, between actors' as social persons, secondly, between an actor and his functional group and finally, between actors' functional groups across the study firms. One finding that emerged relatively early in my analysis and remained consistent throughout, was a pattern of similarity in the language, expressions of core values and everyday actions among actors in the same communities of practice even though the actors were active in the different study organizations. This pattern remained consistent across all three central categories (expressions of social and organizational identity, organizational learning and organizational change). This is not to say that for example the management community of practice in PowerCo could be thought of as a mirror image of the management community at GenerCo.

The communities of practice clustered into functional groups are set apart in relation to national culture and workplace to name but two major differences. Because of responsibility differences and dissimilar areas of function and focus degrees of difference in group social identity within each company might be expected, however, as the data show, the degree of similarity in many aspects of group experience, approach to work, and in the relative levels of social identity strength, are of such correspondence that even though groups are analyzed separately, they come together as virtual 'group units' throughout my analysis.

Figure 6.1 – Group Social Identity Clusters
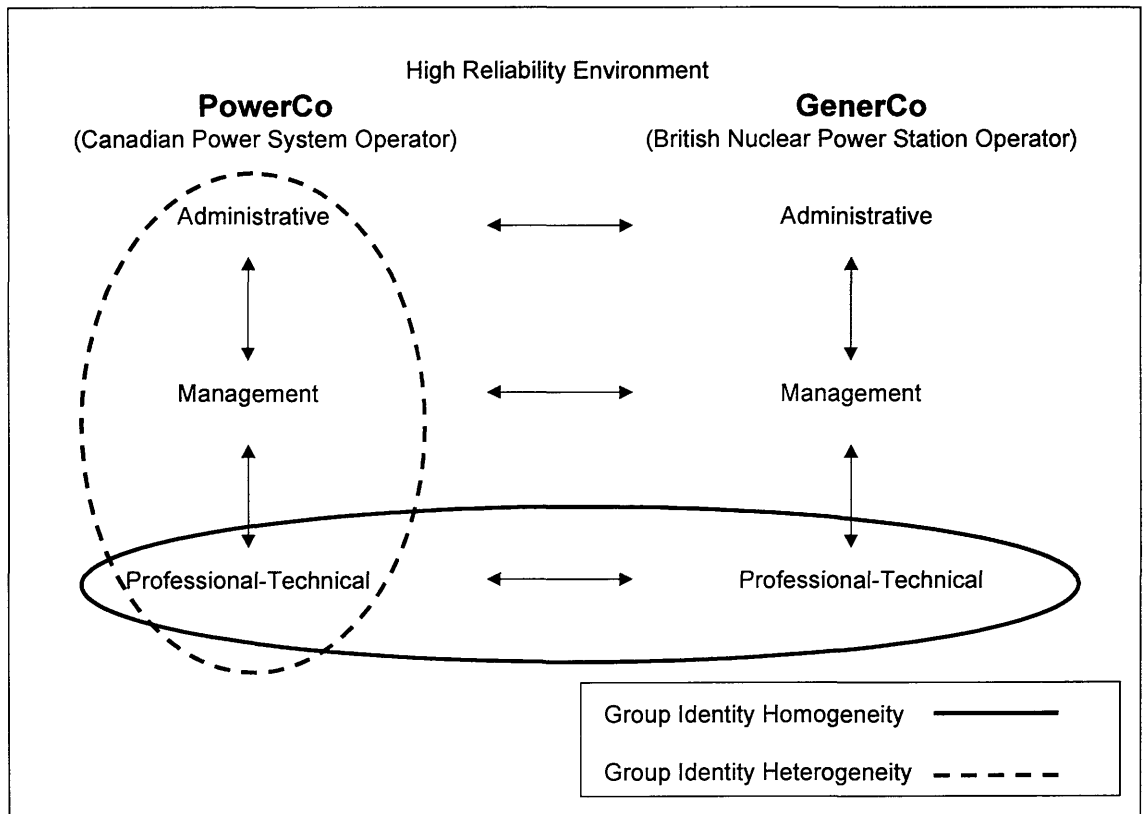
Group similarity in social identity construction is consistent with other findings where socialization is influenced by professional affiliation (Goffman, 1959, 1963, 1967; Kunda, 1992). Group *between-firm* social identity homogeneity is either consistent with or greater than *within-firm* levels of group social identity homogeneity. The relationship is shown graphically above using the P-T as a group example and PowerCo as a company example (Figure 6.1). This pattern is also evident in Table 6.2 and Table 6.3, which follow.

Social and Organizational Identity Representations

Social and organizational identity (SOI) is manifest in various ways that include language of a particular identity, actions and identity appearance. For the following examples I sometimes return earlier expressions as evidence of learning identity. In the administrative group for example, I present an earlier quotation from June. June wears a uniform as a visible way to show identification although she and other members of this group need not wear them. She says,

> *...the contractors that have the facilities contract. They look after reception and admin and the office girls. They do document typing and I think they have their own uniform. They...they're contractors. Katherine and I, we buy our own, but we buy the same thing so we look alike. [Interview 34G-S48]*

Moreover, as with various sorts of 'uniforms' that range from coveralls to suits and ties, an actor's personality is subsumed into the role which fits with the uniform. This idea is illustrated in an expanded version of the following fieldwork memo, which I introduced earlier, entitled 'cafeteria'. The memo is comprised of observation field notes after a lunch meeting with a respondent in the nuclear Station Coast cafeteria:

> *On all sides, long banquet style tables bank the large, bright room. Perhaps a half dozen round tables are sprinkled among them. Similarity and difference is pervasive. Everyone sitting in groups at each table seem to be dressed the same. Coveralls tops are rolled down and tucked into waistbands. White short-sleeved shirts are seated at that table. An all-girl table along the other side features uniforms just like the one worn by the Station Director Secretary. I cannot see mixture among any of the uniforms. It is almost as if what you wear designates where you sit. And in hushed voices people glance up, some white shirts acknowledging the dirty coveralls, and then return to their conversations. [Fieldnote Memo 17G-S3]*

Unpacking Symbolic Representations of Identity

Given that identities evolve and change over time, I utilize Prus's (1996) classification of 'identity career' which includes; acquiring perspectives, achieving

identity, being involved and doing activity, experiencing relationships and forming

and coordinating association (Table 6.1). This approach is rooted in generic

processual sociology (Prus, 1996; Pettigrew 1997) and considers the generic social

process (learning SOI) relative to the social 'problem' of identity tension.

Isomorphic influences also have a bearing on the formation and reinforcement of

manager's social identity. Electricity sector organizations are strong cultures where

social actors pay attention to industry performance information at the corporate and

group level (Kunda, 1992). Industry comparison influences manager's self-

perception as agents of achieving standards. As an organizational identity

reinforcement mechanism, managers also compare their organizations in relation to

other industry players trying to achieve the same standards. In PowerCo's situation,

operations manager Norman considers the agencies as standard setters and monitors

but not as direct controllers of operational activities. He says:

> ...NERC (North American Energy Reliability Council) compliance
> requirements ... it's not an operational compliance, it's a liability compliance.
> [Interview23P-S4]

On the other hand, David, GenerCo's Station Coast director acknowledges the

role of the agencies as one that points out deficiencies. He remarks:

> ...what WANO bring (World Association of Nuclear Organizations) is to look
> and say you've got so many defects on the plant, why aren't they improving it?
> Why aren't you getting on top of it? ...it's always about striving for
> continuous improvement, so you can never actually...get there.
> [Interview14G-S8, 9]

Prus's classification as a theoretical framework to help understand identity

may be clustered along an evolution sequence and includes the category dimensions

shown in Table 6.1 (introduced in Chapter 4 as Table 4.8). Different group and

organizational identification is evident in the data and each of Prus's dimensions are

used in the data sequences which follow. I concentrate on Prus's classification, that

relate directly to my area of focus. For example, respondents did not offer much in the way of data on 'acquiring perspectives' perhaps because the actors that I observed and interviewed were more focused on the present, and the details relating to their perceptions about the companies before they became involved with them were not fresh in their thinking.

Table 6.1 - Identity Analysis Dimensions (Prus, 1996)

Dimensions
Acquiring Perspectives - previous experience, ideas, information
Achieving identity - practice - qualification & training - functional role **Being involved and doing activity** - time - resonance for 'old days' and 'old timers' - experience 'time in the chair'
Experiencing relationships - different episodes & extreme situations - 'knowing' in practice - camaraderie
Forming and coordinating association - group boundary establishment and reinforcement - actions to enhance group prominence - earning stripes for new operators

At the same time, a category emerged around identity expectation and most of the respondents revealed certain of their expectations about either the merger with TransmiCo (for PowerCo respondents) or their thoughts about what things were like before the PII culture change initiative (GenerCo respondents). Achieving social and organizational identity show different ways that actors construct identity. For PowerCo management, identity involves interpreting what stakeholders consider important. Similarly, GenerCo management members discuss the importance of the International Nuclear Power Organization designation and relay the significance of a high ranking in their everyday conversation.

For example, from an earlier quotation, Station Coast manager of operations, Ivan

referred to another nuclear station that was owned by a different company. He said:

> *I'll not tell you the station but it's an 'INPO One' station and has been for*
> *about the last seven years. So pretty good...pretty good station. [Interview*
> *37G-S10]*

These comments illustrate the importance that community members place on

significant reference groups (Ellemers and Rink, 2005). These groups influence how

members 'see themselves' as groups and provide a basis for comparison and

categorization Kelley, 1952; Stets and Burke, 2000). Story telling also features highly

as a key part of achieving identity – another key element of social identity theory and

Prus's second dimension. Particularly in the P-T group, when units 'trip', grids can

have 'contamination on the buss' and debriefing meetings are referred to as 'evening

prayers'. Social identity can also be acquired when an actor achieves certain technical

qualifications, but many of the groups give the impression that experience counts

heavily. For example, one GenerCo respondent refers to 'time in the chair' *[Interview*

38G-S52], representations of competently handling extreme situations is not only an

apparent rite of passage, it also seems to be an important feature of identity formation.

Station Peak operations manager Irving puts the situation this way:

> *...and there is an aspect of that, that's right... that's where a good team will*
> *earn its stripes really in a dynamic situation. ...For example you know, the*
> *pump is off in 15 seconds unless we do something, there is a...you are relying*
> *on sort of the group decision, operator experience. And uhh...and some*
> *people do freeze in that sort of scenario...[Interview 43G-S47,59]*

Being involved and doing activity, is the next dimension in the identity

analysis sequence following Prus (1996) classification. This dimension points to the

importance of constructing knowledge as part of practice as both identity forming and

a process which, in turn, forms SOI. This concept is consistent with Lave and

Wenger's (1991) situated learning and communities of practice conception but it also reveals what appears to be a tension between how knowledge is used in practice versus how it is *expected* to be used. For example, for actions given the high reliability nature of the organizations, managers relate to the importance of having an 'audit trail'. Gail, Station Coast, safety and environment manager says,

> *More and more industry is trying to become proceduralized to show what your procedures were. You lay down what your thoughts were and try to force people through trying to engineer the change process. Standardizing things versus [dealing with them as part of a] complex set of priorities so long as the problem has gone away or [it gets] done at a poor level of quality. [The result is often that] Modifications are inadequately conceived and documented and the end product isn't fit for the purpose. [It's also about recording] If you have a problem, then you can now find it. [Interview 31G-S18].*

Along this same line, PowerCo manager of operations references the outage that occurred in North America in 2003. He says,

> *I guess down East (major outage August, 2003), will probably end up in court all over the place. And they better have records of everything that transpired throughout the whole time and...nobody wants to go to court but if a company is hauled in they better have good records of what took place [Interview 22P-S6].*

In contrast to the importance placed on explicit knowledge by the management group, members of the P-T group in both organizations refer to tacit knowledge or the knowledge 'that you'll never get out of a book' *[Interview 17P-S49]*. One group member suggested the 'computer doesn't...recognize all the dynamics of it *[Interview 38G-S32]*. Thus, P-T members find tacit, practice-based knowledge both important and useful.

Experiencing relationships and forming and coordinating association are closely related dimensions in Prus's classification. Respondents express a 'blended' conception of these dimensions in their discourse. These dimensions illustrate the

importance actors place on narration or the creating and exchanging of stories as a main feature of identification (Brown and Duguid, 1991). Stories not only seemed to galvanize group identity, they also set boundaries to delineate group membership in relation to other groups. PowerCo director of markets, Clare said there was, '...a clear difference in the way engineers, operations and reliability issues were handled versus how market issues were handled', she contended that this difference was, '...not how you keep the lights on in a market' *[Interview 12P-S18, 26, 46]*. Setting boundaries for groups not only seem to spark degrees of conflict, boundaries also evoke 'in group' characteristics even with contract staff. Consistent with Brown and Duguid's (1991, 2002) contention that communities of practice are self-constituting and practice focused, Craig, Station Coast outage manager says, 'We're in for the long game with these guys' *[Interview 33G-S40]* in reference to the contract staff that participate on generating unit outage projects.

Forming and coordinating association seems to serve as a reinforcing mechanism for identification. For example the P-T groups in both GenerCo and PowerCo appear to use story telling as a way to explain the complexities of their role and the function of the organization. Norbert, PowerCo system control room operator uses the complex machinery of an agricultural grain combine as a metaphor to explain the complexity of the electric grid. To give scope to the intricacy of the system he says that, '...it's like managing 80 combines' and 'keeping track of all of them' *[Interview 52P-S18]*.

Degrees of Identity Salience and Commitment

The first axial analysis centres on the actors' symbolic representations of their

social identity and expressions of alignment with the current organizational identity.

This analysis shows pre-change, existing conceptions of identity and further illustrates

degrees of identity salience and commitment as representations of SOI strength.

Table 6.2 GenerCo Quotations – Symbolic Representations of SOI

Group	GenerCo Quotations	Concept
Administrative	...if you talk to anybody ...keeping the <u>lights on</u>...keeping <u>hospitals</u>, <u>incubators</u> or whatever ticking over. <u>Doing the job</u>. [Interview 54G-S2] Communication Specialist <u>I don't see my job as important as engineering or perhaps others out there fixing the plant</u> [Interview 35G-S46,48] HR Specialist	Service Identity (in the service of and in service)
Management	...<u>we're a base load generator</u>. The requirement to be a base load generator is to be <u>predictable</u>. If you're going to start up or shut down, it's to <u>start up and shut down when you say you're going to do</u>... [Interview 14G-S4] Station Coast Director	Service Identity (service provider bound by contract)
Professional-Technical	...we <u>provide a service</u> in terms of electricity <u>to the people of the UK</u>. For myself, keeping the lights on is exactly what we try to do. So <u>keeping the lights on is what we do, it's our job</u>. [Interview 51G-S1] Maintenance technical specialist	Service identity (in the service of) as pride and as calling or vocation
	I see myself as a <u>service provider</u>. Uh...many people are lifers really in the industry. ...It's a 24-hour industry. Uh...<u>other people rely on you</u> um...producing the end product. Even though, now it is a...a private industry, and we do need to make money but it is the end product at the end of the day that <u>keeps the country's infrastructure rolling.</u> [Interview 59G-S18] [Station Peak Outage Coordinator]	

Social identities clustered into two dominant representations. The combined

expressions of current social identity and levels of salience for GenerCo and PowerCo

groups are shown in Table 6.2 and Table 6.3. In reference to his sense of identity

associated with the organizational prime function (organizational identity) I return to

a PowerCo technical specialist's comment who said, 'It's light, heat...warmth... for

'Mrs. Jones'... that's why I think keeping the lights on has a different meaning ...it's

lifestyle and... socially it's about people's lives'. *[Interview 53P-S12]* A deep

connection to self-esteem can be taken from the technical specialists comment, which

characterizes a high salience level (Stryker and Burke, 2000). A PowerCo control

room operator said, '…guys here have a really strong commitment to …providing the service… It's more than a job… I can sum it up in a few words…it's what I do'.

Table 6.3 PowerCo Quotations – Symbolic Representations of SOI

Group	PowerCo Quotations	Concept
Administrative	…there's keeping the system going, which (is about) keep the lights on, [Interview 9P-S52], "… you know, make sure supply and demand are met. You know what I mean? [Interview 9P-S56] Director Human Resources	Service identity (in the service of and in service)
Management	…I don't see that …it makes any difference of what my contribution to society is. …I think it's different for people on the operations side. [Interview 57P-S36,38] Financial Controller …sometimes we fall back into a utility kind of mindset (laughs) because a lot of us (management team) come from utilities, But you've got to step back and say, we're not a utility, we're a service company. [Interview 10P-S4] Chief Financial Officer	Service Identity (service provider bound by contract)
Professional-Technical	…electricity is economic development and also providing on a personal level…for the person at home some uh…personal comfort. It's light, heat…warmth… for 'Mrs. Jones'… that's why I think keeping the lights on has a different meaning …it's lifestyle and… socially it's about people's lives. [Interview 53P-S12] Technical Project Specialist	Service identity (in the service of) Identity as 'pride' and as calling or vocation
	…its…for lack of a better word, it's a little more of an art form I think…yes. I think it's always been…it's always been my…own…my ambition…it's to keep the lights on. [Interview 24P-S33] System Control Room Operator	
	…guys here have a really strong commitment to …providing the service… It's more than a job… I can sum it up in a few words…it's what I do. I mean that sounds too simple but [keeping the lights on] that's what I do. [Interview 18P-S10] System Control Room	

The control room operator's quotation shows the degree of commitment to the social identity that is apparent for the P-T group members as the respondent blends conceptions of group and self-identity. I refer to this intensely held social identity and alignment with organizational identity as the keeping the lights on (KTLO) since members make strong links between their service to the community role as connected to public service or a 'vocation' as their prime organizational and group function. The data show that actors enact multiple social identities through the use of different symbols. Symbols include various references to the power grid or nuclear station as 'light, heat and warmth' for some members, whereas management members describe symbols such as 'making contractual deliveries'. These conceptions of symbolic

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identity enactment not only describe multiple representations of social and organizational identity they also help with understanding degrees of identity salience. Identity salience may be analyzed by considering the groups' two main identity constructions. The administrative group express *both* main constructions of social and organizational identity (in the service of and in service). For the management group the economics of service agreements, contract terms setting out expectations and maintaining customer relations are portrayed in the data. *[Interview 27G-S4,6]*.

The importance David places on identity as 'service' is echoed in an earlier comment from Kirk. As PowerCo's chief financial officer, Kirk seems to also have high salience on identity as service and in particular to separate PowerCo from the traditional identity of a monopoly utility organization. Kirk says:

> ...*a lot of us (management members) come from utilities. But you've got to step back and say, 'We're not a utility, we're a service company.' [Interview 10P-S4]*.

The P-T groups in both organizations have the highest salience for a different conception of social identities as being in service for the broader society. Some P-T group members appear to reference the KTLO identity as a vocation while others seem to describe a source of pride by 'keeping the wheels turning' for the national economy. Finally this group reinforces their high salience in depicting their work as an 'art form' or more like a talent than a skill.

The P-T group KTLO social identification tends to be deepest felt among members with long-term service, (more than 20 years). As Lave and Wenger (1991) and Wenger (1998, 2003) note, learning identity is a function of doing things together. As people engage in practice (Brown and Duguid, 2002), their collective endeavor

shapes their group identity and at the same time, shapes a sense of self. People speak of both themselves and their group in similar ways. Moreover, the process of identity formation and reinforcement is continuous and evolving and boundaries between self and group learning become blurred. For example, PowerCo control room operator, Mick expresses how he learned in an apprentice-styled way and while doing so, he acquired the identity of the group. He says:

> *...everybody in here has got quite a...quite a...ah...hunger, a desire to learn things and you learn a lot on the fly... we got a great group in here that...that talk. And learn...o.k. this happened to Jim last week or remember that happened...a year ago...that happened with Jim at [name of power station]...stuff like that. So you take, other people's learnings which is a big thing too [Interview 24P-S10, 16]*

Mick goes on to explain how he came about becoming a competent practitioner and also how he acquired high level of salience for the group identity:

> *...but for the whole thing it was ah...pretty steep learning curve. I had ah...guys here, let's say they've been really great with sharing information and it's just a matter of diving in and getting at the information...When I first started, O.K., here's the tool. Here's how we do it." A guy sits with me ... for I forget for how long it took me to start soloing on my own (laughs) but it wasn't that long. So you kind of...he tells you, "O.K. about this unit, about that unit...". How things go, what kind of the routines are for the day and for the hour and then he kind of backs off and lets you go at it. Catches you if you do anything really wrong and then out you go. [Interview 24P-S20]*

Similarly, PowerCo control room operator, Albert, comments on the high degree of salience and group identification. His remarks show that when P-T group speak about themselves they often significantly emphasize similarities over differences. Albert says:

> *First of all, we all have a huge fascination for running something as...as I find awe inspiring as a power system. So you definitely have to have a lot of self confidence. So that's common. You won't find a person in the control room without it but you will find different degrees of assertion. I even call it aggression sometimes (laughs)! Ya. As a whole, we're all pretty similar. We're all fascinated with the power system. [Interview 17P-S93]*

Social Identity Reinforcement

My analysis of identity reinforcement as learning focuses on two concurrent social processes. First, because social and organizational identities are learned constructs, I submit that it is important to attempt to understand actors' actual learning processes since these serve to reinforce their social identities. Social identity reinforcement is proposed to take place as a process of learning involving style of learning, whether collective or individual orientation, and means of learning, which employs tacit or explicit knowledge. Collective approaches to learning are suggested as reinforcement mechanisms for highly salient social identities. As actors spend time together in practice, their social identities, developed through practice, are reinforced. Individual approaches suggest less salient social identities and more reinforcement for personal identity. I also analyze whether learning is individually or collectively oriented as a way to understand linkages between forms of social exchange and identity orientation (Flynn, 2005). This element has to do with the extent group members share meaning they construct (learning) and make it available to others in their group or whether they hold on to that meaning for themselves (Dixon, 1999). This notion is linked to Child and Rodrigues's (1996) study of joint ventures, which found that an unwillingness to share knowledge is strongly connected to sustaining a current social identity.

Second, reinforcement is analyzed in relation to modes of learning based on Polanyi's (1966) conception of tacit – explicit dimensions. I use these criteria as a way to analyze actors' characterizations of how 'work as learning SOI' takes place within communities of practice (Brown and Duguid, 1991), which serves to reinforce SOI. In circular fashion, since learning is a social process, the more learning takes

place *as* work, the more social identity is learned and thus the greater social identity is reinforced (Lave and Wenger, 1991; Wenger, 1998; Brown and Duguid, 2002). Tacit learning implies unarticulated understanding that occurs from time spent in situated practice relations and it is considered more closely associated with collective orientations of learning, hence, also implies reinforcement of social identity (see for example Weick and Roberts, 1993; Weick, 2001). Groups may have high social identity salience and commitment levels but in order for social identity to be maintained over an intended organizational identity, the social identity and its attendant processes would need ongoing reinforcement. The data support these links with learning practices as mechanisms for social identity reinforcement. For example, PowerCo's corporate lawyer suggests his learning reinforces his sense of self. He puts it this way, "...whether it's a learning that I have about people, about ... you know... legal subject matter, about the industry, about the operations... ummm... I guess I think that if I haven't learned something in the course of a day, then I go home feeling that I really haven't done something" *[Interview 6P-S2]*.

Administrative Group

The data illustrates that the administrative group learns from a wide range of sources. For example PowerCo's Director Market Design & Operations, Clare remarks that she, "(learn)...from consultants...studies ...theoretical basis, actual practical basis...pretty much all over...research to conversations", *[Interview 12P-S10]*. This group also seems to construct a collective orientation to learning. Respondents remark that learning is 'routine', 'context you are already familiar with' and 'incremental'. This group also presents the most about personal learning and refers to learning in the context of 'self' more than 'group'. Knowledge orientation

for this group is a blend of tacit and explicit types but the dominant type is expressed

as explicit knowledge since this group deals with organizational policy, forms, and

other instruments of business procedure (Table 6.4) [19]. The administrative group

learns in a combination of individual and ways. In relation to individual orientation

as compared to collective or group work orientation, data from this group suggests

that new members are 'thrown in' to a work situation and a new member would have

to 'shadow people and pick it up as you go along' *[Interview 35G-S83]*.

Table 6.4 Quotations – Social Identity Reinforcement Processes – Administrative Group Explicit/Tacit Learning Process and Individual/Collective Learning Orientation

Administrative Group

GenerCo

Dominant Learning Process – Explicit

Company
Learning from past mistakes...concerned with repeat errors in human performances...when the brief was circulated between all plants [Interview 42G-S5] HR Manager

PowerCo

Dominant Learning Process – Explicit

Personal
(learn)...from consultants...studies...theoretical basis, actual practical basis...pretty much all over...research to conversations [Interview 12P-S10] Director Market Design & Operations

GenerCo

Learning Orientation – Mixed

...we deal with every department and most people on plant in some capacity or another. We work closely with finance because quite often, you know we have accountabilities and finance get involved heavily and we rely on them and I rely on the secretarial team next door (Stn Peak). We work quite closely together. But we're not really affiliated to another group. [Interview 34G-S38] Administrative Assistant

Learning Orientation – Mixed

PowerCo

...you consult some people within the organization but there's external people there's a lot of different sources...ah...I guess and university books. Ummm...my network of business contacts outside the organization is really, really valuable for me in terms of knowledge acquisition. Uhh...that's within the IT world and overall ISO (Independent System Operator peer industry organizations) world. [Interview 11P-S24] Director IT

I think they...most people just kind of get you know, put into it. Well, I can't speak for other departments but for here, It's just kind of like, find your seat. But there's definitely support. I mean I would say you know Lisa is one of our new employees and I would say she's been given support on all the new stuff she was learning. [Interview 40P-S72] Communication Specialist

Similarly, a PowerCo Communication Specialist commented that, "...most

people just kind of get you know, put into it. Well, I can't speak for other

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[19] As discussed in Chapter 4 actors express meaning in their social worlds in a multi-vocal way. Respondent expressions in the following tables are therefore labeled as referring to a 'personal',

departments but for here, It's just kind of like, find your seat" *[Interview 40P-S72]*.

At the same time, members of this group seem to 'work closely' with other members

and other groups even though that dependence may be brought to bear by

management. For example, one Director of IT describes 'knowledge acquisition

plans'. The plans are 'monitored, assessed' and 'feedback' is given as a deliberate

encouragement of knowledge transfer *[Interview 11P-S52]*.

Management Group

The data shows that the management group in both GenerCo and PowerCo

characterize the construction of their learning from dominantly explicit sources (Table

6.5). This group appears to reference learning as an 'expectation' and the group

offers the greatest number of responses about how members 'should' learn.

Knowledge tends to be valued mostly in explicit forms, perhaps because of this

group's expressed need for quick distribution, reporting and information transfer. The

management group data suggest that managers seem to learn as individuals.

PowerCo's Senior Legal Counsel, Lloyd, for instance, seems to criticize his fellow

management members with his comment, "...You can't sit in your ...operate in

isolation...You've go to know where to go for information...you've got to constantly

do that... well, at the executive level the same thing should happen" *[Interview 6P-

S72]*. Finally, the data suggest that this group considers learning as mostly taking

place separately from work, which is consistent with cognitive and individual learning

approaches (Dixon, 1999). Learning is described by Station Coast Operations

Manager, Ivan as 'classroom based courses' ...'before they go on the desk' for

example.

'company', 'group' or 'managed group'. To illustrate interpretation of the data, some quotations are
used twice.

Table 6.5 Quotations – Social Identity Reinforcement Processes – Management Group Explicit/Tacit Learning and Individual/Collective Learning Orientation

Management Group

GenerCo

Dominant Learning Process – Explicit

Company
...internal training programs...simulator
[Interview 14G-S64] Director Station Coast

About Managed Group
...they receive an alarm... you get out the procedure and look at the procedures [Interview 37G-S8] Station Coast Manager Operations

Well we train them to do some things, not many, this is actually only a few things and we train them to do...to respond quickly. And we train them to do that for those particular scenarios. Which is two or three...like out of hundreds, so all the rest are dealt with as per the procedure line-by-line. [Interview 37G-S16] Operations Manager

PowerCo

Dominant Learning Process – Explicit

About Managed Groups
...two paths...policy or procedures...I'll provide direction. [Interview 23P-S18] Manager Operations

Group
...don't expect...different technical people are going to talk to each other about different systems...it doesn't happen. You have to say this is really important... I want you to build a plan...with dates...quantified milestones ...going to monitor and assess ... give... feedback ... we'll see how you're progressing... knowledge acquisition plans...each person...every year updated. [Interview 11P-S52] Director IT

GenerCo

Learning Orientation – Individual

... (management made up of) 7-9 managers, about the same number of line managers and 4-5 team leaders but again incentives and consequences with team leads are not there... [Interview 31G-S8] Environment and Safety Manager

PowerCo

Learning Orientation – Individual

I think building really solid intergroup teamwork is a great way to learn and an important way to learn in an organization. You can't sit in your... you know, operate in isolation. So you've got to build those relationships. You've got to know where to go for information you know, you've got to constantly do that. And it's slightly different at...well, at the executive level, the same thing should happen. [Interview 6P-S72] Senior Legal Counsel

Professional-Technical Group

The data suggest that in contrast to the others, this group appears to engage in practice-based learning the most (Table 6.6). Double-loop learning characteristics such as testing underlying assumptions seem evident. For example respondents touch on 'team' processes that involve a 'sort of consultation'. Moreover, knowledge is generated tacitly and achieving competence in tacit abilities appears to be highly valued.

Table 6.6 Quotations – Social Identity Reinforcement Processes – Professional-Technical Group - Explicit/Tacit Learning and Individual/Collective Learning Orientation

Professional-Technical Group

GenerCo   Dominant Learning Process – Tacit

<u>Group</u>
...experience...new desk engineer...rely a lot on supervisor...and...colleague.
experienced...engineer...alarms...accept...
reset and carry on...computed it, recognized it, understood it ...and satisfied themselves that it's not an issue. [Interview 38G-S48] Control Room Operator

<u>Group</u>
...always something that's going to catch you...off the wall...nobody's thought of... lots of plant interacting...permutations and combinations... you can't document it. [Interview 36G-S42] Control Room Operator & Outage Coordinator

<u>Group</u>
...it's an awareness [Interview 38G-S44] Control Room Operator

PowerCo   Dominant Learning Process – Tacit

<u>Group/Personal</u>
...more of an art than a science...get a feeling...things weren't quite right [Interview 18P-S42] System Control Room Operator

<u>Personal</u>
...art form...get a feel for it...you may not know anything tomorrow [Interview 24P-S6] System Control Room Operator

<u>Personal</u>
...like being a pickle in a cucumber jar...sooner or later, you become a pickle. [Interview 18P-S56] System Control Room Operator

GenerCo   Learning Orientation – Collective

...we'll fall back to a group discussion. This is quite often the scenario that...um...through all the best intentions, procedures, some procedures don't necessarily fit the alarms and the scenarios. It's trying to tell you a picture but it's a computer, it doesn't recognize all the dynamics of it. So as a team, you'll sit back. You'll look at the alarms that you've received, you'll look at the plant indications that you've got, perhaps feedback from people who are outside that you've dispatched to go and have a look and then you'll formulate some sort of conclusions to what you think is going on. And then satisfy yourselves of the corrective action that is required. [Interview 38G-S32] Control Room Operator

PowerCo   Learning Orientation – Collective

...he's got background experience. He hasn't done control room for five years, but what we've done with him and with all our new guys...they're pairing up with the crew. ...he's paired up with Neil and Ralph and they assist him [Interview 20P-S20] System Control Room Operator

In both study site control rooms, work is referred to as more 'art than science' and getting a 'feel' for things. The P-T group references 'learning as a group process' more than any other group. They refer to 'team', 'pairing up with the crew' and 'group discussions' *[Interview 38G-S32]*. Finally, this group says that they learn in a situated way. Their learning takes place as work and in the course of their work. At the same time, and as was shown in the management group data, management respondents suggest that the most important way this group learns is by knowing the

procedures. Where the P-T group seems to hold practice-based knowledge as its mainstay way of knowing and learning, (for example, 'experience, time in the chair, get a feel for it') some management group members emphasize canonical and rules-based knowledge as the primary sort. For example, Station Coast Director David says, '…if anything brings an alarm up for example, he's got written instructions for it. For every single alarm. For what can generate that alarm' *[Interview 14G-S37]*. David's comment contrasts P-T group member and control room operator Robert's who says:

> *…we'll fall back to a group discussion. This is quite often the scenario that…um…through all the best intentions, procedures, some procedures don't necessarily fit the alarms and the scenarios. It's trying to tell you a picture but it's a computer, it doesn't recognize all the dynamics of it. So as a team, you'll sit back. You'll look at the alarms that you've received, you'll look at the plant indications that you've got, perhaps feedback from people who are outside that you've dispatched to go and have a look and then you'll formulate some sort of conclusions to what you think is going on. And then satisfy yourselves of the corrective action that is required. [Interview38G-S32]*

Taken together, the extent to which each group's learning serves to reinforce its social identity, and thus contribute towards maintaining high identity salience and commitment, is shown in Table 6.7.

Table 6.7 – Identity Reinforcement Through Learning Approach

Group	Dominant Learning Mode	Dominant Learning Orientation	Level of Identity Reinforcement
Administrative	Explicit	Combined Individual-Collective	Medium
Management	Explicit	Individual	Low
Professional-Technical	Tacit	Collective	High

Social and Organizational Identity Tension

As discussed in Chapter 5, in the pre-change at the level of the organization, members' in both firms social and organizational identities for KTLO were aligned.

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However, in the post-change situation, members suggest that their highly salient social identity is now threatened by the organizational changes. In PowerCo, in reference to the organizational merger with TransmiCo, PowerCo Human Resources Director, Donna said:

> *They're [the staff] hearing, 'O.K., we're a new world. We're going to do things differently.' ...this tremendous pressure on them to learn new things and learn what other people are doing... a whole new group of people and how do we fit? So they have a tremendous pressure but they are afraid, so they're watching ... they will bring these folks along if ...we show we value them in this organization. [Interview 9P-S88]*

Management group members suggest their role is to try and stimulate change in an attempt to improve performance even though the prospect of complete business failure seems remote given the crucial nature of the business to the functioning of the economy and everyday life. For example, using represented quotations on this point from the previous table, Morris, GenerCo Station Coast Maintenance Manager said, 'GenerCo has not done so great in the last few years. We came close to not existing. If this were a normal factory business, we would have been out of business. But this is a nuclear facility'. *[Interview 29G-S2]*. HR manager Jane outlines a reason why GenerCo management may be somewhat resigned to instituting change in her comment that, "There was a voluntary redundancy in 1998 called [name]. In 2001 we had the business support review and reduced business support staff further. 2002-2003, I.T. systems were introduced to streamline work planning, safety systems and permits for work. We consolidated engineering and I.T. systems to get the same work and operations technical platform. People are not resistant to change. They say, 'Oh, we had that one 10 years ago', but...changed fatigued and ask is this going to stay?"*[Interview 30G-S6]* This notion can be interpreted as a GenerCo management perception that there has been too much change and management members have

become somewhat resilient to instituting yet another change initiative. When asked about the importance of the change in maintaining the identity of keeping the lights on, a PowerCo finanacial manager says: '...I don't see that ...it makes any difference of what my contribution to society is. ...I think it's different for people on the operations side'.

Patterns of consistency are evident in the foregoing data. Community of practice clusters in GenerCo and PowerCo express consistent representations of social identity as 'keeping the lights on'. Identities are presented as highly salient and members express correspondingly high levels of commitment for their respective social identities. The management group also seems set apart from the other groups in their expressions. A thread that runs through the management group expressions, especially in GenerCo, is that the nature of nuclear power generation see-saws from being, on one hand, exempt from company financial collapse, to on the other hand, exposed to financial pressures in order to survive. While they express that introducing change is important for their respective organizations, they also remark in ways that can be taken as frustration with other members who seem to resist the change.

I take this as managers being somewhat resigned. Whether they support the need for change, is perhaps moot, since they are charged with being the agents of change. Although the managers' situation could be more fully developed, degrees of variation seem to collect into distinctions of contrasting emphasis. Adjacent opposites in the form of 'paradox' for Gergen (1978) and DiMaggio (1995) increases prospects for developing a theory's generative potency. Similarly, Strauss and Corbin (1997, 1998) note that distinctions or contrasts (Dougherty et al., 2004) facilitates grounded

theory building. Hence, I concentrate more on the diverse aspects of what is unfolding in the data relative to the other groups than on the managers.

Another emergent pattern concerns the heightened level of tension that members in both organizations express with the need to adopt an intended organizational identity. In GenerCo, members cite the introduction of fleet-wide practices and in PowerCo the threat to social identity stems from a merger. For example, reflecting on the need to balance practices that were in place alongside those of the 'fleet wide' approach, GenerCo communication specialist Mitchell remarked that the PII was:

> ...about throwing the baby out with the bath water really. Maybe we should have combined PII and some of the good practices from before. [Interview 54G-S8]

Further, Michael, a GenerCo system control room operator and P-T group member suggested:

> I really think this (names vision) bit – is a thin veneer. You look beneath it – it's a can of worms. There is a real can of worms there. [Interview 36G-S54]

Based on the examples presented in Chapter 5 that represented expressions of SOI tension and this analysis, Table 6.8 represents my interpretation of the intensity of the pre-post change tension levels with each group. As I have argued, this tension is linked to perceived threats to social identity. GenerCo members are required to take on practices of a neighbouring power station and are struggling with 'not invented here' issues. PowerCo members are intended to merge outage scheduling practices with members from a new organization who are considered less competent since 'their homework wasn't done' [Interview 52P-S2].

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Table 6.8 - Social and Organizational Identity Tension – Pre/Post Organizational Changes

Group	Previous to Organizational Change	Post Organizational Change
Administrative	Low	Medium
Management	Low	Low
Professional-Technical	Low	High

Interpretation of Identity Salience and Reinforcement Data

To this point the findings show that despite homogenous depictions of identity in the functional communities in PowerCo and GenerCo, variation between groups identity within each firm exists with respect to social identity conceptions, degrees of social identity salience and social processes that serve to reinforce social identity. This implies a pattern of group level similarity but firm level difference in the study organizations. In both firms, however, prior to the introduction of the new organizational identities, variation in levels of SOI tension was much less evident. According to social identity theory, high social identity salience, commitment and reinforcement would suggest groups would retain their current social identity over learning the intended organizational identity. On the other hand, low levels of social identity salience, commitment and reinforcement infers that groups would be more predisposed to learning the intended organizational identity since work practices, learning routines and ongoing processes may not be as anchored in a current social identity.

Lower levels of social identity salience, commitment and reinforcement would also suggest support for deeper and easier learning an intended identity because lower salience would increase the potential for alignment between social and organizational intended identity.

Figure 6.2 - Social Identity Reinforcement, Salience & Commitment[20]
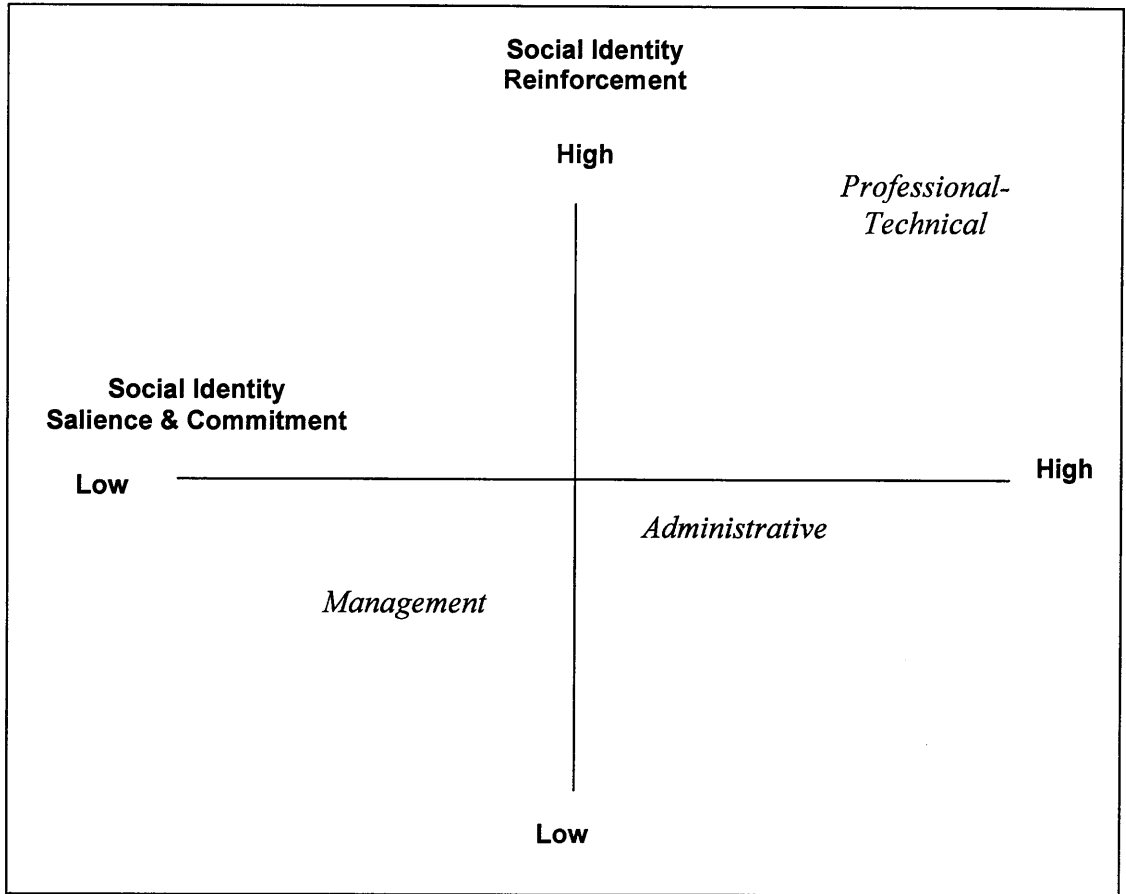
Figure 6.2 depicts the dimension - social identity salience and commitment in relation to the dimension of social identity reinforcement on a continuum from low to high. The dimensional matrix shows the P-T group has the highest levels of social identity salience, commitment and reinforcement, followed by the administrative and finally the management groups. I arrive at this understanding, since group expressions in the P-T group infers high levels of identity salience (intensity) and commitment (dedication). The following representative expressions repeated from the data support this contention. For example by reviewing some of the earlier

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[20] The placement of each group in this Figure (also Figures 6.4 and 6.5) illustrates my interpretation of the data. It intends to show similarity and difference rather than a precise placement based on calculation.

quotations I understand that this group sees their identities as 'light, heat warmth for Mrs. Jones'…it's about people's lives *[Interview 53P-S12]*. This illustrates that they link their identities with providing a benefit to society and thus, reinforce positive self-esteem. Taken from the previous discussion, (Tables 6.2 and 6.3) the same group also expresses ongoing reinforcement for their highly salient identity as they spend sometimes intense long periods of time together in mostly small communities. Learning practices also serve to reinforce social identities (Wenger, 1998). Although their organizations emphasize the importance of canonical knowledge and codified learning, in practice members depend on tacit knowledge in their everyday activities (…it's more of an art than a science…you get a feeling that something isn't right and how do you qualify what that is? *[Interview 18P-S52]*). While this group said there was high levels of identity resonance before the change process when they had to merge practices with another community, they experienced identity tension (…we used to run into problems all the time with who was going to do what and when…their homework wasn't done. *[Interview 52P-S2]*).

The data, therefore, represent a picture of the salience levels and hence the commitment each group has for their respective social identity. High intensity levels or commitment are meaningful in terms of social identity theory because these levels suggest that members will favour their highly salient social identities in favour of adopting new practices consistent with the intended organizational identity (Stryker, 1987, Stryker and Burke, 2000; Ellemers and Rink, 2005). The placement of each group on the matrix as with those that follow, is relative to the other groups.

As discussed earlier, functional groups in both GenerCo and PowerCo mapped onto the matrix in the same relative order, thus, each company group mirrored the other company group in terms of their social identity salience, commitment and reinforcement. In the next part, I concentrate on actors' expressions of organizational change, what it means to their practice and what the change means to their organization. In this way, social identity, how it is reinforced and supports or detracts from learning may be considered in relation to whether the change will impede or facilitate learning new practices necessary to realize the intended organizational identity.

Interpretation of Organizational Change/Impact Data

Burnes's (2004: 322-325) framework integrates what he considers some of the most influential research on organizational change (*cf:* Pettigrew *et al.*; 1992, Kanter et al., 1992; Quinn, 1996; Stace and Dunphy, 2001). It also enables a deeper understanding of how to classify organizational change as process. Burnes's framework fits with the processual analysis strategy that I adopted in my analytic approach. Burnes conceives of organizational change along two central dimensions. First, he references organizational change as incremental. Citing Pettigrew et al., (1992) he associates this type of change as small in scale and relatively unimportant (2005: 324). In contrast, he identifies major and important shifts in structure as transformational change. Burnes (2005: 323) depicts this continuum as follows, "Incremental or fine-tuning forms of change are geared more to changing the activities/performance /behaviour/attitudes of individuals and groups, whereas transformational change is geared towards the processes/structures and culture of an

entire organisation". Burnes also takes environmental conditions into account. He classifies environmental dimension as ranging from stable and planned change through turbulent business environments that he more closely associates with an emergent approach to change. With respect to my project, the data illustrate that both study sites are experiencing turbulence in their environments. Canadian electricity grid and spot market operator, PowerCo, received legislative 'direction' to merge with TransmiCo. The British nuclear power station operator, GenerCo, is concentrating on reducing costs and increasing productivity to maintain its survival since market pricing came into effect as a result of deregulation, thus both firms' business environments are most closely described as turbulent than stable (Newman and Nollen, 1998); Burnes 2004). The first analysis in this area concerns the incremental-transformational or 'scale' dimension.

The second change dimension involves the degree of importance an actor places on the potential effect from the change on the actor's practice. This dimension is used in my analysis as a means to understand what an actor considers the change means to the organizational identity. It follows that a transformational change that concentrates on a major cultural and structural shift will in turn influence the organizational identity (Corley and Gioia, 2003; Burnes, 2004). A change to actors' practices concerns identity salience. Identity is learned in practice (Wenger, 1998; Stryker and Burke, 2000; Charon, 2001; Nicolini, Gherardi and Yanow, 2003). High identity salience means that actors hold high affiliation with the practice in which the particular identity is manifest. A major change to the practice suggests a threat to the actor's identity and affiliation with either the practice or with the organization's intended identity will be potentially tested (Martin, 2002).

Administrative Group Analysis

The data show that the administrative groups seemed to perceive the highest

influence from the change on their practice (Table 6.9). In both GenerCo and

PowerCo the administrative groups had been in the past, and expected that they would

face the highest potential for being laid off. For example, Station Coast,

administrative assistant June recounts:

> *...we've been through upheavals in the past. There was um...Vision 2000 and*
> *numbers were reduced and then the business support group, ...had to have a*
> *further reduction and shared services took work from HR and um...Finance*
> *and the department was reduced. So there have been fairly big changes.*
> *[Interview 34G-S30]*

Further, GenerCo HR Manager, Jane says:

There was a voluntary redundancy in 1998 called Vision 2000. In 2001 we
had the business support review and reduced business support staff further.
2002-2003, I.T. systems were introduced to streamline work planning, safety
systems and permits for work. [Interview 30G-S6]

In relation to the merger between PowerCo and TransmiCo, even though it

had been stated in company documentation that the new organization would attempt

to re-deploy people in redundant positions, the administrative group express that they

are most vulnerable to the prospect of job loss. This notion spread beyond the actual

group membership and seemed commonly known throughout the merged

organization. For example, TransmiCo System Operations Engineer, Frank remarked:

> *Challenges were more so perhaps with respect to dealing with common type*
> *functions, such as HR, Finance and IT related functions; clearly here you*
> *could eliminate duplication which results in some staff redeployment. The*
> *engineering functions or technical areas were less of an issue [Interview 48P-*
> *S1]*

Finally, PowerCo HR manager Donna says:

> *...there's this tremendous pressure on them to learn new things and learn*
> *what other people are doing a whole new group of people and how do we fit?*
> *So they have a tremendous pressure but they are afraid [Interview 9P-S88]*

The administrative groups' perception of the meaning of change for the company is also relatively high. Donna remarked, "...we're a new world. We're going to do things differently" *[Interview 48P-S1]*.

Table 6.9 Quotations - Organizational Change Impact on Actors' Practice – Administrative Group

Administrative Group

		Interpretation
GenerCo	...we've been through upheavals in the past. There was um...Vision 2000 and numbers were reduced and then the business support group, ...had to have a further reduction and shared services took work from HR and um...Finance and the department was reduced. So there have been fairly big changes. [Interview 34G-S30] Administrative Assistant Station Coast	High – Transformational Social actor & group reference
PowerCo	...we're a new world. We're going to do things differently [Interview 9P-S1] HR Coordinator	Transformational – High – Social actor & group reference

For this group it seems that although they appear to have a 'mixed' practice that is characterized by loosely coupled work processes between other members and with employees from other departments, they perceive they are at the greatest risk from the change because of the prospect of job loss.

Management Group

The management groups at GenerCo and PowerCo both showed tendencies and responded that although the changes were significant for their respective organizations, they did not consider the change would influence their management practices significantly (Table 6.10). In PowerCo, for example, Chief Information Officer, William, compared their merged firm to a banking institution *[Interview 8P-S30]* and although an interruption to computer-based market trading or grid control systems would be highly disruptive, the situation would not close down the company from ongoing operations. Similarly, GenerCo Station Coast Director, David referred

to the importance of maintaining high reliability as the best way to meet contractual obligations and prevent having to make costly purchases from the electricity spot market to make up for lost production. He says:

> *When you have a trip due to a plant problem, then we've immediately exposed uhh...600 megawatts to the balancing mechanism.... It costs us a lot of money because we uhh...might be contracted to supply that power and we've got to go in...at the drop of a hat to purchase, maybe pay four or five times the amount [Interview 14G-S4,6]*

Nonetheless, although members of the management groups seem to consider the changes as significant for the viability of their organizations they seem somewhat resigned to instituting the changes.

Table 6.10 Quotations - Organizational Change Impact on Actors' Practice – Management Group

Management Group

		Interpretation
GenerCo	There was a voluntary redundancy in 1998 called Vision 2000. In 2001 we had the business support review and reduced business support staff further. 2002-2003, I.T. systems were introduced to streamline work planning, safety systems and permits for work. [Interview 30G-S6] Station Coast HR Manager	Medium – Transformational /Incremental – reference to other
PowerCo	Challenges were more so perhaps with respect to dealing with common type functions, such as HR, Finance and IT related functions; clearly here you could eliminate duplication which results in some staff redeployment. The engineering functions or technical areas were less of an issue [Interview 48P-S1] Manager Engineering	Medium – Transformational /Incremental – reference to other

For example, Maintenance Manager, Morris puts the situation this way:

> *Dealing with nuclear...issues...quite different from closing us down if we were making baked beans. [Interview 29G-S2]*

Professional Technical Group

The data show that these groups in both organizations appear to construct impressions that the organizational change affects them least (Table 6.11). These

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groups also give the impression that the changes are of moderate importance for their organizations.

When asked about changes to practice from the GenerCo culture change initiative Control Room Operator Robert said he expected, "…some new practices" and that the initiative also, "…raised the profile on some old ones" *[Interview 38G-S14]*. Further, maintenance outage coordinator, Dan said the corporate culture change initiative reflected the practices that were already being performed at Station Peak. He remarked:

> *I'm not so sure that what we do at Station Peak was linked to the PII originally uh…improving in the plant, yes we all want to improve the plant. I think every site wants to do that. And PII was just a realization of what we already did. [Interview 59G-S28]*

Table 6.11 Quotations - Organizational Change Impact on Actors' Practice – Professional-Technical Group

	Professional-Technical Group	
	Concept – expressions of impact in relation to degree of change on practice Property – reference to who is affected by the organizational change	Interpretation
GenerCo	I'm not so sure that what we do at Station Peak was linked to the PII originally uh…improving in the plant, yes we all want to improve the plant. I think every site wants to do that. And PII was just a realization of what we already did. [Interview 59G-S28] Maintenance Outage Coordinator	Low - Incremental Reference to group in past context
PowerCo	Technical Project Specialist, Victor - the merger would address an 'inefficient, not very good arrangement' [Interview 52P-S2], while System Control Room Operator, Norbert said about the change that, "we used to run into problems" [Interview 52P-S2]	Low - Incremental – Reference to other

PowerCo P-T members express similar notions that the change is fairly important for the company, but not necessarily so for their practice. Technical Project Specialist, Victor suggests that the merger would address an 'inefficient, not very good arrangement' *[Interview 52P-S2]*, while System Control Room Operator, Norbert said about the change that, "we used to run into problems" *[Interview 52P-S2]*.

Data about SOI tension and its attendant impact on organizational learning has been presented against the contextual backdrop of transformational change in the two firms that I studied. Transformational change as context presents at least two considerations. First, change of this type evokes examination of social identity, particularly in relation to what the change means for an actor's role, practices and status. Secondly, transformational change can be examined as a process that can either facilitate or impede organizational learning since change in culture triggers change in practice, which has implications for learning and identity since both are manifest through practice (Lave and Wenger, 1991; Wenger, 1999; Nicolini et al., 2003).

When I arrange the data from low to high with one axis depicting the groups' perceived impact from the change on the organization and the other showing the groups' perceived impact from the change on their normal work practice, significant between-group level variance is again apparent (Figure 6.3). At the same time, strong consistency is evident within each of the community collections. This analysis of the impact of change presents consistent patterns with the levels of social identity salience, commitment and reinforcement discussed earlier. As with the previous set of interpretations on the social identity data, community groups in both companies express common conceptions concerning their interpretation of change.

Management groups express a relatively high sense of the impact of the organizational change on the firm. The management groups, however, also expresses that the change will have less of an impact on their normal work routines and processes than the administrative group who suggested their normal work routines would change significantly. The administrative groups report the change will affect them most, perhaps, because they perceive their jobs are at the greatest risk of being made redundant.

Figure 6.3 – Interpretation of Organizational Change Endeavor
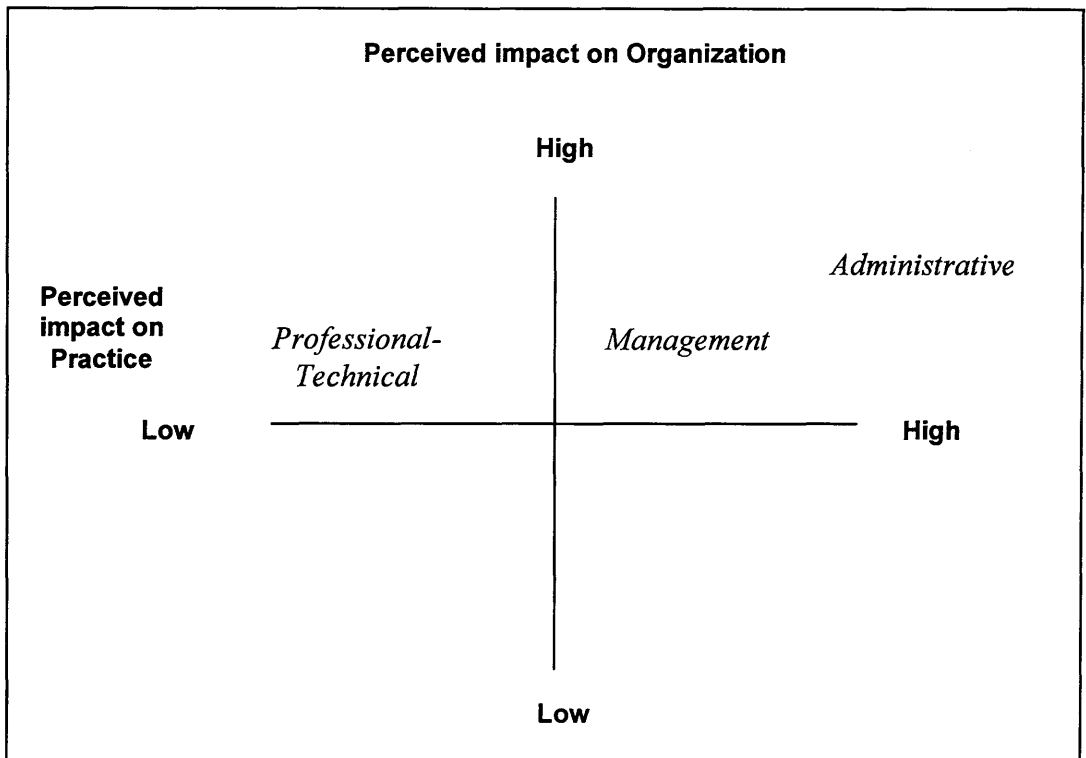
In contrast, the P-T groups in both GenerCo and PowerCo envision the change as having the least impact on the firm and that their operating practices would remain as they are for the most part. Tracing the P-T group data shows that while the change seems relatively important for the organization, members perceive low effect on their

practice routines. For example, the change will 'streamline work planning' and is 'just a realization of what we already do'. High reliability cultures are said to place routine operating procedures over corporate activities such as job analysis and completing work team forms (Weick and Sutcliffe, 2001). Although the P-T groups responses convey that the changes will have relatively low impact on their current practices, in the control rooms for example, this group also indicates the *highest* level of identity tension concerning the planned changes. This group also expresses the highest level of salience for their social identity. I take this to mean that in both firms, even though the groups conceive the changes will have little effect on their normal practice routines, they perceive their social identities will come under threat from the changes. Thus, it does not seem straightforward that a community's practice will automatically form its identity in a one way direction, in linear fashion. In this group's case it seems that although practice forms identity, highly salient social identity can also influence practice – a notion that runs consistent with Nicolini and colleague's (2003) assertion that practice is capable of transcending boundaries and connecting things as much as defining things. Social identity in this group is shown as mutually constitutive and identity is both shaped by and shapes practice.

These distinctions represent actors' interpretations that while the organizational change might be important and of high magnitude for the firm, change in P-T group practices, is regarded as minimal, thus, as some respondents suggest, there is correspondingly little need for learning the intended organizational identity. A similar interpretation can be made when actors suggest the organizational change will mean that they will need to do things differently, but because the change is one in a long line of such changes, learning the intended organizational identity is not taken

seriously. This notion is seen in the GenerCo maintenance manager's suggestion that, "…this is a nuclear facility. Dealing with nuclear decommissioning issues is quite different from closing us down if we were making baked beans *[Interview 29G-S2]*. Knowledge is created in different ways ranging from dominantly tacit to mostly explicit knowledge and these different knowledge forms are valued differently.

Further, the data illustrate that groups enact identity differently. Different symbolic representations of identity emerge and these identities are in some cases, for example mostly the P-T groups, tied more closely to KTLO. SOI tensions involve different levels of identity salience for KTLO as well as between the current versus intended identity. PowerCo's P-T group needs to re-learn how to do the electricity system planning process in a new way and GenerCo's P-T group in outage planning is required to assume a different outage process for maintaining nuclear power station turbines.

Consolidating Interpretations

When the analyses shown in Figures 6.2 and 6.3 are taken together, some understanding emerges about how SOI is acquired, reinforced and maintained. The relationships between learning organizational intended identity or maintaining the existing social identity against the background of SOI tension is shown as expressions of the degree to which the six groups learned new practices associated with the intended organizational identity in their respective organizations (Figure 6.4).

The communities of practice that make up the functional groups in the two study companies are situated in different countries with, albeit similar, but diverse

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national identities and cultures, equally distinct organizational technologies, levels of

safety risk and financial stability, however, significant *homogeneity* is apparent at the

group level as was shown in Figure 6.1.   Also, organizationally, more difference

than similarity exist between GenerCo and PowerCo, yet isomorphic attributes within

the 'electricity' industry seem to influence members who share practices in common

functional community collections (Kunda, 1992).   These notions are consistent with

particular features of institutional theory (DiMaggio and Powell, 1983).

Figure 6.4 - Variation in Group Learning Intended Organizational Identity

Learn Intended Organizational Identity

High   *Professional-*
                                      Technical
                                      PowerCo

                          Administrative
        Administrative ***PowerCo***
Social Identity ***GenerCo***
Salience &
Commitment   *Management*
Low _____ ***PowerCo*** _____ **High**
                        Management
                        GenerCo

                                      Professional-
                                      Technical
                                      GenerCo

Low

At the same time, there is a major distinction in the extent to which the

communities of practice in the six groups (administrative, management and P-T in

both firms) learned the intended organizational identity. In spite of the apparent

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homogenous group identity and group learning of that identity, different organizational processes and approaches to managing the organizational change appear to have a major influence on group learning of practices associated with the intended organizational identity. Figure 6.5, labeled Continuum of Learning Intended Identity is a re-representation of Figure 6.4 but shown this way it intends to illustrate a range of learning. It also combines representations from the earlier interpretations.

Further, Figure 6.5 shows that for the management groups in GenerCo and PowerCo learning the intended identity is neutral. Managers say that the change is important for the organization, yet the data show that managers are experiencing correspondingly little change to their routine practices. I interpret this to mean that managers either act as change agents or what I term as reluctant conscripts of the organizational change. In either case, managers in both firms may not experience significant changes in their normal routines but still 'talk-up' the need for change and work to produce the necessary modifications in their responsibility areas. In relation to cross-organizational comparisons, the data show that PowerCo groups learn the intended organizational identity the most and the GenerCo groups to a lesser extent.

This pattern emerges even though the P-T groups in both organizations share high social identity salience and say they experience the lowest impact from the organizational change on their normal work practices. In contrast, administrative groups in both companies express low social identity salience and both groups express that the organizational change has the highest impact on their practices. GenerCo's administrative group is shown in the range as slightly lower than PowerCo's

administrative group. Each groups' relative placement along the continuum is based

on four main factors.

First, I analyzed the respondent's report of their current social identity and its

'intensity' as an expression of identity salience that they have with their particular

functional group. Then, I took into account the respondent's expressions of their

learning approach and practice and whether these practices were dominantly tacit or

explicit as tacit approaches to learning reinforce social identity.

Figure 6.5 Continuum of Learning Intended Organizational Identity

GenerCo & PowerCo Management
Proponents of intended identity or conscripts
Medium salience & commitment to KTLO identity &
Medium impact on practice from change to intended identity

GenerCo P-T	GenerCo Admin	PowerCo Admin	PowerCo P-T

Group Learning of Intended Identity

High salience & commitment to KTLO identity **Low** impact on practice from change to intended identity	**Low** salience & commitment to KTLO identity **High** impact on practice from change to intended identity	**Low** salience & commitment to KTLO identity **High** impact on practice from change to intended identity	**High** salience & commitment to KTLO identity **Low** impact on practice from change to intended identity

This segment of the analysis has to do maintaining and reinforcing the current

SOI. Next, I consider the level of importance respondents' placed on the change

endeavor on their normal practices. This segment of the analysis probed the potential

situation that a major organizational change might not necessarily imply a

commensurate large-scale change for a group's practice. This logic suggests that

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although a major corporate change in a nuclear power generating organization was being instituted, that change could have little impact on the daily routines in a control room for example. This is why I also analyzed respondents' expressions of the impact the organizational change would have on their practice. Based on respondent expressions, I am able to rank the extent to which each group reported they learned the intended organizational identity on a continuum (Figure 6.5).

Discussion of Findings

Three surprising findings emerge from the data and subsequent analysis. First, *PowerCo's P-T group learned practices associated with the intended organizational identity the most,* when compared to any of the other groups. Despite PowerCo's identity tension and discontinuity from the merger, in the post merger organization, P-T community members jointly learned new practices associated with the intended organizational identity rather than preserving the identity of their former organization. This emergent outcome highlights the process of change used in the PowerCo case.

The GenerCo and PowerCo P-T groups have the highest social identity salience, commitment and reinforcement levels. According to social identity theory, high identification means that these groups would normally retain their current social identity. They would more likely refrain from participating in activities that are necessary for organizational learning, such as knowledge transfer, since the changes to consolidated work practices would threaten their group social identity (Martin, 1992, 2002; Jetten et al., 2002; Child and Rodrigues, 2003; Ellemers, 2003). Nonetheless, the PowerCo P-T group actively engaged in knowledge acquisition, knowledge transfer and knowledge creation – foundational processes of

organizational learning as they renegotiated new practices that were necessary in the merged organization.

GenerCo's P-T group has equally high social identity salience. This group's placement on the continuum appears consistent with the principles of social identity theory since the identity friction between Station Coast and Station Peak maintenance outage groups, illustrate that group identity is founded on a legitimized 'group version' of knowledge. Knowledge has thus become a source of identity conflict and is seen to polarize each group's perception of 'whose practices should be adopted'. Ashforth and Mael (2004) assert that these competitive conditions exacerbate perceived threats to a community's social identity. This finding demonstrates that knowledge is deemed legitimate only once it is sanctioned within a group's current social identity even though it is known to produce results that are desirable for both the group and for the organization in this case increasing station reliability from using another station's outage process. Thus, for the GenerCo groups, knowledge is deemed legitimate if it is 'home grown' and within a group's sanctioned social identity processes. This tension is seen to restrict the group from engaging in knowledge transfer that is both necessary for organizational learning and to learn GenerCo's intended organizational identity's 'fleet-wide' approach.

Second, in line with social identity theory, *GenerCo and PowerCo P-T groups should be located next to each other on the continuum* because they share the same high levels of social identity salience and commitment and, as shown in the study, social identity reinforcement. The group positioning, according to social identity theory, should reflect the placement of the administrative groups – next to each other.

Instead, the P-T groups are located at polar opposite ends. Social identity theory predicts that groups with high levels of salience, commitment and identification reinforcement would share similar stances in relation to maintaining their current social identity in favour of learning an intended organizational identity (Martin, 1992; Ellemers and Rink, 2005). As various studies have shown, (Jetten et al., 2002; Ellemers, 2003) because each group has equally high levels of social identity strength and both experience tension with the requirement to consolidate work practices, which would jeopardize their current social identity, they should both react negatively to the restructuring initiatives. As a result, the P-T groups from both companies would be more likely to be adjacent in their positions on the learning continuum.

Finally, the administrative groups expressed the highest levels of alignment between their social identity and the organizational intended identity. Alignment between SOI might suggest the administrative groups would learn the intended organizational identity the most. Rather, *both administrative groups learned the intended organizational identity marginally*, and in both cases, the administrative groups learned the intended organizational identity less than the PowerCo P-T group. Strong group homogeneity prevailed in all three points of emphasis, (SOI salience and commitment; identity reinforcement processes and expressions of organizational change significance on group practice) however, there is major variation in the extent to which groups in each organization learned the intended organizational identity. Although the levels of learning expressed in the data implies a range with some members potentially maintaining a neutral or static learning condition, such as the managers, this notion is not as developed in this work in comparison to the findings in PowerCo relative to GenerCo. This approach is taken because the contrasting

findings promise greater insights and thus offer more to grounded theory building (Gergen, 1978; DiMaggio, 1995; Strauss and Corbin, 1998; Dougherty, et al., 2004).

Initial Development of Theory

This section begins the process of developing theory based on the findings of this research. Certain questions emerge from the group placement along the continuum. The first line of enquiry has to do with the variation in group learning as shown in Figure 6.5. For example, why did each collection of communities (administrative, management and professional-technical) learn the intended organizational identity differently when they had the same levels of social identity salience, commitment and reinforcement, or why the PowerCo P-T group, with its highly salient identity, learned the intended organizational identity more than the other groups?

There is a discernable shift from the previous the pattern of similarity among the groups. Where before, consistent levels of social identity, approach to learning and interpretation of the change impact were found *between* groups in PowerCo and GenerCo, now groups show consistent learning of the intended identity *within* each firm. The data also reveal that in spite of its highly salient social identity, the PowerCo P-T group learned new practices brought on by an intended organizational identity. Rather than withholding knowledge, PowerCo P-T members engaged in processes that facilitated the acquisition, transfer and creation of knowledge (organizational learning). Given the prominent level of homogeneity with the GenerCo P-T group, it is conceivable that these groups could share closer positioning on the continuum instead of being at opposite ends. A second line of enquiry relates

to an apparent paradox once the logic of social identity theory is applied to the group placement along the continuum.

If high identity salience means a group would most likely retain its root identity rather than learn a contradictory intended organizational identity, then the PowerCo P-T group reporting the highest learning of the intended identity is unusual. Following on social identity theory, this group should be situated on the low end of the continuum like the GenerCo P-T group, which also had high identity salience. Just as important, the GenerCo Administrative group reported low social identity salience and a high perceived impact from the change since they face the greatest chance of job loss. Social identity theory predicts that this group would learn the intended organizational identity at a higher intensity than they did, since their social identity salience, commitment and reinforcement levels were relatively low.

The administrative group most often identified themselves as their 'occupation', lawyer or accountant which illustrates these members' personal identity was more salient than their social identity. However, this group also most often acted as the change agent for the new identity as a proxy for management and because of this role, learning identity might have more to do with modelling (Thompson and McHugh, 1995) the intended identity as a way of 'teaching' it. Thompson and McHugh (1995) describe modelling as a mode of teaching in that it demonstrates competent actions to those that are new to a situation and are looking for situational stereotypes. This combination of factors would conceivably influence administrative group members to learn the intended identity.

Learning identity in this way reflects a person's interest to project the 'right' impression (Goffman, 1959) – in this case an individual who is 'on board' with the corporate change endeavor by knowing and actively supporting the new organizational identity. Another possibility for this outcome has to do with the multiple nature of identities. Groups are known to express different symbolic representations of identity under pressurized situations which may have a bearing on how the different degrees of identity salience can be explained (Prasad, 1993). GenerCo's uncertain financial position and its failure to generate successive profits might mean one thing in terms of job security to a new organizational member in contrast to the meaning made by a person close to retirement. Thus, for administrative members, the prospect of job loss could have exceeded the self-esteem issues associated with threats to their social identity. This 'identity within identity' or multiple identity (Ellemers and Rink, 2005) could have a bearing on why people learned the intended identity differently although everyone belonged to the same administrative group.

Another emergent finding has to do with how the groups clustered differently in learning the intended organizational identity. Since previous research has demonstrated the pattern of 'high salience-high social identity preservation' reliably, (Jetten et al., 2002; Ellemers and Rink, 2005) and because respondent expressions enable group positioning on the learning continuum, the organizational change *process* each company employed to introduce the intended organizational identity surfaces as a factor that influences group learning of the intended organizational identity. Thus, the way each company tackled their change endeavor is a key variable in the learning process and this variable serves to either facilitate or impede learning

the intended identity. Organizational theorists who are concerned with SOI hold common views on the importance of a 'process' to introduce 'continuity with the past' (Rousseau, 1998 :227; Brown and Starkey, 2000; Weick, 2001; Ullrich et al., 2005). Weick (2001: 218) goes as far as to say, "With no continuity, there is no learning". Similarly, Child and Rodrigues (2003: 553) advocate for 'clear goals' and 'psychological safety' (Edmondson, 1999) as essential features of an identity evolution process.

Finally, Brown and Starkey suggest critical self-reflexive and identity-focused dialogue, possibly through scenario planning, as aspects and procedures to negotiate learning identity. Although a 'continuity process' is consistently advocated, little work, save Brown and Starkey's (2000) insights, and more recently Ullrich et al., (2005), attempts to unpack such a process. SOI conflict can place individuals in either-or situations as their multiple identities seem incompatible with a single organizational intended identity (Ellemers and Rink, 2005).

The evidence from this study therefore supports and argument that the divergent theoretical views presented in the literature on whether identity-based conflicts facilitate or impede organizational learning both seem partially accurate in that variation in learning organizational identity becomes apparent and it is not an either/or situation where learning is either impeded or facilitated. This is not to suggest that learning has been fundamentally pigeonholed into two tidy outcomes since identity itself is dynamic and evolving. However, through understanding the levels of identity intensity and tension as actors experienced processes of change the

data suggest a clear grouping of the learning outcomes in the communities and shows a consistent pattern in each organization.

Processes of change that enabled identity negotiation and where communities looked outside their boundaries to import concepts as part of forming a new identity appears to have a significant impact and contributes to learning in contexts of transformational change. Thus, change processes and how a community interacts within the constellation of communities in which it operates is proposed as the explanation for the different learning outcomes between the case organizations. However, without a process that facilitates identity negotiation through local relations and knowledge sharing learning may be problematic. This is shown in the GenerCo case, where the P-T group elected to withhold from engaging in processes to learn new practices. Here, learning in a condition of transformational change was impeded because highly salient identities were made more prevalent over the organizational intended identity.

This finding supports the conclusions of Brown and Starkey (2000) and Child and Rodrigues (2003), that when change threatens social identity, learning is likely to be inhibited. Since social identity is such a deeply rooted psychosocial phenomenon, communities of practice as tightly coupled social systems, can serve to stabilize understanding and meaning in situations of discontinuity and destabilization brought on by major change. In this way, communities can act as sensemaking anchors (Weick, 1993; Tempest and Starkey, 2004) and promote greater identity loyalty than an organizational intended identity.

Social identity theory specifies that actors who have high salience for a particular identity are more likely to invoke that identity and consider it important (Stets and Burke, 2000; Stryker and Burke, 2000; Ervin and Stryker, 2001). Even though it is recognized that actors may invoke multiple identities, in PowerCo, organization actors with high core identity salience *deeply* learned the intended identity but members of the same functional group also with high identity salience in GenerCo, learned the organizational intended identity *weakly*. Only passing expressions concerns the notion that learning in the change situations remained static and the management group seemingly 'neutral' expressions of learning, which closely resemble an attitude of capitulation, could fit this outcome. Nonetheless, the dominant pattern of learning practice as either a condition which occurred deeply in one firm, in contrast to the weak learning in the other, is emphasized in this work because the contrasting nature of this situation implies the greatest insight into the social phenomenon of interest (DiMaggio, 1995).

Variation in Processes of Change

Major change in GenerCo and PowerCo as HROs potentially differs from a major change in an 'efficiency-focused' organization. By efficiency-focused, I mean an organizational type where efficiency dominates reliability. Errors in efficiency-focused organizations do not carry the same potentially catastrophic outcomes from errors as high reliability firms (Roberts, 1990; La Porte and Consolini, 1991; La Porte, 1996). In efficiency firms, major change caused by an environmental jolt (Meyer et. al., 1990) involve management attempts to emphasize the new adaptive condition – the desired future state and a consequent intended identity (Corley and Gioia, 2003). This shift in emphasis occurs when, for example, a new technology introduction

renders an existing product obsolete or less desirable because consumers may be attracted to new or different product features (Burnes, 2004). Burnes' (2004) extensive study of different change processes across many and various organizations shares a consistent thread. In order to galvanize the attention to the new desired situation and its intended organizational identity, adaptive processes in Burnes' (2005: 428) analysis, managers tend to stress 'reinvention', 'starting again', 'new type of relationship' and 'organizational transformation'.

In GenerCo and PowerCo, managers also emphasize the desired 'new' conditions based on their firms need to adapt to changes brought on by deregulation. At the same time, different from efficiency organizations, changes must take place alongside traditional operating practices to ensure safety and reliability. If the logics of the new condition displace the 'old world' logics of safety and reliability exposure to potentially catastrophic risk is increased. Change in both HROs involves a combination of old and new logics even though the logics of learning an intended identity may be steeped in competing ideas. Finally, sufficient time is important for negotiation processes and a collective understanding of a new dominant logic (Starkey, 1996).

Contrary to a common management practice of conflict avoidance (Mullins, 2002), and effective production of learning in a context of change seems more likely if managers acknowledge that group identification in relation to organizational intended identity may be a source of tension. Furthermore, the data suggest that a change process that has sufficient time and space for joint production of a framework for practice seem to generate conditions in which the intended organizational identity

is learned. A central feature of this process is its organic approach where the collective endeavor shapes an identity that incorporates rather than substitutes the existing group social identity. Collective reflection is also shown as key to this process. Learning in the case examples was enhanced when groups were actively engaged to jointly construct new aspects of practice with a focus on a shared problems where managers acted as coordinators and facilitators (Hannigan, 2002a).

Chapter Discussion

The organizational change process emerges as an important variable that mediates learning intended identity because PowerCo - the organization that exhibited the greatest learning used a collectivist approach, which included valuing multiple identities rather than setting out to replace one identity with another. In GenerCo a top-down rule based approach to change was employed that privileged the intended organizational identity. In both cases, the conflict on its own is shown as insufficient to facilitate or impede learning because while members in each company experienced identity-based conflict, in PowerCo learning was facilitated, but in GenerCo learning practices to realize the intended organizational identity was impeded. Although advanced forms of learning do emerge from SOI conflict as Corley and Gioia suggest (in their case, semiotic learning), as shown in the PowerCo case where double-loop learning processes were evident when members tested underlying assumptions (Argyris, 1999), contextual features and change processes are also shown as crucial. Moreover, Corley and Gioia's (2003) emphasis on the SOI conflict as key to learning can be taken differently because GenerCo's members withheld knowledge and elected to refrain from learning new practices. Finally, Rothman and Frideman's (2003)

suggestion that 'conflict is central to learning' is also shown by this research to be equivocal and open to other interpretations.

The present research lends support for my assertion that there is more to organizational learning in situations of SOI tension than solely the identity tension or conflict in itself, particularly since the PowerCo P-T group experienced SOI tension yet this group learned the intended organizational identity the most. This finding also raises questions for Brown and Starkey's (2000) and Child and Rodrigues' (2003) contention that SOI tension impedes learning, again because of the impacts of other intervening factors in how the groups did learn in situations of SOI identity tension. However, Brown and Starkey do highlight certain essential features that promote organizational learning in conditions of SOI tension and cite negotiation (Strauss, 1978) and continuity (Rousseau, 1998; Weick, 2001; Ullrich et al., 2005).

The data show that while the six groups shared attitudinal and social identity similarities, *their level of learning new practices* associated with the intended organizational identity had much to do with the management approach and implementation of the organizational change and the degree to which the approach fostered opportunities for identity negotiation. Power relations are also evident and pose important management implications as actors are shown to use social identity both as a right of passage and as a basis for new member indoctrination. This finding suggests that since power and control is used to acculturate new members, communities of practice might have problems with negotiating major changes to practice because of high salience to their 'practice' identity. Finally, because social identity is analyzed from a processual perspective of 'identity career' (Prus, 1996), the

findings potentially shed light on how social identity is formed and maintained in the first instance. SOI tension as both the source and catalyst for organizational learning is shown as only a partial aspect because contextual elements such as self-determination, having some degree of control, as well as identity continuity and negotiation processes are seen as equally important mediating factors.

Conclusions

This chapter presented an analysis of the research findings and begins the process of building grounded theory. Some of the main ideas that emerge from this research serve as a basis for discussing the implications for organizational learning in the context of identity-based conflict. These notions are empirically grounded in the research data and support the following claims.

First, while the situated learning literature gives sparse coverage to the important interrelationship between identity formation as practice *within* a community, the data in this chapter show it is a major feature which shapes and is shaped by members learning when concepts are imported from *outside* the boundary of the communities as they engage in social identity negotiation processes. In the PowerCo merger case community members were able to co-create new practices through a process of joint action with their counterpart members. Both communities of practice were encouraged to seek input from non-practice members in the broader organization and to also report progress to non-practice members as well. Hence, the process of change and the importation of concepts from outside of the practice seem

necessary for negotiating a community's social identity, therefore, freeing up the potential to learn in situations of transformational change.

Second, where the literature presents a dichotomous view that organizational learning in situations of identity-based tension may be impeded (Brown and Starkey, 2000; Child and Rodrigues, 2003), or facilitated (Corley and Gioia, 2003; Rothman and Friedman, 2003), this research shows that social and organizational identity tension can both facilitate and impede organizational learning at the group level. This new evidence has implications for firm-level learning because if community level learning were impeded, organizational learning would be correspondingly compromised. Conversely, if learning at the level of practice-based communities were facilitated, higher prospects for organizational learning are implied. Gherardi et al., (1998: 281), maintain as, '...new knowledge, both cultural and material is institutionalized in the community of practice...it counts as one of the most important mechanisms of organizational learning'.

Third, social and organizational identity tension and its associated conflict are shown as insufficient in itself to produce organizational learning. Taking the P-T groups as examples of communities of practice, groups in both organizations experienced tension and conflict, yet the evidence shows the PowerCo group deeply learned new practices while in GenerCo learning new practices were impeded. Hence, the present research shows that on its own conflict is a factor, which can stimulate learning if some enabling process is available for members to negotiate identity transformation. This finding decentres conflict and poses a different view

from Rothman and Friedman (2003) that organizational learning is more complex than depending on conflict by itself to stimulate learning.

Fourth, some authors (Gherardi et al., 1998; Nicolini et al., 2003; Contu and Willmott, 2000) have criticized proponents of situated learning for ignoring the inextricable connection between learning in an environment of power relations. This research empirically shows how power and control as a result of social identity tension can hamper learning in communities of practice. The data show that power and control serve as group identity maintenance and retention processes that may prevent newcomers from 'earning their stripes' and also become important mechanisms for new member indoctrination. Managers also distinguish legitimate knowledge as mostly canonical forms, although in practice, noncanonical knowledge is used. The findings further imply that knowledge that is not locally produced seems not only of lesser value, but introduces competition and in-out group identity tension.

Finally, analysis of the data in this chapter demonstrates that in spite of social and organizational identity conflict, learning can occur. A process of change that enables negotiation, some degree of control and self-determination is shown as fertile ground where learning new practices occurs in spite of SOI tension. The data show that in a context of transformational change, learning intended organizational identity seems to occur most when groups are supported in retaining their root identity thus creating identity continuity and by importing concepts and knowledge from outside the boundaries and the repertoire of normal practices and routines.

I will return to this discussion, which begins a process of theory building, in Chapter 8. Chapter 7, which follows, switches from discussing theory building to presenting the practical implications that may be interpreted from the emergent theoretical elements and findings to this point. In particular, I draw on the case examples where I take members' expressions as evidence that they indeed learned new practices associated with the intended organizational identity despite identity-based tensions.

Introduction

The preceding chapter discussed the process that I used to make sense of the research findings. It also explained how in situations of transformational change, learning in communities of practice is more complex than described by the processes of 'legitimate peripheral participation' (LPP – Lave and Wenger, 1991) in situated learning theory. The findings in Chapter 6 provided support for the notion that processes of change as well as social identity play a role in learning under conditions of significant change because learning new practices were found to be both facilitated and impeded.

Social identity has been discussed as a discursive complex phenomenon in which multiple evolving identities may be understood as actors act and articulate identity characteristics. Comparing and contrasting the intensity of these actor-expressed characteristics makes possible some appreciation for contextual patterns of identity in terms of salience and commitment. Social identity is considered a social process that reinforces the 'very antecedents of identification' including a community's distinctiveness values and practices (Ashforth and Mael, 2004: 142). The findings and emergent elements of theory discussed in Chapter 6 show clear ties to identity as a factor that mediates learning in conditions of change. Moreover, variation in learning are able to be clustered into two dominant themes which reflect that in one case organization learning new practices was impeded, but in the other firm, in spite of the presence of identity tension learning new practices was facilitated.

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The purpose of this chapter is to focus on the processes of change in the study organizations because it was so closely linked to learning in communities of practice. Primarily, the case example of the PowerCo merger is used to tease out various aspects of the change process that seem relevant to facilitating processes of learning new practices within conditions of change.

Practical Implications - Facilitating Change in Communities of Practice

The PowerCo change process reveals certain characteristics that contributed to an enabling context for members learning new practices associated with the intended organizational identity. These characteristics have more to do with their effect on community members' attitudes towards change and identity negotiation than as ingredients for a step fashion recipe for organizational change. The characteristics are rooted in the concept of social interaction. Social interaction connotes ongoing action in communities, where actors influence each other in a back and forth manner and in multiple social person-intergroup and intragroup contexts (Rosenberg and Turner, 1981; Charon, 2001). This notion is consistent with Brown and Duguid's (2002) ideas that while communities of practice may not learn easily across practices, by supporting what Whalen and Vinkhuyzen (forthcoming, cited in Brown and Duguid, 2002: 133) say is 'indigenous sharing and collaborative learning', knowledge acquisition, transfer and creation of new knowledge is possible.

The two-by-two matrix, Figure 7.1 that follows, shows the relationship between the core ideas. However, caution is expressed when classifying identities, learning levels and social categories into discrete concepts, which can risk

oversimplifying and reifying complex and dynamic social processes (Pratt and Foreman, 2000). Further, highlighting learning and social identity may be construed as ascribing human-like features to complex social phenomena. At the same time, precisely because the model depicts ambiguous, below the level of obviousness (Turnbull-James and Arroba, 2005) and multifaceted social constructs, assigning labels and grouping constructions does provide a pragmatic way to make sense of and discuss these processes (Weick, 2001).

The present research provides an empirical underpinning for an approach to understand identity tension that is the subject of some discussion among social psychologists (Haslam and Parkinson, 2005). I build on the categories introduced by Haslam and Parkinson (2005) and extend the framework to reflect social categories that relate to the extent to which each group learned the new practices necessary to realize the intended organizational identity. Figure 7.1 is comprised of two discrete factors.

The first factor shows the range (from low to high) of actors learning of the intended organizational identity. The second factor reflects the extent to which community members elected to retain their core social identity, also depicted from low to high. This factor can also represent levels where organizational learning is impeded because groups decline to participate in learning activities or withhold practice-based knowledge. It represents an expression of 'non-learning' that is consistent with the emergent outcome that some authors associate with identity-based tension and conflict (Brown and Starkey, 2000; Child and Rodrigues, 2003). Withholding knowledge or refusing to share in learning processes characterizes this

non-learning perspective (Argyris, 1999). When a community refrains from engaging in knowledge sharing processes because of identity conflict, the community and potentially broader segments of an organization could fail to adapt to environmental influences or make necessary changes driven by firm-level interests.

Each cell in Figure 7.1 describes a distinct approach to producing and maintaining a social interaction perspective to facilitate learning an intended organizational identity.

Figure 7.1 - Change Approach to Produce Learning of Intended Organizational Identity

High Learn Intended Identity	**Assimilation** Identity forced & maintained through power & control – top-down process of change. Organizational intended identity is dominant, but temporary	**Organic Collectivism** Identity continuity achieved through bridging current & intended identities. Co-created through practice & maintained through negotiation process
  Low	**Individualism** Occupation identity is dominant over SOI. Identities maintained through external relations & boundary spanning	**Pluralist Communitarianism** Identity is source of status & prestige – maintained through right of passage and apprentice-styled activity or 'earning stripes'. Group social identity dominant
	Low Maintain Social Identity **High**	

Key features that emerge from the change processes where learning the intended organizational identity was facilitated include: self-determination, actors

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having options and a degree of control to negotiate social identity and identity continuity. These features are aligned with evidence from other studies of identity in situations of change (*cf.* Ellemers and Rink, 2005; Brown and Starkey, 2000). Individualism is rated as low level in the matrix in relation to a concern for learning the intended organizational identity and also low level with respect to a concern for maintaining the group social identity. Individualism means that individual interests supercede both those of the organization and of the group. Actors in this category relate most to their occupation and keep their social identity strong by affiliating largely with exogenous groups, sometimes through professional associations.

Some GenerCo and PowerCo Administrative group members may be characterized as individualists. These group members describe themselves as 'a lawyer' or 'an accountant'. They reference learning processes and sources in terms of loosely knit communities or 'networks of practice' (Brown and Duguid, 2002) as opposed to, for example, the P-T group control room operators who identify with their shift mates and typify tight communities of practice. Networks of practice often refer to outside-firm groups who experience more loosely coupled relationships as compared to mostly inside-firm tightly coupled group relations. Individualism could also pertain to members who express uncertainty because they risk being laid off and may be less inclined to 'invest' in deep identification. Social identity theory suggests identity salience shifts when group social identification is thwarted because no immediate outlet for enacting identity seems available. For example, administrative group members demonstrated individualism and other tendencies as members were divided in their views of learning the intended organizational identity as a 'job protection' strategy or based on their determination that their job was in jeopardy

there seemed little point in learning the new identity. An individualism orientation accentuates self-interest over alliances or collaborative engagement. Collective voice is lost when this approach is dominant and in an 'every man for himself' environment those with the highest authority or status can tend to influence what is important to learn and how it should be learned.

Assimilation is the next element shown in Figure 7.1. It refers to a process that employs power and control to force the adoption of a particular organizational identity. High learning levels for the organizational intended identity can be attributed to this approach but because little value is placed on group social identity, and learning the subordinate group concerns and interests, the concerns of the superordinate group become dominant. This conception of 'either with us or against us' (also conceived as 'not invented here [Dixon, 2000]), identity also tends to privilege the highest status groups whose identities end up being dominant over other interests and concerns. This notion represents erosion of social identity salience as members could withdraw from organizational identity (us), which wears away to group level (we) and ultimately to the level of actor (I). Thus in this mode of change, social categorization can become more in-group, or self-focused. A strategy of assimilation may be elected when managers see few options but to initiate major cultural change over very little time. Members who are faced with a high risk of job loss could perceive they have little choice but to capitulate to the new identification (Burnes, 2004). GenerCo's top-down approach shares common traits with the assimilation orientation. Some members of the management group who expressed frustration that members couldn't seem to take on board the importance of their version of the change seem to fit an assimilation style. Sentiments like Jane's

suggestion that, *"We can't seem to get through to staff we might go bust." [Interview 30G-S2]* can be seen to underlie the rationale for adopting the assimilation approach as a way to urgently respond to dire circumstances. Asymmetric power relations are also closely tied to assimilation. Perhaps out of frustration, managers may exert control to press members into assimilating the intended organizational identity.

Pluralist communitarianism (Figure 7.1) presents an alternative to assimilation. Within this approach to learning organizational identity, subgroup identities dictate and the intended organizational identity is resisted. Communities of practice whose roles are essential to effective operations may chose to disengage with the firm intentions and follow their own course of interest. Skunkworks that chose to pursue their agenda over the firm's, typify this approach to learning organizational identity. Within this conception, lower status groups have an opportunity to expand and possibly develop resistance tactics that contradict the organizational ambition but this approach also risks identity disintegration. Within-group endeavors to reinforce only those practices that are seen to advance the group identity might alienate apprentices and favor more experienced practitioners. Because resources often are controlled by higher status groups in organizations, splintered practice based communities that are characterized by infighting may be broken up or eliminated altogether. Thus, while learning organizational identity within a pluralist communitarianism approach might strengthen community practices and social identity, this approach might also introduce new identity-based conflicts which could detract from members learning new practices associated with an intended organizational identity. The GenerCo P-T group is a cluster of communities who sometimes displayed characteristics consistent with pluralist communitarianism. The

P-T group is tightly coupled. It openly shares common knowledge (Dixon, 2000) and practice based learning, particularly in the control rooms, where small groups become akin to families. GenerCo's Station Coast generating unit maintenance members elected to cleave to their historic practices and largely refrain from adopting the new improved elements of maintenance outage processes that were developed in the adjacent community. This splintering in shared knowledge and thus common practices, which can contribute to providing stability during times of uncertainty (Turner et al., 1997; Ullrich et al., 2005), might also introduce problems if the strategy to adopt fleet-wide practices is the appropriate course of action to ensure GenerCo's long-term viability

Organic collectivism, the final element shown in Figure 7.1 signifies a multicultural approach to learning organizational identity. It contrasts the group-dominant, pluralist communitarianism orientation. This conception means that a practice-based community learns a process of achieving social identity, which depends on negotiating identity in situations of change. According to social identity theory, actors who learn an intended organizational identity exhibit either a commitment to a different social role or some acceptance of a new shared social meaning through negotiating a hierarchy of identities (Lovaglia et al., 2005). SOI in this context evolves and multiple identities are supported rather than substituting one for another. While clear differences in identities exist, a focus on practice and co-invention based on affording equality of perspective, knowledge and approach, encourages knowledge sharing and active participation in processes that lead to learning an intended identity. Doing things together facilitates knowing others, which opens possibilities for learning practice. Situations where transformational change is

necessary are particularly relevant for the organic collectivism approach since transformational change amplifies organizational member uncertainty because it destabilizes normal power roles and relations (Newman and Nollen, 1998).

The PowerCo P-T group resembles this characterization in the matrix. This group engaged with the TransmiCo members and together negotiated a new set of practices, thus they forged a common social identity. PowerCo managers also took steps to shift the way people do things by introducing function teams as a way of introducing some degree of control and self-determination, identity negotiation, and continuity between the intended organizational identity with root social identity. The teams were made up of PowerCo and TransmiCo communities. Group members acted as change agents and also sources of information and knowledge for their co-workers who were not directly involved as function team members. The PowerCo change process offered sufficient space and support for members to co-invent a joint social identity based on previous group identities, in contrast to GenerCo's top-down approach. The co-invention process could then be reconciled with the organizational intended identity because member's negotiations enacted the intended organizational identity. A core task for the function team activity was to alter routine ways of implementing actions by 'learning' new processes that combined the tacit and explicit knowledge of both groups. Thus, new identities were formulated as continuity bridged the distinct group 'root' identity with a new identity.

In this way, rather than disposing of the previous identity, a new one was in effect, grafted together from both previous social identities (Neitz, 1990). This process is seen therefore to hold important implications for learning and change.

Management endeavors to destroy old identities through rewarding only those, which they consider legitimate and reward that, might be consistent with the 'new vision statement', do not fully recognize the capacity for identity regeneration. Identities are seen more as a dynamic and evolving process whereby as members change practice they become new identities (Wenger, 1998; 2003). Seen this way, identities do not die but they become subsumed into a larger ongoing project of selfhood or group confederacy (Neitz, 1990; Ullrich et al., 2005). A process that enables this identity evolution seems to present a higher prospect for group adaptation consistent with intended identity over a top-down approach (Hannigan, 2002b). While PowerCo did take steps along these lines, the cross-organizational workshops, however, did expose situations where in particular the PowerCo P-T group (which held the most organizational power) 'indoctrinated' new members into its way of doing things. Thus, social identity in a work setting can be seen as having a dark side and in particular where it operates with high salience, it may pose a barrier that excludes other groups from participation or by separating newcomers from more experienced members. In this way while identity is learned, the group identity is given precedence and organizational change may ultimately be retarded as a result of an inability of the group to undergo major identity transition.

Accordingly, communities of practice are shown to be more prone to successfully navigate incremental changes to practice. However changes that require transforming, hence learning a different social identity, such as those associated with a major shift in organizational context, like a merger for example, seems possible if a change process were employed such as the one PowerCo implemented. This has implications for the length of time and expense that an organizational change process

is expected to take. On the other hand, shortcutting major change is viewed in the contrasting approach adopted by GenerCo, which sees management as the change agent with a task to shift members to a new set of practices that are consistent with the intended organizational ambition. This approach necessitates identity substitution and members learning of the intended organizational identity can become fraught with conflict, which provokes strategies to resist the change. Although a negotiation based change process is shown to deal with identity conflict, major conflict over which set of practices are adopted can 'cause an organization to polarize into rival camps' as this competition exacerbates perceptions that a group's identity is under threat (Ashforth and Mael, 2004: 151). The GenerCo outage process illustrates this point.

In contrast to GenerCo's focus on prescribing a new organization by fixing all past problems, PowerCo's management practice was more along the lines of setting a framework and identifying characteristics for the future. The two communities jointly acted to develop and make sense of the desired future state in terms of a new set of practices. In this way they created knowledge through social relations. They negotiated identity and transformation through sharing in a newly formed indigenous space and collaborative learning (Whalen and Vinkhuyzen in Brown and Duguid, 2002; 133). This process deeply involved other members who were peripheral to the practice because the two target communities acted as 'go-betweens'. In this role members imported needs, wants and knowledge into the joint discussions and at the same time exported information on progress and special developments outside the core community boundaries into the broader organization. Transformational change triggers the need for a sort of boundary transcendence, because as Starbuck (1983: 99) suggests, transformational change, "takes organizations outside their familiar domains

and alters bases of power". Drawing on the GenerCo maintenance outage case, transformational change appeared to present issues for communities of practice where problems of change, which normally surround incremental changes, that is, changes to practice, could not be handled by the resources available within the community's repertoire of practice-based routines. In contrast to GenerCo P-T communities, the PowerCo communities went outside their practice boundaries to test ideas and import concepts as an integral part of their identity negotiation process.

Moreover, in this approach many voices are considered important, valuable and legitimate, as opposed to solely those with the highest status and power. Strong levels of salience for social identity at the community and group level in conjunction with a negotiated organizational identity seems to facilitate a self-categorization trajectory from actor (I), to community (we) through to company (us). In PowerCo resources (time and budget) were provided to support the development and evolution of learning an intended organizational identity and thus, members perceive learning the identity as a choice instead of it being forced. This orientation is labeled 'organic' to show the dynamic and empowered nature of learning identity as *process* and not as a structured *event*.

Taken together, the key features that underpin PowerCo's approach to change includes an appreciation for multiple identities. Identity transformation took place in conditions of self-determination, having options, and a degree of control to negotiate continuity between the social identity and an intended organizational identity. Self-determination and options suggests that members experience opportunities on their own to make choices about who they are and who they should become. A process of

negotiation informs the ongoing shaping and characterization of social and organizational identity, which has been shown to be an important feature of identity continuity in conjunction with change (Ellemers and Rink, 2005; Ullrich et al., 2005). A temporal dimension is also linked to these features. In PowerCo's case the intended organizational identity negotiation process took place simultaneously as the change evolved. In GenerCo's situation the shift to the 'new way' of consolidating practices was embedded in the change announcement. The present research shows that PowerCo's change process provided sufficient space for members to test underlying assumptions and question taken-for-granted processes that were embedded within the 'old' electric system outage process. The process is supportive of double-loop learning and consistent with Burne's (2005) argument, illustrates that this learning type is important for the implementation of transformational change.

Finally, by opening up reflective space, (Brown and Starkey, 2000) PowerCo management exhibited features that Turnbull-James and Arroba (2005) suggest are important qualities of leadership, a sensitivity and an enabling framework for the less obvious features of organizational life. For Turnbull-James and Arroba (2005: 299), emotion and emotionality are such features. In this research, social identity is treated as a similar aspect of human social process in the everyday world of organizations. As discussed earlier, emotionality is connected to social identity. Tajfel and Turner (cited in Hatch and Schultz, 2004: 59) conceptualize groups as 'members of a social category who share some emotional involvement in a common definition of themselves'. Turnbull-James and Arroba (2005) present a model that shows how, through reading and carrying, leaders can heighten their sensitivity and also build capability for understanding below surface-level emotionality that serves to influence

actions in firms. The model I propose is aligned with theirs. It attempts to assist with the less visible aspects of the organization such as the importance for supporting processes that enable negotiating alignment between social and organizational identity. Similar to theirs, the model presented here (Figure 7.1) hopes to shed light on managing sub-surface social processes, that managers may not normally attend to or potentially even avoid (Turnbull-James and Arroba, 2005).

Approaches to Change in HROs

The PowerCo merger case illustrates the importance of how identity negotiation, which occurred below a level of obviousness, is made more plain. Actors, "…engaged in mutual social action (taking one another into account), symbolically communicating, taking the role of one another, and interpreting one another's acts", (Charon, 2001: 153). Identity negotiation, hence, may be understood as social interaction and as Charon (2001: 154) notes, social interaction forms our identities (see also Newell et al., 2004). The data also suggest that current identities are a factor in shaping social interaction and therefore, a mutually constitutive relationship is shown between identities and interaction as practice. Lave and Wenger's (1991) situated approach to learning, as argued in Chapter 3, challenges the assumptions of learning as taking place in a location that is separate from work and where there is no variance in what is 'taught'. The situated approach to learning emphasizes the importance of socio-cultural activity and connects the collective character of work as both an organizational member identity formation process and a learning approach that enables learners to cope with changes in work and the workplace (Guile and Young, 2001). Learning in this view is a reflexive process that

facilitates communities in altering their identities dynamically as time and change evolves.

However, the current version of situated learning deals with change in communities of practice dominantly at the incremental level (Cook and Yanow, 1993; Gherardi et al., 1998). In this view, communities may be conceived as specialisms wherein practice takes place outside of modern aspects of organizing such as mergers, downsizing or responsibility for concurrent tasks as generalists. Drawing on Engeström (1991, 2001), the view adopted in this research shows how communities cannot always undergo slow, incremental evolution in practice but must sometimes radically transform. This depiction of community learning amidst major change contrasts the views expressed by Gherardi et al., (1998). Gherardi and colleagues maintain that communities learn primarily in incremental ways. Gherardi (2006) further suggests that the discursive nature of practice, language and unstated assumptions of knowledge combine to form a mode of ordering such that a community experiences potentially insurmountable problems with across-community exchanges.

In this research, the PowerCo P-T members are seen to negotiate a social identity that aligns with the intended organizational identity despite identity tension founded on language and knowledge differences. Moreover, both firms engaged in identity transformation in conjunction with performing their normal practices, which were subject to incremental change. Thus, the data show that communities do negotiate identity and new practices as a process of transformation. In this research change is understood as new practice knowledge. The simultaneous ongoing production of change, learning and identity transformation conceptually co-exists.

This is the sort of change that diverges from the fairly resistant dispositions of habitus (Swartz, 1997) by extending the boundaries of a community of practice to include the wider social system in which it operates at the same time as new members learn to become full members. This change is shown as the type PowerCo members negotiated yet it is omitted from situated learning discussion (Barab and Duffy, 2000).

Engeström argues that 'transformative learning' (quoted in Guile and Young, 2001: 68), depends on a broader view over and above the here and now, quick fixes of a change. This view of learning is founded on reflexivity as necessary to enable new possibilities. This perspective argues that concepts and ideas from outside the community of practice must be imported and reconceptualized. This view of learning is associated with some aspects of the current conception of situated learning (Lave and Wenger, 1991), for example, the aspect of situated learning that constructs continuity with the past and the co-invention of possible futures. However, the orientation drawn from this research, also views psychological safety (Edmondson, 1999) as an important additional mediating factor of community learning. In this thesis rather than privileging personal identity as an actor makes the journey to full member of a practice a pluralist approach to identity production is advocated.

Identity is a dualism that depends on personal and social production. Social production of identity means that it is susceptible to temporal influences, power relations and influences from outside communities that make up the collection of communities in which a target community operates. Identity here, is a process of social interaction that is not restricted by the boundaries of a single practice. As shown in the GenerCo case, SOI tension could steer actors towards the perceived

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secure environment of tightly coupled communities, in which their social identity can be protected (Hogg, 2005). This dominant notion of situated action assumes primacy of a given situation. It emphasizes situations as generally static, where change occurs in small incremental adjustments to practice. It can be seen to define the world of practice in its by-the-moment particulars (Nardi, 1996). This inward looking focus is shown to reinforce existing practices in GenerCo through the 'not invented here' syndrome (Dixon, 2000). It was shown to restrain communities of practice from sharing their knowledge across communities, and thus inhibit firm-level learning. Rather than inducing a sort of identity liminality (Tempest and Starkey, 2004) founded on a dominant within community emphasis, this research proposes a view of learning where a community's identity transformation is more easily facilitated if it adopts both a practice-based *and* an outward looking perspective.

A pluralist perspective is achieved when a community is open to identity transformation by engaging with the constellation of communities that make up an organization. It is based on the logic that while the production of knowledge might occur within a community of practice, the knowledge production is influenced by social systems outside that community. This concept seems particularly relevant in conditions of uncertainty brought on by change. Psychological safety is embedded within a process of change that affords identity continuity and transformation through negotiation.

To this point, the implications for practice that stem from this research suggest that a theory of learning, which is founded on the notion that in order to produce change, a change in the context of a current social identity is essential. This view

holds that organizational change is a process of changing how a firm learns. It presents some potential for balance between social and organizational intended identity since negotiation processes that underpin testing assumptions and questioning taken-for-granted processes, seek to bridge old and new practices (Senge, 1990; Argyris, 1999). Although some writers argue that attempts to regulate social identity are common to interests of managerial control (Alvesson and Willmott, 2002; Alvesson and Robertson, 2006), this research suggests such actions may yield only short-lived results. As shown in the GenerCo case, members can ultimately (and potentially covertly) cleave to their root social identity. By doing so, communities could choose to refrain from learning new practices associated with an intended organizational identity, which seems to defeat the interests of attempting to impose an identity in the first instance. A top-down approach, which is consistent with power relations, such as GenerCo's, is shown to galvanize group social identification and leads members to choose to refrain from transferring knowledge or participating in organizational learning processes.

Implications for Change Processes in High Reliability Settings

A final interpretation that is drawn from the data analysis shows degrees of distinction between levels of HRO. Although the relevant literature mostly treats high reliability as a defining organizational characteristic will little distinction, the view adopted in this study (discussed in Chapter 2), proposes that this factor is a significant consideration with implications for change, learning and identification. I argued earlier that in PowerCo, risk to public safety from an error in practice would not cause the same degree of impact in terms of immediate catastrophic failure (Roberts, 1990) as with GenerCo's nuclear power plant operations, however, according to Weick and

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Sutcliffe (2001: 3), both firm types are included in their listing of high reliability organizations. The distinction of degrees of high reliability provides insights into the different change management approaches used by GenerCo and PowerCo. Smart and colleagues (2003) caution against lean processes in high reliability settings simply as an end in themselves or without balancing risk. They assert that increased levels of risk may arise in situations where space for reflection has been eliminated in order to gain greater efficiency levels. This notion is shared by Belling et al., (2004: 253) who argue that space for reflection is key for manager's transfer of learning into 'diverse organizational settings'.

Organic collectivism as discussed earlier is dependent on openness to social identity continuity and a willingness to negotiate an intended organizational identity. Critical reflection underlies this approach (Reynolds and Vince, 2004). Transformational change places importance on the interrelations between a target community and significant reference communities in the wider organizational construct. These nested relations, which include recontextualizing knowledge from across community boundaries, serve to define the lived experience of a particular community of practice as it engages in contextual change. If members perceive a threat to their current social identity or an organization dictates that practices must be imposed from an irrelevant, social identity theory maintains that members may express an indifference to that information, which can inhibit learning (Ellemers and Rink, 2005; Ullrich et al., 2005).

Further, a low tolerance to risk may interfere with the essential features of organic collectivism, since this mode of change includes openness towards organic,

unstructured and uncontrolled social processes. This implies that at its macro level, high reliability environment, GenerCo may not be as well equipped to deal with variation at the level of micro process, in this case, unstructured and organic approaches to negotiating SOI continuity in a context of change.

This emergent finding supports Rouse and Daellenbach's (1999), assertion that setting parameters for performance factors, such as learning to effect change, solely on the basis of external firm performance and ignoring internal factors and resources such as social and intended organizational identity, can skew a collective conception of learning intentions and strategic change ambitions. GenerCo's emphasis on adaptation to achieve organizational performance goals that originate from dominantly external sources could be taken as a failure to pay attention to social and organizational identity tensions within the firm.

The case findings suggest that implementing transformational change may be more viable if attention is paid to SOI as a social process that hold implications for both *within* and *across* communities of practice in an organization since identity negotiation transcends normal boundaries of practice. High reliability contexts with high salience for an organizational identity that is steeped in no tolerance for the unplanned or unstructured, suggests difficulties in adopting learning processes that depend on micro-level variance such as negotiation or collectivism. Nonetheless, a process to facilitate learning and negotiate social and organizational identities as foundational to a process of change such as the one PowerCo instituted is shown to have a significant impact on stimulating the conditions necessary for double-loop learning (Argyris and Schön, 1974; 1978). Members tested their previous

assumptions and taken for granted (Argyris, 1999) notions of the old version of outage planning and co-invented a new joint process.

Weick (2001) argues that a public or external side of identity is crucial for an identity career. The public side of identity, he contends, is characterized more by 'official position and the institutional complex' (2001: 218). HROs as institutional types may share many attributes and common operating practices, however, as shown in this study, strong across industry organizational identification while enabling performance comparison, may also constrain processes that do not 'fit' the institutional version of an organizational identity (Figure 7.2). Here, HRO's may wish to emulate another because of commonalities in processes and desired performance levels, but in-firm social processes that operate below the surface of obviousness, such as social identity and identity tension, may impede those interests.

Figure 7.2 Impact/Risk Features Compared with Common HRO Features

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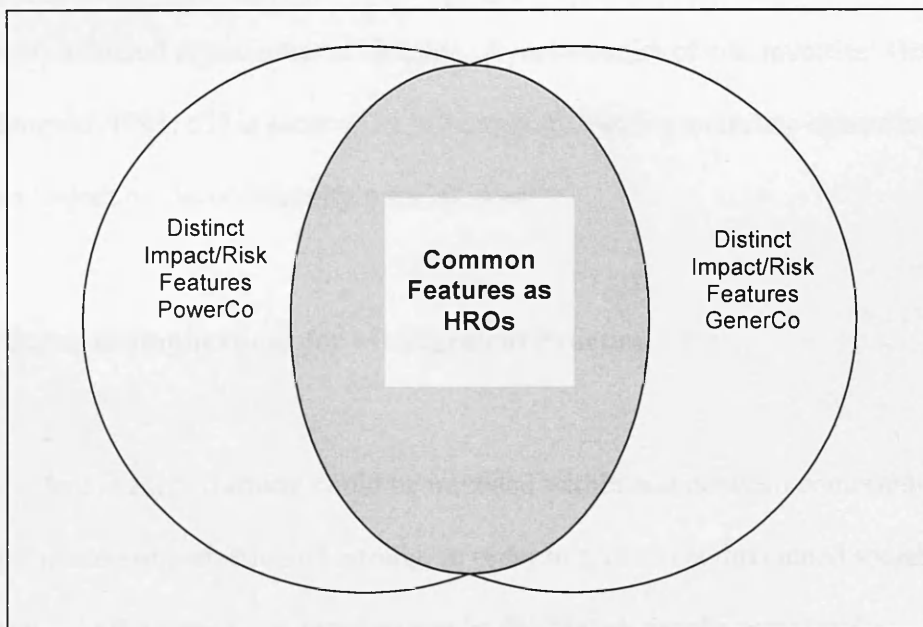
This finding supports Weick's (1979: 186, 187) argument that loosely coupled social systems ecological (macro) changes, 'favor adaptive actions that are flexible, loosely structured and improvised' and that these systems are fuller, more varied and remove more equivocality'. Thus, PowerCo as a tightly coupled system maintained a degree of looseness in its change process and GenerCo's SOI tension, without such a process, promoted resistance to change and preference for group social identity over the organizational intended identity. This looseness is argued as a different conception of the practice world of a community. Rather than emphasizing actor-community relations as legitimate peripheral participation and where the new person becomes a full member of a practice, this conception of learning takes into account the important influence of the constellation of communities. In situations of transformational change, this view sees practice as having an identity threshold, which requires influences from outside a practice's boundaries since within the community understanding is founded on the identity of the practice, not on a new untested intended organizational identity. A 'community of communities' (Brown and Duguid, 1991: 53) is show to be influential in ingroup-outgroup dynamics, which has an impact on the community's social identity.

Discussion of Implications for Management Practice

As I argued, learning could be impeded within and between communities, thus compromising organizational learning, in order to preserve a threatened social identity. At the same time, learning can be facilitated, despite social and organizational identity tension, when a process of change is instituted that pays attention to multiple identities and enables identity transformation through

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negotiation. Weick's argument implies that changing from a tightly coupled to a loosely coupled system is a function of managerial choice. However, this research shows SOI as a factor that introduces cultural constraints on social system coupling has more to do with active intervention than well-meaning choice for alignment with a 'new' organizational identity. Identity issues may be a concern for mangers interested in knowledge translation and transfer as a source of competitive advantage (Rouse and St-Amour, 2003, Yanow, 2004) since refraining from learning and knowledge transfer processes are seen to potentially impinge on firm level adoption of an intended organizational identity (Martin, 1992). This finding is consistent with Ullrich et al., (2005) research that demonstrates that continuity in contexts of change is a function of management being active facilitators (Weaver and Farrell, 1997) of an intended organizational identity.

In summary, the implications of this research for the practice of management include the following points. First, by drawing on the experiences from the study cases, the 'below surface' aspects of identity negotiation are made visible. Second, a model is proposed that might be useful for managers interested in identity negotiation within the broader social system, since the study evidence shows that members may elect to withhold knowledge, which inhibits learning, as a response to the introduction of an identity change. Third, a process of change that includes *self-determination* in the form of actors having *options* and a degree of *control to negotiate* an intended organizational identity while maintaining *continuity* with a current social identity are shown as key features that mediate organizational learning in situations of social and identity-based tension.

Conclusions

As the GenerCo data show, managers who attempt to implement change while ignoring social identity congruence with organizational identity may encounter problems of resistance. Members who resist could refuse to transfer knowledge or prevent newcomers from accessing practice. Members might also experience confusion and anxiety when asked to forego a highly salient social identity and adopt an intended organizational identity that is new to the firm's identity repertoire. Understanding the importance and relationship between social and organizational identity tension and its impact on learning could reduce resistance and diminish members' anxiousness in the face of transformational change. Better understanding these relationships might also shed some light on new different ways to research these interrelated complex phenomena that are shown as significant to organizational learning. Ignoring the impact of social and organizational identity tension on learning infers that new learning could be impeded and what is already known could be placed at risk if members refrain from putting that learning into practice.

Managers in high reliability settings might also find some utility from the study finding that concerns a distinction between degrees of high reliability. This emergent finding may be helpful in better understanding how SOI conflict might influence some high reliability cultures that are engaged in transformational change. Nonetheless, because of high levels of salience in group identification organic collectivism as processes of change to negotiate social identity may not be tolerated in some HROs where impact and risk levels are high. Certain trade-offs may have to be made in relation to change for increased efficiency (Belling et al., 2003; Smart et al.,

2003) versus more stable, safer, reliable processes. At the same time, creating processes of change that address identity tension is shown in this research to contribute towards putting organizational learning into practice. Over the long run, an organizational capacity for learning could bridge the zero-sum outcomes of trading off efficiency against safety and reliability in such a way as to advance both endeavors simultaneously. Finally, since social and organizational identity are important relevant processes that become magnified in conditions of change, insights from this research may open a door for understanding these processes as key mediating factors of organizational learning and change. The perspective drawn from this research suggests extending existing notions of situated learning theory (Lave and Wenger, 1991) in the context of social identity theory (Tajfel and Turner, 1986) since communities of practice form identities in practice and concurrently as members of a broader organizational community. This broader 'organizational identity' whether division, business unit, branch region or at the level of the firm has a bearing on the community's sense of self as does its practice-based social identity. These processes are amplified in conditions of transformational change.

This chapter discussed the implications of the research findings within the context of this project. It drew upon the study cases to present elements of a learning theory for management practice when communities are faced with negotiating identity transformation in response to organizational change. The next chapter will return to the theory elements and continue with theory development. It will also propose contributions from this research in particular for situated learning theory - a major conceptual lens used to understand the social production of knowledge in the field of organizational learning.

Chapter 8
Theoretical Basis for Research Contributions

Introduction

The preceding chapter drew upon the case analyses and emergent elements of theory, to present some practical implications for how practice-based communities might negotiate social identity transformation in situations of organizational change. It traced the PowerCo change process to frame the discussion of potential implications for management practice. The GenerCo process also reveals possible implications for situated learning in communities of practice as that community elected to withhold flows of knowledge, which impeded organizational learning. Although the data represent variation in levels of learning the intended organizational identities promoted in the case firms, members learning levels cluster relative to each group in dominant categories. The change process employed by the case study firms either enabled or constrained identity negotiation. This is shown as a significant mediating factor in levels of learning.

The purpose of this chapter is to discuss the theoretical basis for my contributions to situated learning theory - a conceptual construction within the broader field of organizational learning for understanding social processes of learning in communities of practice. I return to the earlier theory building discussion from Chapter 6, by presenting the links between social identity theory as the dominant theoretical framework that underpins this chapter discussion and the findings from this research. I discuss what these relationships might mean to situated learning. Finally, consistent with grounded theory, I use the emergent data as evidence in

support of my contribution claims and theory development. Making these connections provides a basis for the claims I make in particular about the potential contributions of this work. I select this approach and sequence to show that the community groups studied were indeed influenced by the principle tenets of social identity theory in how they either elected to learn new practices or withhold knowledge flows and thus impede learning.

Theoretical Links

As Corley and Gioia (2003: 624) argue, "…the notion that 'change is everywhere; change is everything', still holds powerful sway over the modern organization". My study is contextualized in situations transformational change, which pose a singular challenge in high reliability organizations since change must take place in a culture of constancy, hierarchy and structure, with public safety and reliability as paramount organizational concerns. Change, therefore, problematizes learning in communities that are required to maintain stability while negotiating modifications to practices. I have argued that change of this nature depends on organizational learning as firms adapt through acquiring knowledge, transferring knowledge and creating new knowledge in practice-based settings. This conception of change refocuses the fundamental ways in which communities of practice see themselves because change necessitates shifts in practices, which are also dependent upon learning and simultaneous identity construction.

With HROs, deviation from embedded routines and practices in an unstructured way carries safety risk for the organization and the public. Thus, studying HROs magnifies the implications of what it means for social and

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organizational identity tension in a context of change. Major parallels exist between the organizational change literature and the organizational learning literature in the treatment of change and learning as broad based corporate endeavors that sometimes pay little attention to within-firm variance (Edmondson, 2002). These views present organizational learning and change as unitary initiatives, which especially in the change consulting literature, treats learning and change as events that every organizational member experiences in the same way (Salaman and Asch, 2003). The GenerCo, PII initiative may be seen in this light. First, an outside consultant was employed to help establish a new vision, which in its own right opens potential SOI tensions because operations under the old vision especially for P-T employees need to be continued to ensure safety and manage operational risk. Secondly, the 'fleet-wide' approach as a central principle of the PII program leaves little room for creating continuity between 'old' practices and particular power station social identities. Wenger (1998, 2003) and Orr's (1996) research support this notion. Based on their respective study findings, both theorists maintain that learning identity is formed and maintained through practice.

For members of a community with high identity salience, a top-down process intent on standardizing practice across identity settings may be perceived as attempting to standardize or regulate identity (Alvesson and Willmott, 2002). The data illustrate that when high salience to a current social identity exists, simply 'announcing' a new vision or a decision to standardize actions with another group, even if they are also members of the same corporate entity, can spark conflict between social and organizational identity. Without a SOI negotiation process that facilitates learning an intended organizational identity suggests that groups will refrain from

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learning and maintain their root identity (Martin, 1992, 2002; Child and Rodrigues, 2003; Ellemers, 2003). GenerCo's PII fleet wide approach is shown to de-emphasize within-firm social identity and pay little attention to social identity variance. It is consistent with a top-down approach to introducing change founded on asymmetric power relations (Newman and Nollen, 1998; Burnes, 2000, 2004).

Further, the change initiative makes only small allowances for differences in identities within particular power stations. This element of the change process implies that all GenerCo members share the same levels of support and face the same obstacles as other members with respect to social identity (Edmondson, 1999) and that these similarities are consistent within each power station and work practices since work practices shape social identity (Wenger, 1998). Moreover, GenerCo's blanket approach to attempt to produce change is shown to pay little attention to identity tension as a key influencing factor of members' learning the intended organizational identity. PowerCo's different approach to acquiring, transferring and creating knowledge is shown to shape and be shaped by negotiating social identity. Thus, in the case communities, learning is influenced by their sense of groupness or social identity. This influence comes from the actor's experience as he or she becomes a full member of practice as widely discussed in the situated learning literature. The present research, however, illustrates that social identity of a community, that is, the identity of a community among the constellation of communities in an organization of which it is part, also is shaped and shapes learning.

Consequently, a change process that accounts for variation in learning approach seems more likely to stimulate identity transformation and diminish change

resistance strategies (Piderit, 2000). Without such a process, learning in communities can also be impeded. Hence, learning may not always be an outcome of ongoing social relations in a community of practice. As shown in this study, learning can be impeded if a practice is engaged in change. Because of SOI tension and asymmetric power relations, the community may elect to withhold knowledge from new members or refrain from participating in knowledge transfer activities with other communities. It follows that if learning within a group of practice-based communities is impeded, organizational learning will be also hampered.

The PowerCo change process used 'functional teams' to differentiate roles, practices and thus, identities and learning approaches. Resources and organizational support systems such as functional group meeting time for planning and co-creating the new practices were made available and supported by the organization's management. Function team members also served as 'go betweens'. This means actors were directly involved in both creating continuity with current and intended SOI as well as acting as key communicators for other organizational members who were not on the function team. Function team members used stories during weekly meetings to communicate key messages that were foundational to the change. Story themes included the rationale for the change (why), the process of change (how) and the idea that the change would satisfy the future business requirements that prompted the change in the first instance (outcomes) *[CoDoc P10-S14]*. Ongoing informal conversations also served to incorporate ideas from non-team members into the function team design sessions, which enabled a two-way flow. Finally, information from function team members helped to facilitate understanding of progress for all organizational members (Rouse and Rouse, 2002). This role facilitated a broader

dialogue about the change and change process through story telling as well as idea sharing which aligns with the conception of social identity as discursive and realized in language. Further, PowerCo's process supports the notion that for identity formation and reinforcement, language can take the form of stories (Brown and Duguid, 1991; Brown and Starkey, 2000).

This research demonstrates that social and organizational identity tension can be a mediating factor for organizational learning. However, various elements within a process of change are found to facilitate learning in spite of identity tension. Power and control are also embedded within these processes, for example, as power-based endeavors where top managers either affirmed or discounted the legitimacy of certain knowledge. In this view although I understand knowledge as process and not content, this study shows that knowledge can be *treated* as object and thus, assume the characteristics of 'a resource'. This was seen in the distinctions between GenerCo leader's emphasis on canonical and explicit forms of knowledge over and above non-canonical, tacit forms used in practice.

Power and Knowledge Legitimation

Power relations are also evident in the practice communities as well, for example, in the P-T communities of practice in GenerCo and PowerCo control rooms. In the PowerCo control room for example, new recruits must successfully navigate identity hurdles before gaining acceptance as full members of the practice. Thus, within this group, social identity can be seen as an instrument of power and control. Control room operators in tightly coupled practices can impose control over newcomers and existing members to maintain social identity because of asymmetrical

levels of power. High status group members whose power comes from experience ('time in the chair') and from dealing effectively with urgent problems in the power station or on the electricity grid can apply control over new members to adhere to a particular social identity. These communities exerted control to indoctrinate new members on the basis of *their* group membership criteria as well as using their position of influence to 'convert' new members. 'Depersonalization' as a function of social identity places a group social identity over and above a social person's (Stryker, 1980; Ervin and Stryker, 2001; Ellemers and Rink, 2005). However, when identity is negotiated as with the PowerCo merger, social identity is expressed as volition and not as a process of assimilation. While PowerCo's change process seems to result in greater learning of the intended organizational identity, within-group social identity tension is evident. Although Wenger, (1998: 85) notes that communities of practice can 'prevent us from responding to new situations', and may 'hold us hostages to that experience', he does not mention asymmetrical power levels as an instrument of normative control in a community's 'gatekeeper of identity' role.

This power-based control is exerted by not sharing knowledge, sanctioning only knowledge deemed legitimate by the group or by impeding legitimate peripheral participation necessary for learning (Lave and Wenger, 1991). These cases reveal a 'dark side' to communities of practice because of their highly salient social identities (Janis, 1972; Duguid, 2005, personal conversation). They contrast the conception of communities of practice as exclusively flexible and open to change, (Brown and Duguid, 2002) or that change is more easily produced in tightly coupled versus loosely coupled social systems (Weick, 1979, 2001). Entitativity is another way to view social system coupling. Hogg (2005: 211) defines 'entitativity' as a property of

groups, which rests on clear boundaries, internal homogeneity, clear internal structures and a common fate or that quality which makes a group 'groupy'.

Uncertainty conditions such as those introduced in situations of transformational change, (Hogg and Abrams, 1990; Hogg and McGarty, 1990; Hogg, 2004) shows that actors can migrate to high entitativity groups to experience social and psychological reinforcement from commonly known situated practices. In this way identity uncertainty conditions promote stability and potentially a reluctance to change. Communities of practice that are high entitativity social systems promote identity continuity and solidarity. As a result, transformational change conditions hold particular relevance for social identity not only because of the necessary production of change but also precisely because this type of change triggers high degrees of uncertainty for members (Ullrich et al., 2005). Thus, without taking social identity effects into account as part of a change process members may be steered in the direction of high entitativity communities that are characterized by their stability – the opposite condition to change and promoting the learning of new knowledge. Consequently, unless some process is introduced that facilitates continuity negotiation between the current social and future organizational intended identity (Rousseau, 1998; Weick, 2001; Ullrich et al., 2005), communities with high social identity alignment may not be the most favourable prospects for learning an intended organizational identity in a context of transformational change.

As I discussed earlier, social and organizational identity, learning and change are inextricably linked. Together they combine a complex collection of micro-level social processes. A main theme that underpins this notion is that if learning is

compromised at the level of a community of practice, that compromise inhibits firm-level learning, thus organizational learning is impeded. Organizational learning depends on integrating new knowledge from situated activity into a community's practice routines. Hence, firm-level learning occurs when this knowledge becomes institutionalized. This process outlines integral elements of situated learning theory.

Unpacking Situated Learning Theory in the Context of this Research

Situated learning theory as conceived by Lave and Wenger (1991) is concerned with the social production of learning as members of varied experience levels engage through legitimate peripheral participation in communities of practice. It serves as a conceptual framework to focus on how newcomers acquire skills and knowledge by participating with more experienced members. Hence, through legitimate peripheral participation, as cognitive skills are acquired, individual identities within a social community are developed (Lave, 1988; Lave and Wenger, 1991; Levine et al., 1993). However, symbolic interactionism as both theory and method does not distinguish, 'community' from 'social person' as part of an 'organization' because of its insistence on self as social object and the inherent impossibility of conceiving of a self outside of a social experience (Mead, 1934; Charon, 2001). In this same way, social identity theory presented by Tajfel and Turner (1979, 1986) proposes a pluralist self/group dynamic, which has been argued in this thesis as a framework for communities of practice (Lave and Wenger, 1991; Brown and Duguid, 2002). In this view, identity formation is not separate from knowledge production, but rather, a simultaneous project which is informed by inter, intra and extra-community dynamics. Brown and Duguid (1991) describe communities of practice as social constitutions, as such, communities of practice

undergo dynamic experiences of change and identity transition; features which tightly correspond to the evolving social processes that make up social identity theory. Gherardi (2006: 57) notes that although learning means also concurrently developing one or more social identities, 'the relationship of social identity to organizational learning is still largely unexplored'.

Social identity is a dual conception, which is based on a mutually constitutive relationship between self and social group. Social identities are rooted in sociopolitical contexts (Howard, 2000) and span a hierarchy that is founded on the extent to which actors identify themselves in relation to group membership (Tajfel and Turner, 1986). Social identity theory has three key elements: categorization or the way people come to understand groups by placing them into a labeled category, identification or our association with groups often to sustain self-esteem, and comparison or the way we compare our groups with other groups. The data in this research support the argument that situated learning theory, which concentrates mostly on the identity of the actor in their journey to become a full member of a practice, only partially explains the dynamics of learning as a social production in situations of change. For example, in GenerCo's case, the maintenance outage community refrained from learning the 'fleet wide' practices, thus, their learning was impeded. Here, in a context of change, one community of practice elected not to learn practices from another community. Therefore, in situations of major change, learning is influenced by more than solely legitimate peripheral participation, which can be seen as separating knowledge from identity by privileging the internal view of 'member-in-practice' over the 'practice in relation to social system' orientation with equal weighting.

I propose that under conditions of major change, communities not only learn through legitimate peripheral participation, but they are also subject to interdependencies and interrelationships that are nested in a community's social processes and simultaneously, within the community's broader social systems. The interrelational/interdependent view I present incorporates organizational identity characteristics such as goals, belief systems and logics. I take organizational identity into account because broader social systems concurrently frame and value organizational identity characteristics *as well as* practice-based knowledge.

This study provides empirical support for a perspective that extends the orientation of communities of practice as relatively static self-replicating systems when newcomers replace old-timers who leave a practice (Barab and Duffy, 2000). In this new perspective, communities are engaged in identity enactment as a mutually constitutive production of knowledge, both, within community, and as influenced by a broader social system. Consequently, along with the type of knowledge (tacit/explicit) and mode of transfer (interpersonal/database), social processes such as social identification are also shown to be important for enabling and inhibiting effective knowledge transfer between communities. This claim supports and enlarges upon previous arguments that social network identities and their associated forms of capital are integral to theories of knowledge-based organizational advantage. Authors argue that because identification acts as a 'resource' (Nahapiet and Ghoshal, 1988: 256), it influences both anticipation of the value that will be achieved and, once knowledge has been combined and exchanged, the actual value realized (Bourdieu, 1986; Nahapiet and Ghoshal, 1988).

Hence, evidence from this research lends weight to the claim that salient group identification can increase perceived opportunities for knowledge exchange and enhance cooperation. At the same time, a community's highly salient social identity can also constitute barriers to learning and knowledge creation (Child and Rodrigues, 1996; Nahapiet and Ghoshal, 1988). This conception is consistent with Orlikowski's (2002:271) argument that sharing knowledge (transfer) is not solely a process of disembedding that knowledge from a community by switching in newcomers or counting on the mediating help of 'boundary objects, boundary practices, brokers or forums'.

Instead, the transfer of knowledge is shown in this study to also be subject to a process of assisting actors to be able to enact that knowledge (Orlikowski, 2002) in contexts and conditions that are consistent with a *(re)negotiated* identity. Thus, an enlarged view of legitimate peripheral participation adds to the scholarly debate concerning knowledge transfer, particularly in contexts of change. Rather than only concentrating on the current issues that focus on the type of knowledge (e.g. tacit or explicit) or transfer process, this new evidence provides support for the view that it is also effective to conceive of developing people's capacity to enact knowledge. This is done through situated practice (Orlikowski, 2002), and founded on this research, by expanding their capacity for the simultaneous, mutual constitution of knowledge and a negotiated social and organizational identity. Cook and Brown (1999: 398) argue that a need exists to better understand how situated dimensions of knowledge can be 'generated in' *rather* than 'transferred to' other communities. A principal notion of this research provides support for understanding both, how identity relates to knowledge generation *and* transfer.

Consistent with social identity theory, evidence is presented that shows learning can be influenced by the collective views of members as they categorize themselves in relation to another community of practice. The present study shows this finding applies when communities are part of the same organization – what Brown and Duguid (1991: 53) describe as a 'community of communities'. As communities practice in the same firm, it is conceivable that the communities would have a similar understanding of the need for making change. However, when one generating unit maintenance community compared themselves to the community in the neighbouring power station and although the benefits of new practices were clearly documented, one community refused to adopt new practices. Knowledge flows were impeded and learning the new practices became compromised. At the same time, the study shows that social identity comparison can serve strategic ambitions. This is seen when managers presented other industry member performance levels to community groups in their organization. Power and control underpins this mode of comparison when managers use the performance gap as a deficiency in practice and in identity (Alvesson and Willmott, 2002; Alvesson and Robertson, 2006). This is analogous to a 'you (as a group) should be like them'.

Social identity comparison can also be used as a 'social yardstick' when members' self-esteem coincides with social cues that call for high achievement. Shibutani (1955: 567) defines reference groups which communities use to compare themselves against as 'social worlds'. His orientation focuses on communication in the development and maintenance of reference groups in order to understand the perspective of another to define situations. For Shibutani, comparison among members of practice is an essential feature of how actors define themselves and their

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communities in the conditions of evolving everyday life. As Charon (2001: 36) puts it, this comparison process which helps us understand perspectives of others is a selected choice but it is something, '... we borrow to help us define reality...The perspective is our guide to reality'. Comparing and categorizing with another community of practice could highlight missing qualities that could be desirable to a target community. For example, if an adjacent community was known for its excellence in managing complicated power system problems, a community sentiment could be 'we want to be like them'.

Comparison and categorization could also raise identity problems. Community members may perceive a threat to their social identity when comparison reveals performance deficiencies or shortcomings in competencies, which could serve to exacerbate uncertainty, self-doubt and put group self-esteem in jeopardy. Here, as shown in the GenerCo case, members could refrain from transferring knowledge, which inhibits learning as a way of protecting their threatened social identity. This research, therefore, has shown the attendant impact of social identity on learning within a community of practice as a complex social process. Contradictions and complexity are foundational qualities of this social phenomenon, however, certain patterns can be extracted which have a significant bearing on the focus of this research. First, communities of practice as social constitutions are subject to the essential qualities of social identity theory, in particular, as result of a community's comparison and categorization with another community. Second, in contexts of change learning outcomes are not necessarily a dichotomous proposition where tension serves to either impede or inhibit. A process that affords identity negotiation can promote the mediating properties of social identity in situated learning contexts.

Since social and organizational identity tension can *both* impede and facilitate learning, a community of practice that is required to change its context, that is, time, place or situation, in a transformational way, would appear to also need to change its social identity in order to adopt new practices. The PowerCo case where communities deeply learned new practices aids in understanding how social identity theory and this extended view of situatedness relates to learning. In spite of social and organizational identity tension a process of identity renegotiation that employed the central tenets of social identity theory is shown to facilitate learning new practices. Again, learning new practice is seen as more complex than the current situated learning theory proposes because in this case 'situatedness and interaction' included the simultaneous co-production of knowledge and identity *between* community of practices in the merged organization.

Conclusions

The GenerCo outage maintenance case demonstrates that although legitimate peripheral participation occurred for community members, without an identity negotiation process, SOI tension contributed towards impeding organizational learning. This contrasts Hanks's argument (1991:21) in Lave and Wenger's 'Situated Learning' (1991). Hanks maintains that learning 'can take place even when co-participants fail to share a common code' (or social identity) when access to practice is afforded. This research shows that identity-based tension contributed to community members withholding knowledge, refraining from learning processes and restricting access. Therefore, my study shows that in situations of major change over and above 'access' to practice through legitimate peripheral participation, learning in a

community of practice can also be inhibited without an identity transformation process to negotiate a 'common code'.

Moreover, and in contrast to the dominant discourse pertaining to communities of practice, organizational learning through creating new knowledge cannot always be assumed as an ongoing outcome of a community's action repertoire notwithstanding legitimate peripheral participation. Thus, a process that supports social identity transformation is an important feature of social relations such that learning within a practice-based setting and amongst different organizational communities can take place. Finally, the situatedness or context, which I define as having a temporal, situational and locational sensitivity, is shown to have a direct bearing on social identity. Groups in the study organizations in the 'before change' situation, indicated that their social and organizational identities were generally aligned. However, once their situational context changed, that is, when the companies required communities to adopt new practices from other communities, they experienced tension between their social identities and the intended organizational identity. The process of change and the social context of the communities are therefore key in how social actors shape and are shaped by identity. Contexts are seen as situations in which knowledge is co-created through identity formation and practice. Because of this, I argue that organizational learning is contextual. Moreover, this study demonstrated these new aspects of situational learning in a hierarchical organizational setting, a formal structure consistent with many organizations (Boddy, 2002), different from the pedagogical, apprentice-oriented situations of the early conceptions which founded situated learning theory (Lave and Wenger, 1991).

By extending existing notions of situated learning theory in the context of social identity theory and based on the empirical evidence from this research, various insights may be afforded into the social production in communities and transfer of knowledge between communities of practice. These interpretations from the data and subsequent analysis support the theoretical, methodological and practical contributions of this research. Each will be discussed in turn in the next chapter.

Introduction

Chapter 8 outlined the theoretical links that relate to the findings of my research. Connecting theory to my findings underpins the contributions of this study to the field of organizational and situated learning and the presentation of these contributions is the aim of this concluding chapter. I discuss the contributions of this research to theory, methodology and to the practice of management. Next, I discuss the limitations of the study and research opportunities that are potentially stimulated as a result of this work. Finally, I conclude by tracing the phenomenon from macro through to micro level social processes and discuss what the study accomplished throughout this evolution.

Study Contributions

A more pluralist conception of identity, founded on social identity theory, takes into account the influence of other social groups and communities within the organizational setting in which the community of practice is active. This research makes four theoretical contributions. First, it informs the discussion on the implications of social and organizational identity tension on organizational learning. Then, this study contributes to situated learning theory by extending Lave and Wenger's (1991) conception of situatedness and interaction. Next, the research adds

to the current theoretical understanding of the mode of change that communities of practice are capable of achieving by broadening the current thinking that communities are only capable of incremental change. Finally, by extending existing notions of situated learning theory (legitimate peripheral participation and situatedness) in the context of social identity theory (comparison, categorization and identification), a new emergent theory is proposed, which draws together the contributions of this work. Each contribution is linked back to the aims of this research, which were presented in the introductory chapter. The research aims included first, an interest to inform the scholarly discussion on the nature of the impact on organizational learning in situated contexts where organizational change has brought about identity tension. Second, this research aimed to help better understand the interrelationships between learning and identity as potential barriers or facilitating processes for organizational change. Since this project deeply studied processes of change in relation to identity and situated learning, the final aim of this project is founded on the notion that some implications for the practice of management might arise. These aims are discussed in the following section in the context of the research contributions.

Informing the Identity and Organizational Learning Dichotomy

The first theoretical contribution of this study is towards the scholarly debate and discussion concerning social and organizational identity, organizational learning and change. This contribution addresses the research aim of informing the polarized nature of the impact identity tension has on organizational learning that is presented in the literature. My study outlined the dominant dichotomous arguments in the literature. On one hand, certain theorists note that learning produces anxiety when community members attempt to preserve existing identities (Brown and Starkey,

2000). They argue that the resultant tension constrains learning since learning and change are mutually dependent. On the other hand, other authors argue that the conflict that arises from SOI tension is a necessary condition, which stimulates introspection processes that trigger a test of underlying assumptions. These authors posit that SOI tension leads to organizational learning (Rothman and Friedman, 2003). Through grounded empirical data, the present research shows that important interdependent linkages exist between social and organizational identity, organizational learning and change. Key to these links is the notion that as communities of practice experience major change they also experience social categorization and comparison processes as they negotiate identity construction (Tajfel, 1992; Stryker and Burke, 2000). This concept builds on Goffman's (1959) idea that establishing identities is the fundamental aspect of social encounters. As such, Lave and Wenger's focus on the identity of the individual as newcomer and lack of attention to the identity establishment of the broader community of practice is the area of concentration for the theoretical contributions of this research.

This theoretical contribution responds to the central research question: "What impact does social and organizational identity tension have on organizational learning in a context of change?" The response is made up of two parts. First, this research supports the foundational notion that identity indeed plays a role in the nature of situated learning in contexts of change. While caution must be expressed that the 'role performed' by identity is steeped in complex socio-psychological processes that range from preservation of self-esteem through rivalry on the basis of stereotypical notions of other communities, the evidence does show that identity tension can shape learning in a community of practice. The second part of the response focuses on the

impact of identity tension on learning. The evidence illustrates that a community of practice may elect to withhold knowledge to preserve a current identity. At the same time, despite a highly salient social identity, a change process that negotiates identity continuity can be instituted, which facilitates learning. Thus, the impact on learning in situations of identity tension induced by change is subject to variance where learning could be impeded and facilitated.

This finding links back to the research aim which set out to inform the scholarly discussion on the nature of the impact identity conflict might hold for organizational learning in a context of change. The present research explains that in situations of identity tension, rather than learning being *either* impeded *or* facilitated, learning can be *both* impeded *and* facilitated. The data show that both dominant academic views concerning the impact of identity tension on organizational learning are partially accurate – organizational learning can be impeded and facilitated in situations of identity-based tension. This is not to suggest learning is compartmentalized into only two clustered outcomes. The present research illustrates that while some variation exists, the management group's learning new practices essentially remained stable. However, the dominant contrasting findings suggest the greatest potential for grounded theory building (Strauss and Corbin, 1997, 1998).

Significance of this Research

In a knowledge-based view, a shared identity is the source of a sense of community, in which 'discourse, coordination and learning are structured (Kogut and Zander, 1996: 503). Other authors maintain that a shared identity enhances willingness for organizational cooperation and more frequent and free contributions

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towards goals and higher performance standards (Dutton et al., 1994). Further, Zimmerman (1982) found that costs to construct nuclear power stations fell not only as the construction firm gained experience, but also as knowledge spilled over from other industry players, thus learning increased once knowledge (and new identities) from outside crossed internal boundaries. Finally, Child and Heavens (2003) maintain that the extent to which identities between organizational and community groups are shared may be relevant to the ability of one group to access information from outside its boundaries. This capability, they argue, could prove to be a necessary catalyst for learning.

Accordingly, as these authors argue, a shared identity is important to organizational functioning. This study has shown a new and distinct link between identity and learning. The evidence presented in this research demonstrates that *variation* in learning practices associated with an intended organizational identity is apparent and learning therefore is not necessarily an either/or situation where in conditions of identity tension knowledge may or may not be produced. Evidence from this study shows that a process of change that enables identity negotiation and the importation of concepts to spark knowledge creation from outside a community's normal practice repertoire appear to be essential mediating factors for learning and knowledge transfer in a context of transformational change. Consequently, the potential benefits of shared identities for both actors and organizations could be at risk when members elect to withhold knowledge or refrain from participating in learning processes. This contribution supports a new understanding: that knowledge production in communities of practice is subject to influence by identity tension,

which can involve issues of identity alignment between the community and its broader social system.

Extending Situatedness and Interaction

The second theoretical contribution of my study is towards an extension of Lave and Wenger's (1991) situated learning theory. Lave and Wenger (and other authors such as Orr, 1996; Brown and Duguid, 2002) emphasize the social identity forming aspects of a newcomer as they engage in practice. However, situated learning theory largely refrains from discussing the social identity *of the practice*. In the current view of legitimate peripheral participation, legitimacy is concerned with *access* to practice. The current view emphasizes the personal identity of the newcomer to a practice and pays little attention to the identity of the practice in relation to influencing effects from the broader social system in which the community is active. Periphery denotes a 'path' to practice (Gherardi et al., 1998) as a newcomer moves from the outside boundary into the core of practice through a social process of engagement (Lave and Wenger, 1991; Gherardi et al., 1998: 279). The current view makes only sparse mention of the attendant influencing effects from significant reference group(s) on a target community of practice's social identity. It focuses on the individual's identity as he or she becomes a full member of a community of practice (Lave and Wenger, 1991; Gherardi et al., 1998; Wenger, 1998).

This research provides empirical support for the argument that a different perspective of 'situatedness' and what constitutes 'interaction' is required by teasing out the complexity, power issues and identity relations communities undergo in situations of transformational change. This broadened view is consistent with Lave's

(1997:67) *situated social practice*, where boundaries between the individual and the

world are not rigid and durable, but dynamic and mutable. In this view of

situatedness and interaction, both meanings *and* entire identities are shaped by and

shape an experience (Barab and Duffy, 2000). Intersubjective interaction here

constitutes and is constituted by actor, content, and context. No boundaries delimit

the development of knowledgeable skills, or Lave's (1997) 'knowing about', from the

development of identities. In this extended view of situatedness and interaction, both

skills and identities are co-constructed as actors participate and become central to a

community of practice together with the broader social system, as that community

undergoes transformational change.

This perspective argues that the current view of situated learning theory's

focus on the identity of the individual limits the construction of social identity. I draw

on social identity theory and the present research to propose a broader view of

situatedness and interaction which implies that the identity of a community is also

influenced by the constellation of communities in the organization of which it is part

as a community categorizes, compares and experiences as part of the social

production of identity. Since social identity transcends the personal and the social to

include the constellation of communities and groups, this conception also helps to

enrich what is meant by the term 'situated' in situated learning theory. Situatedness

and interaction are thus expanded beyond legitimate peripheral participation to

include *identity (re)negotiation*. To suggest communities of practice formulate social

identity strictly on the basis of the community is to infer that communities are free

from categorization, identification and comparison. The research data show that

focusing on the social person without acknowledging that a community identity is

already in place affords only a partial view of what it means to become a full member of the practice. I have argued that a community's social identity both shapes its members and is shaped by its members in an ongoing dynamic fashion. This mutually constitutive process has implications for learning because as shown in this study, social identity and the way it is modified can impede *and* facilitate organizational learning. Thus, expanding the current understanding of situated learning theory (Tyre and von Hippel, 1997) implies a related increased comprehension of a key factor that might impede learning in practice-based settings.

As with the first contribution, this one also links to the research aim which attempts to broaden the scholarly conversation on the nature of the impact identity conflict might hold for organizational learning in a context of change. Empirical evidence from this work demonstrates that without a process of identity negotiation, situations of identity-based tension can inhibit learning in communities of practice when members withhold knowledge and refrain from participating in learning new practices, hence, learning at the level of the firm is also compromised.

This evidence also holds implications for the scholarly debate concerning knowledge transfer. Different from the dominant literature, which focuses on knowledge types and transfer processes to explain knowledge transfer, evidence from this study shows that issues embedded in the discursive social relations of social identity tension can also problematize knowledge transfer. The GenerCo case, where communities were required to adopt a new set of practices, illustrated this point and adds weight to the argument when community members elected to withhold knowledge and refrained from learning new practices when they perceived a threat to

their social identity. As discussed earlier, rather than solely focusing on knowledge type (e.g. tacit or explicit) or transfer process (e.g. near transfer or far transfer), evidence from the present research lends support for the perspective that it is also important to develop the capacity to enact knowledge (Orlikowski, 2002), which is mediated by a community's social identity.

Reconceptualizing Change and Learning Across Practice-based Communities

The third contribution of this research is in reference to the current version of situated learning theory that deals with change in communities of practice dominantly at the incremental level (Cook and Yanow, 1993; Gherardi et al., 1998). Incremental change connotes improvements to the constituent activities embedded in a practice. In situations where a community experiences high social identity salience and commitment, consistent with the prevailing thinking, communities would retain degrees of certainty within the tightly coupled framework of their practice. Taken this way, communities would count on internally generated, legitimate knowledge in times of change and uncertainty. However, this study presents new evidence, which supports the claim that a pluralist conception of identity that looks outside the community, coupled with a process of identity negotiation, can facilitate advanced forms of learning that are requisite for transformational change.

As discussed earlier, management and learning scholars have accepted communities of practice as a collection of situated learners. Strong alignment between social and organizational identity is integral to theories of knowledge-based organizational advantage and thus identification is implied as a form of capital or a resource (Nahapiet and Ghoshal, 1998). The dominant focus in situated learning

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tends to treat communities as static entities where change is mostly at the level of practice (Gherardi et al., 1998). Incremental change might be the major type experienced by communities in their everyday practice, however, communities like other informal groups in organizations, also experience major change (Salaman and Asch, 2003; Burnes, 2004). This research illustrates that social and organizational identity tension is stirred in conditions of change since organizational life is an ongoing production and negotiation of identities of communities of practice which is amplified in conditions of transformational change.

As seen from this research, as communities in both firms struggled with the need to take on new practices as a result of transformational change sparked by industry level deregulation, communities cannot always undergo slow, incremental evolution in practice but must sometimes radically transform. The concept that communities of practice experiencing major transformation contrasts Gherardi et al., (1998) who maintain that communities learn solely in incremental ways. Empirical evidence from the PowerCo case, therefore, provides support for Engeström's argument that 'transformative learning' (quoted in Guile and Young, 2001: 68), depends on a broader view over and above the here and now, quick fixes of a change.

This view of learning is founded on reflexivity as necessary to enable new possibilities. This perspective argues that concepts and ideas from outside the community of practice must be imported and reconceptualized. This orientation stems from the present research, in particular, from the PowerCo transformation process. It is also consistent with Brown and Starkey's (2000:110) argument, which draws on Hirschhorn (1997: 17, 18). The authors suggest that while difficult, identity

transformation depends on reflexive practices and instead of a protective, insular attitude, a culture that is 'open to others...in which we relate in-depth to others', as key to organizational membership and a catalytic for organizational learning. This view is also aligned with Child and Rodrigues (2003) assertion that considers psychological safety (Edmondson, 1999) as an important additional mediating factor for transformational learning in communities of practice.

Rather than privileging personal identity as an actor makes the journey to full member of a practice the pluralist approach advocated on the basis of the evidence presented in this study argues for a social production of identity. This means that social identity construction in communities is susceptible to temporal influences, power relations and influences from outside communities that make up the collection of communities in which a target community operates. The focus on the member's personal identity and the identity of the community is shown to reinforce existing practices through the 'not invented here' syndrome (Dixon, 2000) and prevent communities of practice from sharing their knowledge across communities, thus inhibiting firm-level learning. This theme is consistent with McPerson and Smith-Lovin's (1987) research, which distinguished between 'induced' ties and 'choice' ties to groups, what they term homophily. The authors classified situations where group membership was imposed through organizational group constitution and people were constrained from choosing ties with other members. Conversely, a choice in group ties defined situations where actors were free to select similar others as co-members. Chatman and Spataro (2005) found that in the situations where actors' choices were induced, people reacted by reducing their willingness to cooperate, or as shown in the GenerCo case, withhold knowledge and refrain from learning new practices. This

circumstance also serves to reinforce an 'inward communication focus' (Thompson, 2005: 151).

In opposition to the inward looking perspective of the current situated learning theory, a new approach based on this research proposes that a community's identity transformation is more easily facilitated if it adopts both a practice-based *and* an outward looking perspective. Shown from the PowerCo case, this pluralist perspective is achieved when a community is open to identity transformation by engaging with the constellation of communities, which make up an organization. This concept seems particularly relevant in conditions of uncertainty brought on by transformational change. Through proposing to reconceptualize notions of how communities experience learning in contexts of change, this contribution relates to the second aim of this study, which intended a better understanding of the interrelationships between learning and identity as potential barriers or facilitating processes of organizational change.

A final implication for the reconceptualization of learning when a community's identity and knowledge are simultaneously formed by importing concepts from outside its boundaries is that its habitus (Bourdieu, 1980) is reoriented. Habitus is best understood as a system of durable principles, which produce and systematize practices (Swartz, 1997; Gherardi et al., 1998), but operate below conscious levels and in the background of a community's action systems. Habitus thus guides and renders constancy for the newcomer as he or she absorbs the skill and experience, or identity of a community (Lave and Wenger, 1991).

However, importing concepts into a community makes the background habitus more obvious as categorization and comparison, the tenets of social identity, trigger reflexivity. Hence, as shown with the PowerCo case, this research introduces a broader interpretation of Bourdieu's concept of habitus. Because a wider scope of interaction and identification shifts habitus from background invisibility to foreground visibility, the possibility for a community to learning new practices is promoted, which is shown in this research to be part of negotiating identity in contexts of transformational change.

Emergent Theory

The final theoretical contribution is the construction of an emergent theory that sees social identity as a contextualized feature of practice, which simultaneously mediates identity formation and learning. This emergent theory proposes that: *Situated learning is bound by the context of a current social identity.* A social theory should identify and explain the association and processes within a phenomenon. As a constellation of concepts, it should describe, define and analyze that phenomenon in relation to the empirical world in a systematic way. Finally, a social theory extends our understanding of the particular social world under study (Cangelosi and Dill, 1965; Strauss and Corbin, 1998).

The present research illustrates that identity negotiation between group social identities and their organization's intended identity is a key mediating factor in how groups participate in acquiring, transferring and creating new knowledge – a process of organizational learning. Moreover, claims that conflict on its own, arising from SOI tension facilitates organizational learning, may fail to appreciate how actors and

groups vary in the construction of social identity and knowledge. Despite the presence of identity conflict, learning did occur in the PowerCo group, yet learning new practices was impeded in the same functional group with equally high identity salience in GenerCo. Accordingly, the mediating factors surrounding categorization, comparison and identification (Tajfel and Turner, 1986) within and between groups are seen as equally important consequences to learning as conflict. This study also highlights the importance of a negotiation-based change process to address degrees of SOI variation. A process of change, which enables social identity continuity, can facilitate advanced forms of learning an intended organizational identity even though tension exists between SOI.

This orientation is aligned with Swan et al. (2002), argument that radical innovations often take place at the intersection of a community's boundaries when new knowledge is integrated with embedded knowledge from among different groups. Similarly, negotiating identity in a context of change includes the need to import new concepts from outside the community's boundaries. By including the theoretical notion that situated learning is bound by the context of a current social identity into the functioning of practice-based communities implies certain practical considerations in how communities interact, make sense of their dynamic social worlds and negotiate identities that stimulate advanced modes of learning. Advanced forms of learning (for example, double-loop) are essential for transformational change (Burnes, 2000, 2004). Learning in this view is a reflexive process that facilitates a community's dynamic identity alteration as time and change evolves. This depiction of learning is consistent with Engeström's (1991, 2001) notion that the importation and reconceptualization of concepts from outside the community are necessary for the production of

transformational change. It takes into account a re-defined notion of situatedness and interaction to include a community's history, intentions and multiple, evolving identity.

This perspective represents situations as both '*in situ* proximal relations' and as a 'state of affairs' where context is central and a community learns its practices both from within and among the constellation of other communities in the social system of a firm. In this view, a community is influenced by practices within its boundaries, and also by those from outside, as it engages in practice and negotiates conditions of change. Broad patterns of action within a community's social system as well as specific episodes are taken together as the contextual framework for practice. This perspective assumes ongoing change to practice sometimes as change that necessitates transformation, rather than emphasizing the primacy of a situation as defined in its episodic particulars in a static way (Nardi, 1996).

Consequently, the emergent theory from this research addresses the study aim of understanding the interrelated nature of situated learning, identity and organizational change. It proposes to aid in explaining inherently complex aspects of social processes, and through some core themes, portray some of the underlying aspects of organizational life. This theory attempts to shed light on how social and organizational identity structures, conditions and actions arise and their effect on learning in contexts of transformational change. By making these underlying logics more visible, the emergent theory from this research hopes to offer pragmatic insights into situated learning within the context of significant change as well as everyday activity routines in practice-based communities.

Methodological Contribution

The methodological contribution of this research is twofold. First, this research makes a contribution that informs the study of complex social processes: social and organizational identity. High reliability cultures are heavily dependent upon canonical explicit knowledge since standard operating instructions and procedures are embedded in these tightly coupled cultures, thus another method to collect and interpret data became necessary for doing research in these settings. As well, with 'pure' grounded theory the researcher fragments data by coding it into increasingly smaller units. Understanding the context and the research participants' social world was deepened by taking a different course from the pure grounded theory approach of continuously reducing data into increasingly discrete chunks. This is particularly important because collections of communities of practice as groups are the units that I studied. Thus, by combining SI and a Straussian version of constant comparison informed by grounded theory, I was able to transcend on one hand, studying solely the 'individual', or on the other hand, researching only 'macro sociological process'.

The blending of SI and Straussian version of constant comparison mediates both worlds since SI cannot theoretically or methodologically divide a social person from their group. This concept reflects Bourdieu's (1988) ideas about 'field'. For Bourdieu, field shifts attention away from particular characteristics of individuals and groups. Instead, the field perspective highlights the challenges and dynamics that shape people's actions (Swartz, 1997). The present study provides an understanding of field by providing an empirical basis for it. This research emphasizes the struggle, uncertainty and discontinuity within and between collections of communities of

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practice that make up organizations. Rather than emphasizing the dichotomous relationship between agency of any single actor or community versus structural endeavors, which favour large-scale emphasis on industry-level change, the combination of SI and constant comparison affords a view of social identity, learning and change as interrelated complex social processes that transcend a single focus.

Second, the key underpinning elements of social identity theory, salience and commitment, which are intrinsic to social identity theory methods that concentrate on organizational learning, pay relatively little attention to cultural processes that *reinforce* social identity. By employing a combined SI and Straussian constant comparison method, a broader methodological scope, became possible. This enabled data gathering and the subsequent analysis of SOI and reinforcement mechanisms. Symbolic interactionism does offer a methodological framework, however, data collection from solely participant observation and interviews provide only a partial picture of the actors social worlds. This methodological contribution strengthens SOI studies of organizational learning because it enables data triangulation through multiple data collection methods (participant observation, interviews and document analysis). As a result a clearer picture of social and organizational identity 'intensity' or salience and commitment levels is made possible. This contribution is tied to the research aim of trying to better understand factors that influence organizational learning in situated contexts by proposing a way to study complex 'sub-surface' social processes.

Contribution to Management Practice

Because of the selected methods in this study, I was able to develop a comparison both across and between firms. This enabled a deeper understanding of how actors learned new practices associated with an organizational intended identity. It also provided a platform for a contribution to the practice of managing organizational learning in a context of change. This contribution is linked to the third study aim, which proposed that research of this nature might offer some practical implications to the practice of management.

In Chapter 7, I proposed a model that both intends support for managers who wish to better understand the dynamics of SOI tension and for managers interested in a way to negotiate social identity continuity between communities and their broader social environment. My study has shown *self-determination* in the form of actors having *options* and a degree of *control to negotiate* an intended organizational identity while maintaining *continuity* with a current social identity are key features in mediating organizational learning in situations of social and identity-based tension. This finding opens the current understanding of communities of practice as self-replicating social systems that are capable of only incremental changes in their practice. Instead, communities can also be seen as dynamic, evolving and capable of transformation. SOI tension itself is shown as insufficient to trigger organizational learning. Furthermore, an advanced form of organizational learning (double-loop) seems to have occurred in PowerCo, where these common features were apparent, despite the identity-based tension. In GenerCo where a top-down process of change was used, identity tension promoted uncertainty, which was perceived as a threat to social identity. This distinction introduced a different interpretation of legitimate

peripheral participation that could illuminate below surface social processes where learning new practice is necessary in situations of organizational change.

Integrated Study Contributions

Taken together the theoretical, methodological and practice contributions reflect the inherent complexity relating to knowledge and learning in situated contexts. The emergent theory explains that a community's current social identity is pertinent for community learning in a context of transformation. Social and organizational identity tension and the process of change are relevant factors in accounting for variation in levels of learning and whether new practices are adopted. A process of change, which affords the space and time to negotiate identity and achieve some degree of continuity, is shown to facilitate learning despite identity tension (model presented in Chapter 7).

However, identity tension is also implicated as a key factor that influences actors choices to withhold knowledge, which is shown to stem learning and knowledge transfer between communities. Actors may withhold knowledge or refrain from participating in learning activities when they elect to preserve their highly salient community identity, which reinforces their sense of self, instead of adopting practices associated with instituting an intended organizational identity. This circumstance holds implications for how we understand situatedness and interaction for communities of practice in contexts of change. These processes may not translate across contexts where primacy for individual performance in competitive settings is the goal, for example commissioned sales, because there, individual identity could

supercede a community's identity. In collaborative community settings, however, the community's social identity is shown as significant when new practices are deemed important for firm level adaptation or when managers elect to institute internally driven change.

Concepts such as power relations, control, destabilization and discontinuity underline these conditions. This research has attempted to present some of the essential qualities of an intricate social phenomenon that has not been sufficiently discussed or empirically supported in the knowledge and learning literature. By empirically elaborating on previous work that is concerned with social identity and learning, the contributions from this research endeavor to represent some central themes that could help to better understand aspects of how people learn in communities when they are faced with change and perceive a threat to their sense of self.

This study has shown that in this situation, learning which is an important feature of adaptive functioning and firm-level effectiveness, can indeed be impeded. It has also presented a model that is based on a successful identity transformation and change process in spite of identity-based tension. By presenting a methodology to study learning, change and identity and by building theory to explain some of the key themes at work in these situations, I hope I have captured some of the underlying social processes that might explain a key mediating process for learning and knowledge transfer between communities.

Relationship between Research Aims and Contributions

The aims of this research set out in the introductory chapter were threefold. First, I intended to contribute to organizational learning as an academic endeavor by providing an enhanced understanding of attendant effects of social identity as a key mediating factor of organizational learning in situated contexts. The contribution that informs the identity and organizational learning dichotomy is proposed to illustrate that identity based tension indeed holds the potential to impact learning and where learning may be impeded and facilitated dependent upon identity continuity through a process of negotiation. This contribution attempts to elevate the importance of identity and bring attention to its attendant effects on learning in a context of change by making it more visible and possibly better understood.

The finding where learning was impeded is used to address the second study aim. This aim focused on exploring transformational change as a contextual lens for understanding identity as a key mediating factor of learning. The contribution that discusses reconceptualizing change deals with this study aim. Change here, means not only an inward orientation but also an outward perspective can ease flows of knowledge across boundaries thus facilitating identity negotiation and transformation. Consequently, this contribution supports the notion that communities are not only self-replicating systems but can also be open to reconstitution and renewal.

The final aim proposed that a study of this nature might provide some practical utility for managers who, as change agents, have an interest in instituting new practices through learning and transferring knowledge. The contribution here draws on the case study examples to contrast change processes and develop a model

for understanding the underlying dynamics of identity negotiation and potentially as a mitigative instrument where because of identity tension, members elect to withhold knowledge. The model presented in Chapter 7 proposes practical implications of this research. It suggests organic collectivism as a process of change, and that the negotiation of continuity and alignment between identities seems to involve self-determination, having options and a degree of control on the part of members. Thus, this study aim is addressed by providing a practical way that might support managers in their attempts to put organizational learning into practice.

Finally, the emergent theory serves as an integrative construct and as a way of understanding these complex social processes by recasting existing notions of situated learning theory in the context of social identity theory. It ties together the contributions of this research and the study aims in the following way. This study has reinforced the point that indeed identity can impact learning in conditions of transformational change. In communities with equally high levels of identity salience, learning might be impeded *and* facilitated. Learning is thus shown to be subject to variance beyond an either/or dichotomy. If learning has been facilitated, this research attempts to lend some understanding as to why this takes place by expanding current conceptions of situated learning and reconceptualizing a community's boundary perspective, which holds the prospect for negotiating a transformed identity. An emergent theory is proposed as a way to make meaning of these processes.

However, if identity tension impedes learning and members elect to withhold knowledge and fail to learn new practices, this study proposes a model that might help

promote identity negotiation. The contributions of this research are aimed toward helping organizational members' sense of self-esteem while, concurrently, presenting a few options for negotiating social identity transformation. Ultimately, the intention of these contributions is to help organizations and their members understand complex social phenomena of learning and change as firms strive to succeed and people try to make sense out of the uncertainty of their dynamic organizational life.

Study Limitations

My research is limited along three lines. The first has to do with the breadth of organizational culture. Organizational culture has many aspects and dimensions and it may be considered an interdependent aspect of social and organizational identity (Hatch and Schultz, 1997). My study concentrates only on one aspect of culture (SOI) where many other facets, such as manager-group relations or the place of the culture in a firm's lifecycle could come into play, particularly within the broad context of organizational change.

Similarly, learning within communities presented as a clustered outcome emphasize contrast over a range of learning where members' learning for example the management group remained relatively static pre and post change. This notion was not developed to the same extent as the dichotomous relationship between learning levels in the different firms because as Strauss and Corbin (1998) argue, contrasting conditions provide the most promise for grounded theory building. At the same time, my project set out to research a specific element integral to organizational culture and not the wider terrain of culture itself (Martin, 2002). Second, my study proposes only

limited generalizability. Since I studied two high reliability organizations my claims cannot generalize beyond the study sites in their situations and at that point in time. My claims may or may not pertain to non-HRO industries. Further, learning in a context of change sets a boundary that limits this study. Not all firms are engaged in transformational change. Some organizations may be operating in periods of stability or experiencing incremental and not transformational change. A host of factors are also involved in organizational functioning, which may have a bearing on learning processes, for example market fluctuations, leadership capability or Board performance, which go beyond social and organizational identity in a context of change. Nonetheless, I felt it necessary to use the boundaries that I set to both constrain and free-up opportunities, in order to develop a deeper understanding of such complex phenomenon as learning and identification.

One implication of this focus and emphasis on identity, is the risk of reification where identity takes on a life of its own to explain a variety of processes, particularly when identity can be founded on stereotypical notions of other community's or groups. Evidence from this study shows that rivalry and competition were factors in how groups compared to others. Moreover, proximal relations have also been identified as a factor in situated learning when actors' in shared functional groups operating in the same organization but in different sites develop site specific practices (Sole and Edmondson, 2002). In this research, PowerCo members came together as co-located communities and elected to negotiate learning new practices. GenerCo communities, however, although only 30 metres apart, withheld knowledge and thus learning was impeded. Transferring knowledge might be problematized because of the rigidity of location boundaries. Nonetheless, the role of social identity

has been left out of Sole and Edmondson's discussion and as such, the present research lends weight to the suggestion that proximal relations on its own is an inconclusive factor in knowledge transfer and situated learning. Further, identity is shown as a significant feature as communities engage in everyday life experiences and in contexts of change. This study illustrates that identity helps to inform answers about questions of purpose for a community - who a community is and should be. Hence, although identity may only be a partial explanation for actions and interests, it is shown in this study as a social construct that can significantly shape attitudes and actions.

In summary, I elected to constrain the scope of discussion on organizational culture in this research. I made trade offs on the study's degree of generalizability and I dealt with organizational learning in a specific context. These may be seen as limitations to this research, at the same time, the boundaries I imposed also established important precincts within which, a study about such wide-ranging social processes, like social identity and learning, is achievable.

Implications for Further Research

The findings in this thesis and the contributions to theory development have produced some potential for future study of situated learning. As I have argued, situated learning theory does not solely apply in stable operating conditions or when practice members experience incremental types of change. As such, this research has attempted to more fully develop an understanding of situated learning in conditions of SOI tension and attendant implications on organizational learning in a context of

change. Finally, greater exploration of why learning remained stable in the management groups might enhance explanations of how in situations of change social identities influence stability and common understanding via enacted routines as well as ambiguity and discontinuity.

This project has provided evidence to support the argument that when community actors experience major change, situated learning is more complex and beyond what solely cognitive learning approaches, or legitimate peripheral participation might explain. The data show that in conditions of transformational change, new relationships are necessary that stretch outside normal practice routines, which suggests that other socially informed factors are active in these contexts. These new relationships spark a series of concurrent, interrelated social processes including comparison and categorization: endemic elements of situated social identity. Additional research could yield an understanding of other aspects of social and organizational identity and situated learning to provide a richer understanding along this line of enquiry. Learning in a context of strategic change that takes into account SOI and leader-follower relations is one such example.

Previous studies (Newman and Nollen, 1998; Burnes, 2000, 2004) have found that actors' discontinuity and ambiguity experiences associated with change relations generalize to other settings. This evidence supports an assertion that actors' experiences, as reported in this work, could translate to non-high reliability research settings. However, further work could provide richer deeper insights into this aspect of the phenomenon. Research in multiple HROs, non-HROs or a comparison study of HRO versus non-HRO cultures could also further advance an understanding of SOI

tension on organizational learning as an area of study. Multiple HROs as research sites can also increase the potential for increased generalizability.

This study demonstrates empirically that micro and macro social processes intersect in situations of transformational change. The trigger for change at macro levels can originate from conditions in a firm's wider business environment. Yet the adaptation process cannot unfold without commensurate changes in micro-level social processes. As was shown in the PowerCo case, learning identity transformation processes at the micro-level or at the level of practice is crucial in order for members to make sense of adaptation processes triggered at the macro-level. Other studies at this level of analysis, those which transcend the micro-macro process dichotomy, employing different research questions, or different methods might also help in the scholarly pursuit of better understanding situated learning under conditions of change.

Final Remarks

Finally, and in conclusion, I am not aware of any studies that offer insights into social processes that deal with social and organizational identity tension and the attendant implications for learning in a context of change. Transformational change implies a change in context, which means a commensurate change in identity. In this study, change is traced from its inception which was triggered by deregulation, a macro environment stimulus, through to the micro level processes that promote learning new practices in order to adapt. Rather than focusing exclusively on the change and its outcome, this research developed the notion that in situations of change it also seems important to consider social identity and its attendant impact on learning.

This study demonstrated that social identity is formed and maintained 'below the observable' surface and unless a degree of intention is applied to how it might impact community learning in times of change, it might blend into the organizational background. As background, social and organizational identity is far less obvious and its impact may go unnoticed as a factor in learning of new practices to bring about an intended change. As Brown and Duguid (2002: 139) point out, "It's not ...the information that creates that background. The background has to be in place for the information to register. The forces that shape the background are, rather, the tectonic social forces, always at work, within which and against which individuals configure their identity".

By extending existing notions of situated learning theory in the context of social identity theory, elements such as categorization, comparison and identification, contribute to a deeper understanding of the complex issues at play in workplace learning in terms of the formation, joining and transformation of identities in communities of practice. This enlarged perspective proposes that to facilitate a community's learning about transformation, active engagement in practice where knowledge becomes significant, actionable and meaningful is as important as abstract knowledge on it own. This is because learning as part of transformation largely involves interpretation on the basis of what is not explicit or explicable which is developed and framed collectively in a social context (Lave and Wenger, 1991). Hence, if knowledge is socially produced, then social processes like social identity would seem important for its transfer. In conditions of change, members' involvement in networks of practice crosses knowledge and social identity boundaries beyond the level of the community, which stimulates learning across contexts. These

complex and interrelated social processes coalesce and contribute to the formation of social identity, which, in contexts of change at the community level in situated practice, can both impede and facilitate organizational learning.

References

Abrams, D. and Hogg, M.A. (1990) An introduction to the social identity approach. In D. Abrams and M.A. Hogg (eds.), *Social Identity Theory: Constructive and critical advances.* Hertfordshire, UK: Harvester Wheatsheaf.

Addleson, M. (1996) Resolving the Spirit and Substance of Organizational Learning. *Journal of Organizational Change*, 9(1), 32-41.

Albert, S., Ashforth, B.E. and Dutton, J.E. (2000) Organizational identity and identification: Charting new waters and building new bridges. *Academy of Management Review,* 25(1), 13-17.

Albert, S. and Whetten, D. (1985) Organizational Identity. In L.L. Cummings and B.M. Staw (eds.) *Research in Organizational Behavior.* Greenwich, CT: JAI Press.

Alvesson, M. (2000) Social Identity and the Problem of Loyalty in Knowledge-intensive Companies. *Journal of Management Studies,* 32, 1101-23.

Alvesson, M. and Robertson, M. (2006) The Best and Brightest: the Construction, Significance and Effects of Elite Identities in Consulting Firms. *Organization,* 13(2), 195-224.

Alvesson, M. and Willmott, H. (2002) Identity Regulation as Organizational Control: Producing the Appropriate Individual. *Journal of Management Studies,* 39(5), 619-644.

Angrosimo, M.V. and Mays de Perez, K.A. (2000) Rethinking Observation: From method to context. In N.K. Denzin and Y.S. Lincoln *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.

Antal, A.B., Lenhardt, U., and Rosenbrock, R. (2003) Barriers to Organizational Learning. In M. Dierkes, A.B. Antal, J. Child and I. Nonaka (eds.) *Handbook of Organizational Learning and Knowledge.* New York: Oxford University Press.

Anthony, P. (1994) *Managing Culture.* Buckingham, UK: Open University Press.

Argyris, C. (1993) *Knowledge for Action: A guide to overcoming barriers to organizational change.* San Francisco: Jossey-Bass Publishers.

Argyris, C. (1999) *On Organizational Learning.* (2nd ed.). Malden, MA: Blackwell Publishing.

Argyris, C. and Schön, D.A. (1974*) Theory in Practice: Increasing professional effectiveness.* San Francisco, CA: Jossey-Bass Publishers.

Argyris, C. and Schön, D. A. (1978) *Organizational Learning: A Theory of Action Perspective.* London: Addison Wesley.

Argyris, C. and Schön, D. A. (1996) *Organizational Learning II: Theory, Method and Practice.* Reading, Massachusetts: Addison Wesley.

Asch, S. (1952) *Social Psychology.* Englewood Cliffs, NJ: Prentice-Hall.

Ashforth, B.E. and Johnson, S.A. (2001) Which hat to wear? The relative salience of multiple identities in organizational contexts. In M.A. Hogg and D.J. Terry (eds.) *Social Identity Processes in Organizational Contexts.* Philadelphia, PA: Psychology Press.

Ashforth, B.E. and Mael, F. (2004) Social Identity Theory and the Organization. In M.J. Hatch and M. Schultz (eds.) *Organizational Identity: A Reader.* Oxford: Oxford University Press.

Babbie, E. (1995) *The Practice of Social Research* (7th ed.) Belmont, California: Wadsworth Publishing Company.

Bandura, A. (1977) *Social Learning Theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. and Walters, R.H. (1963) Social Learning and Personality Development. New York: Holt, Rinehart and Winston.

Barab, S.A., Hay, K. and Duffy, T. (1998) Grounded Constructions and How Technology Can Help. *Technology Trends*, 43(2), 15-23.

Barab, S.A. and Duffy, T. (2000) *From Practice Fields to Communities of Practice.* In Center for Research on Learning and Technology Report (1-98), D. Jonassen and S. Land (eds.) Bloomington, IN: Indiana University.

Barlow, N.M. (2001) *Batteries Included!: Creating Legendary Customer Service.* London, UK: Random House.

Barney, J.B. (1991) Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.

Becker, H.S. (1955) Schools and Systems of Stratification. In A.H. Halsey, J. Flound and C.A. Anderson (eds.). *Education, Economy and Society: A Reader in the Sociology of Education.* New York: New York Free Press.

Becker, H.S. (1986). *Writing for social scientists: How to start and finish your thesis, book, or article.* Chicago: University of Chicago Press.

Belling, R., James, K., and Ladkin, D. (2004) Back to the Workplace: How Organisations Can Improve Their Support for Management Learning and Development. *The Journal of Management Development*, 23(3/4), 234-255.

Berger, P.L. and Luckmann, T. (1966) *The Social Construction of Reality: A treatise in the sociology of knowledge.* New York: Anchor Books.

Berkely-Thomas, A. (2003) *Controversies in Management: Issues, Debates, Answers.* London: Routledge.

Berzonsky, M.D. (1988) Self-theorists, identity status, and social cognition. In D.K. Lapsley and F. Clark Power (eds.), *Self, Ego and Identity: Integrative approaches.* New York: Springer-Verlag.

Bierly, P.E., and Spender, J-C. (1995) Culture and high reliability organizations: The case of the nuclear submarine. *Journal of Management*, 21(4), 639-657.

Birkinshaw, J. and Gibson, C. (2004) Building an Ambidextrous Organisation. Advanced Institute of Management Research Working Paper Series, WP No. 003-June.

Blackler, F. (1993) Knowledge and the Theory of Organizations: Organizations as Activity Systems and the Reframing of Management. *Journal of Management Studies,* 30(6), 863-84.

Blasi, A. (1988) To be or not to be: Self and authenticity, identity and ambivalence. In D.K. Lapsley and F. Clark Power (eds.), *Self, Ego and Identity: Integrative approaches.* New York: Springer-Verlag.

Blumer, H. (1966) Sociological implications of the thought of George Herbert Mead. *American Journal of Sociology*, 71, 535-48.

Blumer, H. (1969) *Symbolic Interactionism: Perspective and method.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Blumer, H. (1971) Social problems as collective behavior. *Social Problems,* 18, 298-306.

Boddy, D. (2002) *Management: An introduction.* (2nd ed.). Harlow, England: Pearson Education Limited.

Bond, G.C. (1990) Fieldnotes: Research in Past Occurrences. In R. Sanjek (ed.) *Fieldnotes: The Makings of Anthropology.* Ithaca, NY: Cornell University Press.

Bontis, N. (1997) Intellectual capital: An exploratory study that develops measures and models. *Management Decisions,* 36(2), 34-47.

Bourdieu, P. (1977) Symbolic Power. *In Identity and Structure.* D. Gleeson (ed.) Driffield: Nafferton Books.

Bourdieu, P. (1980) *Le Sens.* Paris: Le Minuit.

Bourdieu, P. (1986) The Forms of Capital. In J.G. Richardson (ed.) *Handbook of Theory and Research for the Sociology of Education.* New York: Greenwood.

Bourdieu, P. (1988) *Homo Academicus.* Stanford: Stanford University Press.

Bourdieu, P. (1990) *The Logic of Practice*. Stanford: Stanford University Press.

Bourrier, M. (1996) Organizing Maintenance Work At Two American Nuclear Power Plants. *Journal of Contingencies and Crisis Management,* 4(2), 104-112.

Brewer, J.D. (2004) Ethnography. In C. Cassell and G. Symon (eds.) *Essential Guide to Qualitative Methods in Organizational Research.* London: Sage Publications Ltd.

Brown, A.D. and Starkey, K. (2000) Organizational identity and learning: A psychodynamic perspective. *Academy of Management Review,* 25(1), 102-120.

Brown, J.S., Collins, A. and Duguid, P. (1989) Situated Cognition and the Culture of Learning. *Educational Researcher,* 18, 32-42.

Brown, J.S. and Duguid, P. (1991) Organizational Learning and Communities-of-Practice: Toward a Unified View of Working, Learning and Innovation. *Organization Science,* 2(1), 40-57.

Brown, J.S. and Duguid, P. (1998) Organization Knowledge. *California Management Review,* 40(3), 90-111.

Brown, J.S. and Duguid, P. (2002) *The Social Life of Information.* Boston, Massachusetts: Harvard Business School Press.

Bryman, A. and Bell, E. (2003) *Business Research Methods.* Oxford: Oxford University Press.

Burke, P.J. (1980) The Self: Measurement requirements from an interactionist perspective. *Social Psychological Quarterly,* 43(1), 18-29.

Burnes, B. (2004) *Managing Change: A Strategic Approach to Organisational Dynamics* (4th ed.) Harlow, England: Pearson Education Limited.

Burnes, B. (2000) *Managing Change: A Strategic Approach to Organisational Dynamics* (3rd ed.) Harlow, England: Pearson Education Limited.

Campbell, D.T. (1990) Asch's moral epistemology for socially shared knowledge. In I. Rock (ed.) *The Legacy of Solomon Asch: Essays in Cognition and Social Psychology.* Hillsdale, NJ: Erlbaum.

Cangelosi, V. E. and Dill, W. R. (1965) Organizational learning: Observations toward a theory. *Administrative Science Quarterly,* 10(2), 175-203.

Carroll, J.S., Rudolph, J.W. and Hatakenaka, S. (2003) Learning from organizational experience. In M. Easterby-Smith and M.A. Lyles (eds.) *The Blackwell Handbook of Organizational Learning and Knowledge Management.* Malden, MA: Blackwell Publishing Ltd.

Castanias, R.P. and Helfat, C.E. (1991) Managerial Resources and Rents. *Journal of Management*, 17, 115-117.

Charmaz, K. (2000) Grounded Theory: Objectivist and Constructivist Methods. In N.K. Denzin and Y.S. Lincoln *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.

Charon, J.M. (2001) *Symbolic Interactionism: an introduction, an interpretation, an integration.* (7th ed.). Upper Saddle River, NJ: Prentice-Hall.

Chatman, J.A. and Spataro, S.E. (2005) Using Self-Categorization Theory to Understand Relational Demography-Based Variations in People's Responsiveness to Organizational Culture. *Academy of Management Journal*, 48(2), 321-331.

Cherrington, D.J. (1994) *Organizational Behavior: The management of individual and organizational performance.* (2nd ed.) Boston: Allyn and Bacon.

Child, J. (1972) Organization structure, environment and performance: The role of strategic choice. *Sociology*, 6, 1-22.

Child, J. and Heavens, S.J. (2003) The Social Constitution of Organizations and its Implications for Organizational Learning. In M. Dierkes, A.B. Antal, J. Child and I. Nonaka (eds.) *Handbook of Organizational Learning and Knowledge.* New York: Oxford University Press.

Child, J. and Rodrigues, S. (1996) The Role of Social Identity in the International Transfer of Knowledge through Joint Ventures. In S.R. Clegg and G. Palmer (eds.) *The Politics of Management Knowledge.* London: Sage.

Child, J. and Rodrigues, S. (2003) Social identity and organizational learning. In M. Easterby-Smith and M.A. Lyles (eds.) *Handbook of Organizational Learning and Knowledge Management.* Malden, MA: Blackwell Publishing Ltd.

Collinson, D.L. (2003) Identities and Insecurities: Selves at Work. *Organization*, 10(3), 527-547.

Contu, A. and Willmott, H. (2000) Comment on Wenger and Yanow. Knowing in Practice: A Delicate Flower in the Organizational Learning Field. *Organization*, 7(2), 269-276.

Cook, S.D. and Brown, J.S. (1999) Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. *Organization Science,* 10, 381-400.

Cook, S.D.N. and Yanow, D. (1993) Culture and organizational learning. *Journal of Management Inquiry*, 2(4), 373-390.

Coopey, J. (1994) Power Politics and Ideology. In J. Burgoyne, M. Pedler and T. Boydell (eds.), *Toward the Learning Company: Concepts and Practices.* London: McGraw-Hill.

Coopey, J. (1995) The Learning Organization: Power Politics and Ideology. *Management Learning,* 26(2), 193-214.

Coopey, J. and Burgoyne, J. (2000) Politics and Organizational Learning. *Journal of Management Studies,* 37(6), 869-885.

Corley, K.G. and Gioia, D.A. (2003) Semantic learning as change enabler: Relating organizational identity and organizational learning. In M. Easterby-Smith and M.A. Lyles (eds.) *Handbook of Organizational Learning and Knowledge Management.* Malden, MA: Blackwell Publishing Ltd.

Creswell, J.W., (1998) *Qualitative Inquiry and Research Design: Choosing among Five Traditions.* Thousand Oaks, CA: Sage Publications.

Crossan, M.M., Lane, H.W., and White, R.E. (1999) An organizational learning framework: from intuition to institution. *Academy of Management Review,* 24(3), 522-537.

Cyert, R. M. and March, J. G. (1963) *A Behavioral Theory of the Firm.* Englewood Cliffs, NJ: Prentice-Hall.

Daft, R.L., and Weick, K.E. (1984) Toward a Model of Organizations as Interpretation Systems. *Academy of Management Review,* 9, 284-95.

Daft, R.L. (1999) *Leadership: Theory and Practice.* Orlando, FL: Harcourt Inc.

Davenport, T.H. and Prusak, L. (1998) *Working Knowledge: How organizations manage what they know.* Boston, MA: Harvard Business School Press.

Davis, L.B. (Senior ed.); Jones, F.D., Sparacino, LR., Wilcox, V.L., Rothberg, J.M. and Stokes, J.W. (eds.) *War Psychiatry* (1995) Falls Church, Virginia, MD: Office of The Surgeon General, United States Army.

Dawson, P. (2003) *Understanding Organizational Change: The contemporary experience of people at work.* London: Sage Publications Ltd.

Deal, T.E. and Kennedy, A.A. (1999) *The New Corporate Cultures.* Cambridge, Massachusetts: Perseus Publishing.

Dennis, A. and Martin, P.J. (2005) Symbolic Interactionism and the Concept of Power. *British Journal of Sociology,* 56, (2), 191-213.

Denzin, N.K. (1992) *Symbolic Interactionism and Cultural Studies: The Politics of Interpretation.* Cambridge, Massachusetts: Blackwell Publishers.

Denzin, N.K. (2001) *Interpretive Interactionism* (2nd ed.). Thousand Oaks, CA: Sage Publications Ltd.

Denzin, N.K. and Lincoln, Y.S. (2000) *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.

Dewey, J. (1933) *How We Think: A restatement of the relation of reflective thinking in the educative process.* Boston, Massachusetts: D.C. Heath and Company.

Dewey, J. and Bentley, A.F. (1949) *Knowing and the Known.* Boston, MA: Beacon Press.

Dierkes, M., Antal, A.B., Child, J. and Nonaka, I. (eds.) (2003) *Handbook of Organizational Learning and Knowledge.* New York: Oxford University Press.

DiMaggio, P.J. (1995) Comments on "What theory is not." Administrative Science Quarterly, 40, 391-397.

DiMaggio, P.J., and Powell, W.W. (1983) The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147-160.

Dixon, N.M. (1999) *The Organizational Learning Cycle: How we can learn collectively* (2nd ed.) Hampshire, England: Gower Publishing Limited.

Dixon, N.M. (2000) *Common Knowledge: How companies thrive by sharing what they know.* Boston, Massachusetts: Harvard Business School Press.

Dodgson, M. (1993) Organizational Learning: A Review of Some Literatures. *Organization Studies*, 14(3), 375-394.

Dougherty, D., Barnard, H., and Dunne, D. (2004) *Exploring the Everyday Dynamics of Dynamic Capabilities.* Presented at the 3rd Annual MIT/UCI Knowledge and Organizations Conference, Laguna Beach: CA. Mar. 5-7, 2004.

Dreyfus, H.L. (2003) Being and Power Revisited. In A. Milchman and A. Rosenberg (eds.). *Foucault and Heidegger: Critical Encounters.* Minneapolis, MA: University of Minnesota Press.

Driver, M. (2002) Learning and leadership in organizations: Toward complementary communities of practice. *Management Learning*, 33(1), 99-126.

Dubini, P. and Aldrich, H. (1991) Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing*, 6, 305-13.

Du Gay, P. (1996) *Consumption and Identity at Work.* London: Sage Publications Ltd.

Dutta, D.K. and Crossan, M.M. (2003) *Understanding Change: What Can We "Learn" From Organizational Learning.* (Unpublished Paper) Organizational Learning and Knowledge, 5th International Conference, Lancaster University.

Dutton, J.E. and Dukerich, J.M. (1991) Keeping and Eye on the Mirror: Image and Identity in Organizational Adaptation. *Academy of Management Journal*, 34(3), 517-554.

Dutton, J.E., Dukerich, J.M. and Harquail, C.V. (1994) Organizational Images and Member Identification. *Administrative Science Quarterly*, 39, 239-263.

Easterby-Smith, M. and Lyles, M.A. (eds.) (2003) *Handbook of Organizational Learning and Knowledge Management*. Malden, MA: Blackwell Publishing Ltd.

Easterby-Smith, M., Snell, R., and Gherardi, S. (1998) Organizational Learning Divergent Communities of Practice. *Management Learning*, 29(3), 259-272.

Easterby-Smith, M., Thorpe, R. and Lowe, A. (1991) *Management Research: An introduction*. London: Sage Publications Ltd.

Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002) *Management Research: An introduction*. (2nd ed.) London: Sage Publications Ltd.

Edmondson, A.C. (1999) Psychological safety and learning behavior in work teams. *Administrative Science Quarterly,* 44, 350-83.

Edmondson, A.C. (2002) The local and variegated nature of learning organizations: A group-level perspective. *Organization Science,* Linthicum: Mar/Apr 2002, 13(2), 128-148.

Eisenhardt, K.M. and Martin, J. A. (2000) Dynamic Capabilities: What are they? *Strategic Management Journal,* 21(10-11), 1105-1121.

Elkjaer, B. (1999) In Search of a Social Learning Theory. In M. Easterby-Smith, J. Burgoyne and L. Araujo (eds.) *Organizational Learning and the Learning Organization: Developments in theory and practice.* London: Sage Publications.

Elkjaer, B. (2003) Social learning theory: Learning as participation in social processes. In M. Easterby-Smith and M.A. Lyles (eds.) *Handbook of Organizational Learning and Knowledge Management.* Malden, MA: Blackwell Publishing.

Elkjaer, B. (2004) Organizational Learning: The Third Way. *Management Learning,* 35(4), 419-434.

Ellemers, N., de Gilder, D. and van den Heuvel, H. (1998) Career-oriented Versus Team-Oriented Commitment and Behavior at Work. *Journal of Applied Psychology*, 83, 717-730.

Ellemers, N., de Gilder, D. and Haslam, S.A. (2004) Motivating Individuals and Groups at Work: A Social Identity Perspective on Leadership and Group Performance. *Academy of Management Review*, 29(3), 459-478.

Ellemers, N. (2003) Identity, Culture and Change in Organizations: A Social Identity Analysis and Three Illustrative Cases. In S.A. Haslam et al., (eds.) *Social Identity at Work: Developing Theory for Organizational Practice.* New York: Taylor and Francis.

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Ellemers, N. and Rink, F. (2005) Identity in Work Groups. In S.R. Thye, E.J. Lawler (eds.) *Social Identification in Groups*. Amsterdam: Elsevier.

Engeström, Y. (1991) Towards Overcoming the Encapsulation of School Learning. *Learning and Instruction*, 1, 243-261.

Engeström, Y. (2001) Expansive Learning at Work: Toward an Activity Theoretical Reconceptualization. *Journal of Education and Work*, 14(1), 133-56.

Ervin, L.H. and Stryker, S. (2001) Theorizing the relationship between self-esteem and identity. In T.J. Owens, S. Stryker and N. Goodman (eds.) *Extending Self-Esteem Theory and Research: Sociological and psychological currents*. Cambridge: Cambridge University Press.

Eysenck, H. (1947). *Dimensions of personality*. London: Routledge and Kegan Paul.

Fenwick, T. (1996) *Women as continuous learners in the workplace*. Unpublished doctoral dissertation, University of Alberta, Edmonton, Alberta, Canada.

Fenwick, T. (2001) Questioning the Concept of the Learning Organization. In C. Paechter, M. Preedy, D. Scott and J. Soler, (eds.) *Knowledge, Power and Learning*. London: Paul Chapman Publishing Ltd.

Fiol, C.M. (1991) Managing Culture as a Competitive Resource: An Identity-based View of Sustainable Competitive Advantage. *Journal of Management*, 17(1), 191-211.

Fiol, C.M. (2001) Revisiting an Identity-based View of Sustainable Competitive Advantage. *Journal of Management*, 27, 691-699.

Fiol, C.M. (2002) Capitalizing on Paradox: The Role of Language in Transforming Organizational Identities. *Organization Science*, 13, 653-66.

Fiol, C. M. and Lyles, M. A. (1985) Organizational learning. *Academy of Management Review*, 10, 803-813.

Fischoff, B. and Beyth, R. (1975) "I knew it would happen": Remembered probabilities on once future things. *Organizational Behavior and Human Performance*, 13, 1-16.

Finch, J. (2004) Rose's M&S riposte impresses City. In *The Guardian*. July 13, 2004. London, UK: Guardian Newspapers Limited, 2004. And Marks and Spencer (2004) *First Marks and Spencer Lifestore Unveiled in Gateshead, Tyne & Wear: Concept designed to revolutionise the home retail market*. News Release 25 February, 2004. Available at: http://www.marksandspencer.com.

Flynn, F.J. (2005) Identity Orientations and Forms of Social Exchange in Organizations. *Academy of Management Review*, 30(4), 737-750.

Follett, M.P. (1920) *The New State: Group Organization, The Solution of Popular Government*. London: Longmans Green.

Fontana, A. and Frey, J.H. (2000) The Interview: From structured questions to negotiated text. In N.K. Denzin and Y.S. Lincoln *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.

Forgas, J.P. (1979) *Social Episodes: The Study of Interaction Routines*. London: Academic Press Inc.

Foucault, M. (1980) *Power/Knowledge: Selected interviews and other writings 1972-1977*. C. Gordon (ed.) New York: Pantheon Books.

Friedlander, F. (1983) Patterns of Individual and Organizational Learning. In Srivastva, Suresh and Associates, *The Executive Mind: New Insights on Managerial Though and Action*. San Francisco: Jossey-Bass Inc.

Fulmer, M.R. and Perret, S. (1993) The Merlin exercise: Future by forecast or future by invention. *Journal of Management Development*, Vol. 12, (6) 44-52.

Gagliardi, P. (1986) The creation and changes of organizational cultures: A conceptual framework. *Organization Studies,* 7(2), 117-134.

Garvin, D.A. (1993) Building a Learning Organization. *Harvard Business Review,* 71(4), 78-91.

Gates, B. (1995) *The Road Ahead.* New York: Viking.

Gergen, K.J. (1978) Toward Generative Theory. *Journal of Personality and Social Psychology*, 36, 1344-1360.

Ghefaili, A. (2003) Cognitive Apprenticeship, Technology, and the Contextualization of Learning Environments. *Journal of Educational Computing, Design and Online Learning*, 4, 1-27.

Gherardi, S., Nicolini, D. and Odella, F. (1998) Toward a Social Understanding of How People Learn in Organizations: The Notion of Situated Curriculum. *Management Learning.* 29(3), 273-297.

Gherardi, S. and Nicolini, D. (2000) To transfer is to transform: The circulation of safety knowledge. *Organization,* 7(2), 329-348.

Gherardi, S. and Nicolini, D. (2001) Learning in a constellation of interconnected practices: Canon or dissonance? *Journal of Management Studies,* 39, 419-37.

Gherardi, S. and Nicolini, D. (2003) The Sociological Foundations of Organizational Learning. In M. Dierkes, A.B. Antal, J. Child and I. Nonaka (eds.) *Handbook of Organizational Learning and Knowledge.* New York: Oxford University Press, 50.

Gherardi, S. (2006) *Organizational Knowledge The Texture of Workplace Learning.* Malden, MA: Blackwell Publishing.

Giddens, A. (1979) *Central Problems in Social Theory.* London: Macmillan.

Giddens, A. (1987) Structuralism, Post-Structuralism and the Production of Culture. In A. Giddens and J.H. Turner (eds.) *Social Theory Today.* Cambridge: Polity.

Giddens, A. (1991) *Modernity and Self-Identity: Self and society in the late modern age.* Cambridge: Polity Press.

Giddens, A. (1997) *Sociology* (3rd ed.) Cambridge: Polity Press.

Gioia, D.A. and Chittipeddi, K. (1991) Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal,* 12(6), 443-58.

Gioia , D.A. and Thomas, J.B. (1996) Identity, Image and Issue Interpretation: Sensemaking during Strategic Change in Academia. *Administrative Science Quarterly,* 41, 370-403.

Glaser, B.G. and Strauss, A.L. (1967) *The Discovery of Grounded Theory: Strategies for qualitative research.* New York: Aldine De Gruyter.

Glaser, G.G. (1992) *Basics of grounded theory analysis: emergence vs. forcing.* Mill Valley, California: Sociology Press.

Gleitman, H. (1987) *Basic Psychology* (2nd ed.) New York: W.W. Norton & Company.

Goffman, E. (1959) *The Presentation of Self in Everyday Life.* New York: Anchor Books-Doubleday.

Goffman, E. (1963) *Behavior in Public Places: Notes on the Social Organization of Gatherings.* New York: The Free Press.

Goffman, E. (1967) *Interaction Ritual: Essays on Face-to-Face Behavior.* New York: Pantheon Books.

Goffman, E. (1983) The Interaction Order. *American Sociological Review,* 48, 1-17.

Goulding, C. (2002) *Grounded Theory: A practical guide for management, business and market researchers.* London: Sage Publications Ltd.

Graham P. (1995) *Mary Parker Follett: Prophet of management.* Boston, Massachusetts: Harvard Business School Press.

Granovetter, M. (1985) Economic Action and social structure: The problem of embeddedness. *American Journal of Sociology,* 91(3), 481-510.

Greeno, J.G. and Moore, J.L. (1993) Situativity and Symbols: Response to Vera and Simon. *Cognitive Science*, 17, 49-61.

Guile, D. and Young, M. (2001) Apprenticeship as a Conceptual Basis for a Social Theory of Learning. In C. Paechter, M. Preedy, D. Scott and J. Soler, (eds.) *Knowledge, Power and Learning.* London: Paul Chapman Publishing Ltd.

Gupta, A.K., Smith, K.G., Shalley, C.E. (2004) Special research forum call for papers: Managing exploration and exploitation. *Academy of Management Journal*, 47(1), 158-159.

Hammersley, M. (1992) By What Criteria Should Ethnographic Research be Judged? In. M. Hammersley (ed.) *What's Wrong With Ethnography.* London: Routledge.

Hammersley, M. and Atkinson, P. (1983) *Ethnography Principles in Practice.* London: Routledge.

Hanks, W.F. (1991) Foreward by William F. Hanks. In *Situated Learning: Legitimate Peripheral Participation*, J. Lave and E. Wenger, Cambridge: Cambridge University Press.

Hannigan, T. (2002a) *Management: Concepts and Practices.* (3rd ed.) Essex, UK: Pearson Education Ltd.

Hannigan, T. (2002b) *Mastering Strategic Management.* Bassingstoke, Hampshire: Palgrave.

Haralambos, M. (1980) *Sociology: Themes and Perspectives.* Slough: University Tutorial Press.

Haslam, S.A. and Parkinson, B. (2005) Pulling together or pulling apart: Towards organic pluralism in social psychology. *The Psychologist*, 18(9), 550-552.

Hatch, M.J. and Schultz, M. (1997) Relations between organizational culture, identity and image. *European Journal of Marketing,* 31(5/6), 356-365.

Hatch, M.J. and Schultz, M. (eds.) (2004) *Organizational Identity: A Reader.* Oxford: Oxford University Press.

Hedberg, B. (1981) How Organizations Learn and Unlearn. In P.C. Nystrom and W.H. Starbuck (eds.) *Handbook of Organizational Design.* London: Cambridge University Press.

Helleloid, D. and Simonin, B. (1992) *Organizational Learning and a Firm's Core Competence.* Working Paper. Seattle, WA: University of Washington. Presented at the Strategic Management Conference, Belgium, 1992.

Helm, D. (2003) *Energy, the State, and the Market: British energy policy since 1979.* New York: Oxford University Press.

Herasymowych, M and Senko, H. (2000) *Creating Whole-Thinking and Whole-Learning Experiences.* University of Calgary, Calgary, Alberta, Canada: MHA Institute Inc.

Henriksson, K. (1999) *The Collective Dynamics of Organizational Learning.* Lund Studies in Economics and Management 49. Lund, Sweden: Institute of Economic Research, Lund University.

Hirschhorn, L. (1997) Reworking Authority. Cambridge, MA: MIT Press.

Hogg, M.A. (2004) Uncertainty and extremism: Identification with high entitativity group under conditions of uncertainty. In V. Yzerbyt, C.M. Judd and O. Corneille (eds.) *The Psychology of Group Perception: Perceived Variability, Entitativity and Essentialism.* New York: Psychology Press.

Hogg, M.A. (2005) Uncertainty, Social Identity and Ideology. In S.R. Thye, E.J. Lawler (eds.) *Social Identification in Groups.* Amsterdam: Elsevier.

Hogg, M.A. and Abrams, D. (1990) Social motivation, self-esteem and social identity. In D. Abrams and M.A. Hogg (eds.) *Social Identity Theory: Constructive and critical advances.* Hertfordshire, UK: Harvester Wheatsheaf.

Hogg, M.A. and Abrams, D. (1999) Social identity and Social Cognition: Historical backgrounds and current trends. In D. Abrams and M.A. Hogg (eds.) *Social Identity and Social Cognition.* Malden, Massachusetts: Blackwell Publishers Inc.

Hogg, M.A. and McGarty, C. (1990) Self-categorization and social identity. In D. Abrams and M.A. Hogg (eds.). *Social Identity Theory.* Hemel Hempstead, England: Harvester Wheatsheaf.

Hogg, M.A. and Terry, D.J. (2000) Social Identity and Self-Categorization Processes in Organizational Contexts. *Academy of Management Review*, 25, 121-140.

Howard, J.A. (2000) Social Psychology of Identities. *Annual Review of Sociology*, 26, 367-393.

Janis, J.L. (1972) 'Victims of Groupthink'. Houghton Mifflin and Janis, J.L. (1982) 'Groupthink' (2nd ed.) Houghton Mifflin. In L.J. Mullins (2002) *Management and Organisational Behaviour.* (6th ed.) Essex, UK: Pearson Education Ltd.

Jeon, Y.H. (2004) The Application of Grounded Theory and Symbolic Interactionism. *Scandinavian Journal of Caring Science*, 18, 249-256.

Jetten, J., O'Brien, A. and Trindall, N. (2002) Changing Identity: Predicting Adjustment to Organizational Restructure as a Function of Subgroup and Superordinate Identification. *British Journal of Social Psychology*, 41, 281-297.

Johannisson, B. (2000) Networking and entrepreneurial growth. In D.L. Sexton and H. Landström (eds.) *The Blackwell Handbook of Entrepreneurship.* Exford: Basil Blackwell.

Jones, D.R. (1980) What the repatriated prisoners of war wrote about themselves. *Aviation Space and Environmental Medicine,* 51, 615–617.

Kando, T.M. (1977) *Social Interaction.* St. Louis, MO: The C.V. Mosby Co.

Kanter, R.M., Stein, B.A. and Jick, T.D. (1992) *The Challenge of Organizational Change.* New York: Free Press.

Kelley, H.H. (1952) Two Functions of Reference Groups. In *Readings in Social Psychology.* G.E. Swanson (ed.) New York: Holt.

Kimberly, J.R. (1987) The Study of Organization: Toward a Biographical Perspective. In J.W. Lorsch (ed.) *Handbook of Organizational Behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Kipnis, S. and Huffstutler, C. (1990) Productivity Trends in the Photographic Equipment and Supplies Industry. *Monthly Labor Review.* Bureau of Labor Statistics: US Government, June, 1990.

Knights, D. and Willmott, H. (1985) Power and Identity in Theory and Practice. *Sociological Review,* 33(1), 22-46.

Kogut, B. and Zander, U. (1996) What Firms Do? Coordination, Identity and Learning. *Organization Science,* 7, 502-518.

Kotter, J.P. (1996) *Leading Change.* Boston, Massachusetts: Harvard University Press.

Kotter, J.P. and Heskett, J. (1992) *Corporate Culture and Performance.* New York: Free Press.

Kuhn, M.H. (1964) Major Trends in Symbolic Interaction Theory in the Past Twenty-five Years. Sociological Quarterly. 5, 61-84. Reprinted in J.G. Manis and B.N. Meltzer (eds.) (1972) *Symbolic Interaction: A Reader in Social Psychology* (1st ed.) Boston: Allyn and Bacon.

Kunda, G. (1992) *Engineering Culture: control and commitment in a high-tech corporation.* Philadelphia: Temple University Press.

Kwaczek, A.S. and MacRae, K.M. (1996) *Charting New Frontiers: Electric power reform.* Calgary: Canadian Energy Research Institute.

Lant, T.K. and Mezias, S.J. (1992) An Organizational Learning Model of Convergence and Reorientation. *Organization Science,* 3(1), 47-71.

Lantis, M. (1987) Two important roles in organizations and communities. *Human Organization,* 46(3), 189-99.

Lanzara, G.F. (1983) Ephemeral organizations in extreme environments: Emergence, strategy, extinction. *Journal of Management Studies,* January (20), 71-95.

La Porte, T.R. (1996), 'High Reliability Organizations: Unlikely, Demanding, and at Risk', *Journal of Contingencies and Crisis Management*, 4 (2), 60-71.

La Porte, T.R., and Consolini, P.M. (1991) Working in practice but not in theory: Theoretical challenges of "High-Reliability Organizations". *Journal of Public Administration Research and Theory*, 1(1), 19-47.

Lave, J. (1993) The Practice of Learning. In S. Chaiklin and J. Lave (eds.) *Understanding Perspectives on Activity and Context.* Cambridge: Cambridge University Press.

Lave, J. (1997) The Culture of Acquisition and the Practice of Understanding. In D. Kirshner and J.A. Whitson (eds.) *Situated Cognition: Social, Semiotic and Psychological Perspectives.* Mahwah, NJ: Erlbaum.

Lave, J. (1998) *Cognition in Practice.* Cambridge: Cambridge University Press.

Lave, J. and Wenger, E. (1991) *Situated learning: Legitimate peripheral participation.* Cambridge: Cambridge University Press.

Law, J. and Lodge, P. (1984) *Science for Social Scientists.* London: Macmillan Press.

Levine, J.M., Resnick, L.B. and Higgins, E.T. (1993) Social Foundations of Cognition. *Annual Review of Psychology*, 44, 585-612.

Levitt, B. and March, J. (1988) Organizational learning. *Annual Review of Sociology*, 14, 319-340.

Locke, K. (2001) *Grounded Theory in Management Research.* London: Sage Publications.

Lofland, J. (1970) Interactionist Imagery and Analytic Interruptus. In T. Shibutani (ed.) (1961) *Society and Personality.* Englewood Cliffs, NJ: Prentice-Hall.

Lovaglia, M.J., Youngreen, R. and Robinson, D.T. (2005) Identity maintenance, affect control, and cognitive performance. In S.R. Thyne, E.J. Lawler (eds.) *Social Identification in Groups.* Amsterdam: Elsevier Ltd.

Lowenberg, J.S. (1993) Interpretive Research Methodology: Broadening the Dialogue. *Advances in Nursing Science*, 16, 57-69.

MacKeracher, D. and McFarland, J. (1993-94) Learning Working Knowledge: Implications for Training. *Women's Education Des Femmes*, 10(3/4), 54-58.

Maines, D.R. (1991) Reflection, Framing and Appreciations. In D.R. Maines (ed.) *Social Organizations and Social Process.* New York: Aldine de Gruyter.

March, J.G. (1991) Exploration and Exploitation in Organizational Learning. *Organization Science*, 2(1), 71-87.

March, J.G. and Simon, H.A. (1993) *Organizations* (2nd ed.). Oxford, UK: Blackwell Business.

Martin, J. (1992) *Cultures In Organizations: Three Perspectives.* New York: Oxford University Press.

Martin, J. (2002) *Organizational Culture: Mapping the terrain.* Thousand Oaks, CA: Sage Publications Inc.

Mason, R.M. (1993); Strategic information systems: use of information technology in a learning organization, *Proceedings of the 26th Hawaii International Conference on System Sciences,* 1993, Vol. 4, p840-849.

Mason, J. (1996). *Qualitative Researching.* London: Sage.

McPerson, J.M. and Smith-Lovin, L. (1987) Homophily in Voluntary Organizations: Status Distance and the Composition of Face-to-Face Groups. *American Sociological Review,* 52, 370-379.

Mead, G.H. (1934) *Mind, Self and Society: from the standpoint of a social behaviorist.* C. W. Morris (ed.). Chicago: University of Chicago Press.

Meyer, A.D., Brooks, G. R., and Goes, J.B. (1990) Environmental jolts and industry revolutions: Organizational responses to discontinuous change. *Strategic Management Journal,* 11, 93-110.

Miles, M.B. and Huberman, A.M. (1994) *Qualitative Data Analysis: An Expanded Sourcebook.* London: Sage.

Mills, S. (2003) *Michel Foucault.* London: Routledge.

Moingeon, B. and Ramanantsoa, B. (1997) Understanding Corporate Identity: The French School of Thought. *European Journal of Marketing,* 31(5/6), 383-395.

Morgan, G. (1998) *Images of Organization: The executive edition.* Co-published by: San Francisco, CA: Berrett-Koehler Publishers Inc. and Thousand Oaks, CA: Sage Publications Inc.

Morgan, G. and Smircich, L. (1980) The case for qualitative research. *Journal of Management Review,* 5(4), 491-500.

Moss-Kanter, R. (2003) *On the Frontiers of Management.* Boston, Massachusetts: Harvard Business School Publishing.

Mullins, L.J. (2002) *Management and Organisational Behaviour* (6th ed.) Harlow, Essex: Pearson Education Limited.

Nahapiet, J. and Ghoshal, S. (1998) Social capital, intellectual capital and the organizational advantage. *Academy of Management Review,* 23(2), 242-267.

Nardi, B. (1996) Studying context: A comparison of activity theory, situated action models, and distributed cognition. *Context and consciousness: activity theory and human-computer interaction.* B. Nardi. (ed.) Cambridge, MA: The MIT Press.

Neitz, M.J. (1990) Studying Religion in the Eighties. In *Symbolic Interaction and Cultural Studies*, H.S. Becker and M.M. McCall (eds.) Chicago: The University of Chicago Press.

Nelson, R.R. and Winter, S.G. (1982) *An Evolutionary Theory of Economic Change.* Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Nevis, E.C., DiBella, A.J. and Gould, J.M. (1995) Understanding Organizations as Learning Systems. *Sloan Management Review*, 36, 73-85.

Newbery, D.M. and Pollitt, M.G. (1997) *Public Policy for the Private Sector: The Restructuring and Privatization of the U.K. Electricity Supply – Was It Worth It?* Note No. 124 (September). The World Bank Group. Finance, Private Sector, and Infrastructure Network.

Newell, S., Tansley, C. and Huang, J. (2004) Social capital and knowledge integration in an ERP project team: The importance of bridging AND bonding. *British Journal of Management*, 15, Special Edition, S43-S57.

Newman, K.L. and Nollen, S.D. (1998) *Managing Radical Organizational Change.* Thousand Oaks, California: Sage Publications.

Nicolini, D., Gherardi, S., and Yanow, D. (2003) *Knowing in Organizations: A Practice-Based Approach.* Armonk, NY: M.E. Sharpe Inc.

Nonaka, I., and Takeuchi, H. (1995) *The Knowledge Creating Company.* New York: Oxford University Press.

Nonaka, I., Katsuhiro, U., and Sasaki, K. (1998) Managing and Measuring Knowledge in Organizations. In G. von Krogh, J. Roos and D. Kleine (eds.) *Knowing in Firms: Understanding, managing and measuring knowledge.* London: Sage Publications Ltd.

Nonaka, I., Umemoto, K. and Senoo, D. (1996) From information processing to knowledge creation: A paradigm shift in business management. *Technology in Society,* 18(2), 203-218.

Oakes, P.J., Haslam, S.A., and Reynolds, K.J. (1999) Social categorization and social context: Is stereotype change a matter of information or meaning? In D. Abrams and M.A. Hogg (eds.) *Social Identity and Cognition.* Malden, MA: Blackwell Publishers Inc.

Orlikowski, W.J. (2002) Knowing in Practice: Enacting a Collective Capability in Distributed Organizing. *Organization Science*, 13(3), 249-273.

Orr, J. (1996) *Talking About Machines: An Ethnography of a Modern Job*. Ithica, NY: IRL Press.

Pak, C.K. (2000) *Towards a Model of Organizational Learning as Social Construction in Dispersed learning Communities*. Unpublished thesis. Lancaster University.

Parker, M. (2000) *Organizational Culture and Identity*. London: Sage Publications.

Parry, K.W. (1998) Grounded theory and social process: A new direction for leadership research. *Leadership Quarterly*, 9(1), 85-105.

Penrose, E. T. (1979) *The Theory of the Growth of the Firm*. Oxford: Blackwell.

Perrow, C. (1986) *Complex Organizations. A Critical Essay*. (3rd ed.) Englewood Cliffs, N.J.: Prentice-Hall.

Pettigrew, A.M. (1990) Longitudinal field research on change: theory and practice, *Organization Science*, 1(3), 267- 292.

Pettigrew, A.M. (1997) What is a Processual Analysis? *Scandinavian Journal of Management*, 13(4), 337-348.

Pettrigrew, A.M., Ferlie, E., and McKee, L. (1992) *Shaping Strategic Change*. London: Sage.

Pettigrew, A.M. and Whipp, R. (1993) Understanding the Environment. In C. Mabey, and B. Mayon-White (eds.), *Managing Change* (2nd ed.). London: The Open University/Paul Chapman Publishing.

Plaskoff, J. (2003) Intersubjectivity and Community Building: Learning to Learn Organizationally. In M. Easterby-Smith and M. A. Lyles (eds.) *Handbook of Organizational Learning and Knowledge Management*. Malden, MA: Blackwell Publishing Limited.

Pfeffer, J. and Salancik, G. (1978) *The External Control of Organizations: A resource dependency perspective*. New York: Harper & Row.

Piderit, S. (2000) Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review*, 25(4), 783-794.

Polanyi, M. (1966) *The Tacit Dimension*. London: Routledge and Kegan Paul.

Polany, M. and Prosch, H. (1975) *Meaning*. Chicago: University of Chicago.

Porter, M.E. (1980) Competitive Strategy: Techniques for Analyzing Industries and Competition. The Free Press, a Division of Macmillan, Inc. In B. de Wit and R. Meyer (1998) *Strategy: Process, Content, Context* (2nd ed.) London: Thomson Learning.

Postmes, T., Haslam, S.A., and Swaab, R.I. (2005) Social Influence in Small Groups: An interactive model of social identity formation. *European Review of Social Psychology*, 16(1), 1-42.

Prasad, P. (1993) Symbolic Processes in the Implementation of Technological Change: A Symbolic Interactionist Study of Work Computerization, *Academy of Management Journal*, 36(6), 1400-1429.

Pratt, M.G. and Foreman, P.O. (2000) Classifying managerial responses to multiple organizational identities. *Academy of Management Review*, 25, 18-42.

Probst, G., Büchel, B., Raub, S. (1998) Knowledge as a Strategic Resource. In von Krogh, G., Roos, J., Kleine, D. (2000) *Knowing in Firms. Understanding, Managing and Measuring Knowledge* London: Sage Publications.

Prus, R. (1996) *Symbolic Interaction and Ethnographic Research: Intersubjectivity and the Study of Human Lived Experience*. New York: State University of New York Press.

Quinn, J.B. (1996) *Deep Change: Discovering the Leader Within*. San Francisco, CA: Jossey-Bass.

Reckwitz, A. (2002) Toward a Theory of Social Practices: A development in culturalist theorizing. *European Journal of Social Theory*, (5)2, 245- 265

Reicher, S. (2005) Where Next? *The Psychologist*, 18(9), 553-554.

Reicher, S., Haslam, S.A. and Hopkins, N. (2005) Social identity and the dynamics of leadership: Leaders and followers as collaborative agents in the transformation of social reality. *The Leadership Quarterly*, 16, 547-568.

Reynolds, M. and Vince, R. (eds.) (2004) *Organizing Reflection*. Hampshire, England: Ashgate Publishing Limited.

Resnick, L.B. (1987) Learning in School and Out. *Educational Researcher*, 16, 13-20.

Riketta, M. and van Dick, R. (in press) Foci of attachment in organizations: A meta-analytic comparison of the strength and correlates of work group versus organizational identification and commitment. Journal of Vocational Behavior. In N. Ellemers and F. Rink (2005) Identity in Work Groups. In S.R. Thye, E.J. Lawler (eds.) *Social Identification in Groups*. Amsterdam: Elsevier.

Roberts, K.H. (1990) Some characteristics of one type of high reliability organization. *Organization Science*, 1, 160-176.

Rodrigues, S.B. (1996) Corporate Culture and De-institutionalization: Implications for Identity in a Brazilian Telecommunications Company. In G. Palmer and S.R. Clegg (eds.) *Constituting Management, Markets, Meanings and Identities*. Berlin: DeGruyter.

Rogers, C. R. (1961). *On becoming a person.* Boston: Houghton Mifflin.

Rosenberg, M. and Turner, R. (1981) *Social Psychology.* New York: Basic Books.

Rothman, J. and Friedman, V.J. (2003) Identity, Conflict, and Organizational Learning. In M. Dierkes, A.B. Antal, J. Child and I. Nonaka (eds.) *Handbook of Organizational Learning and Knowledge.* New York: Oxford University Press.

Rouse, M.J. and Daellenbach, U.S. (1999) Rethinking Research Methods for the Resource-Based Perspective: Isolating Sources of Sustainable Competitive Advantage. *Strategic Management Journal,* 20, 487-494.

Rouse, M.J. and Rouse, S. (2002) *Business Communications: A Cultural and Strategic Approach.* London: Thomson Learning.

Rouse, M. J. and St-Amour, W.F. (2003) Knowledge Translation as a Source of Competitive Advantage. In W.F. St-Amour (2004) Interpersonal Risk Aversion: An impediment to learning and knowledge translation for innovation. *Risk Management: An International Journal,* 6(2), 31-47.

Rousseau, D.M. (1998) Why workers still identify with organizations. *Journal of Organizational Behavior,* 19(3), 217-233.

Sachdev, I. and Bourhis, R.Y. (1990) Language and social identification. In D. Abrams and M.A. Hogg (eds.) *Social Identity Theory: Constructive and critical advances.* Hertfordshire, UK: Harvester Wheatsheaf.

Salaman, G. and Asch, D. (2003) *Strategy and Capability: Sustaining Organizational Change.* Malden, MA: Blackwell Publishing.

Schein, E.H. (1992) *Organizational Culture and Leadership* (2nd ed.) San Francisco, CA: Jossey-Bass.

Schumpeter, J.A. (1934) *The Theory of Economic Development.* Cambridge, MA: Harvard University Press.

Senge, P. M. (1990) *The Fifth Discipline: The Art and Practice of The Learning Organization.* New York: Currency Doubleday.

Senge, P.M., Kleiner, A., Roberts, C. Ros, R.B. and Smith, B.J. (1994) *The Fifth Discipline Fieldbook: Strategies and tools for building a learning organization.* New York: Currency-Doubleday.

Serpe, R.T. and Stryker, S. (1987) The construction of self and reconstruction of social relationships: In E. Lawler and B. Markovsky (eds.) *Advances in Group Processes.* Greenwich, CT: JAI Press.

Sheldon, K.M. and Bettencourt, B.A. (2002) Psychological Need-Satisfaction and Subjective Well-being Within Social Groups. *British Journal of Social Psychology,* 41, 25-38.

Shibutani, T. (1955) Reference Groups as Perspectives. *American Journal of Sociology*, 60, 562-569.

Silverman, D. (1984) Going Private: Ceremonial Forms in a Private Oncology Clinic. *Sociology*, 18, 191-204.

Silverman, D. (1985) *Qualitative Methodology and Sociology: Describing the Social World.* Aldershot, UK: Gower.

Simmons, R. G. (2001) Comfort with the self. In T.J. Owens, S. Stryker and N. Goodman (eds.) *Extending Self-Esteem Theory and Research: Sociological and psychological currents.* Cambridge: Cambridge University Press.

Simon, H.A. (1991) Bounded Rationality and Organizational Learning, *Organization Science*, 2, 125-134.

Skinner, B.F. (1953) *Science and Human Behavior.* New York: The Free Press.

Smart, P.K., Tranfield, D., Deasley, P., Levene, R., Rowe, A., and Corley, J. (2003) Integrating 'lean' and 'high reliability' thinking. *Proceedings of the Institution of Mechanical Engineers,* 217, Part B: Engineering Manufacture, 733-739.

Smircich, L. and Morgan, G. (1982) Leadership: The management of meaning. *The Journal of Applied Behavioral Sciences*, 18(3): 257-73.

Smith, D. (1988) *The Everyday World as Problematic: A Feminist Sociology.* Evanston, IL: Northeaster University Press.

Snell, R.S. (2001) Moral foundations and their connections with characteristics of learning organizations. *Human Relations*, 54(3), 321-44.

Snow, D.A. (2001) Extending and broadening Blumer's conceptualization of symbolic interactionism. *Symbolic Interaction*, 24(3), 367-377.

Sole, D. and Edmondson, A. (2002) Situated Knowledge and Learning in Dispersed Teams. *British Journal of Management*, 13, S17-S34.

Sparrow, J. (1998) *Knowledge in Organizations: Access to thinking at work.* London: Sage Publications Ltd.

Stace, D.A. and Dunphy, D.D. (1994) *Beyond the Boundaries: Leading and Re-Creating the Successful Enterprise.* Sydney, Australia: McGraw-Hill.

Stace, D.A. and Dunphy, D.D. (2001) *Beyond the Boundaries: Leading and Re-Creating the Successful Enterprise* (2nd ed.) Sydney, Australia: McGraw-Hill.

St-Amour, W.F. and Easterby-Smith, M. (2003) *Routine versus Innovative Learning: Towards a Resolution* (unpublished) Organizational Learning and Knowledge 5th Annual Conference, June 2003 and Employment Research Unit Conference, September 2003.

Starbuck, W.H. (1983) Organizations as action generators. *American Sociological Review*, 48, 91-102.

Starkey, K. (ed.) (1996) *How Organizations Learn.* London: International Thomson Business Press.

Stets, J.E. and Burke, P.J. (2000) Identity Theory and Social Identity Theory. *Social Psychological Quarterly*, 63(3) 224-237.

Stickland, F. (1998) *The Dynamics of Change: Insights into Organisational Transition from the Natural World.* London: Routledge.

Strauss, A. (1959) *Mirrors and Masks.* New York: Free Press.

Strauss, A.L. (1978) *Negotiations: Varieties, Contexts, Processes and Social Order.* San Francisco: Jossey-Bass Publishers.

Strauss, A., and Corbin, J. (1997) *Grounded Theory in Practice.* Thousand Oaks, California: Sage Publications Inc.

Strauss, A.L., and Corbin, J. (1998) *Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory.* (2nd ed.) Thousand Oaks, California: Sage Publications.

Stryker, S. (1980) *Symbolic Interactionism: A social structural version.* Menlo Par, CA: Benjamin/Cummings.

Stryker, S. (1987) Identity Theory: Developments and Extensions. In K. Yardley and T. Honess (eds.) *Self and Identity: Psychosocial Perspectives.* New York: Wiley.

Stryker, S. and Burke, P.J. (2000) The past, present and future of an identity theory. *Social Psychology Quarterly,* 63(4) 284-297.

Swan, J., Scarbrough, H., and Robertson, M. (2002) The Construction of 'Communities of Practice' in the Management of Innovation. *Management Learning*, 33(4), 477-496.

Swartz, D. (1997) *Culture and Power: The Sociology of Pierre Bourdieu.* Chicago: The University of Chicago Press.

Tajfel, H. (1972) Experiments in a vacuum. In J. Israel and H. Tajfel (eds.) *The Context of Social Psychology: A critical assessment.* London: Academic Press.

Tajfel, H. (1981) *Human Groups and Social Categories: Studies in Social Psychology.* Cambridge: Cambridge University Press.

Tajfel, H. (1992) *Social Identity and Intergroup Relations.* Cambridge: Cambridge University Press.

Tajfel, H. and Turner, J.C. (1979) An Integrative Theory of Intergroup Conflict. In S. Worchel and W.G. Austin (eds.) *The Social Psychology of Intergroup Relations.* Monterey, CA: Brooks-Cole.

Tajfel, H. and Turner, J.C. (1986) The Social Identity Theory of Intergroup Conflict. In S. Worchel and W.G. Austin (eds.), *Psychology of Intergroup Relations.* Chicago: Nelson-Hall.

Tajfel, H. and Turner, J.C. (2004) An Integrative Theory of Intergroup Conflict. In M.J. Hatch and M. Schultz (eds.) *Organizational Identity: A Reader.* Oxford: Oxford University Press.

Tedlock, B. (1991) From participant observation to the observation of participation: The emergence of narrative ethnography. *Journal of Anthropological Research,* 47(1), 69-94.

Teece, D. J., Pisano, G.P. and Shuen, A. (1998) Dynamic Capabilities and Strategic Management. *Strategic Management Journal,* 18(7) 509-533.

Tempest, S. and Starkey, K. (2004) The Effects of Liminality on Individual and Organizational Learning. *Organization Studies,* 25(4), 507-527.

Teece, D.J., Pisano, G. and Shuen, A. (1997) Dynamic capabilities and strategic management. In M.H. Zack (ed.) (1999) *Knowledge and Strategy.* Boston, MA: Butterworth-Heinemann.

Terry, D.J., Callan, V.J., and Sartori, G. (1996) Employee Adjustment to an Organizational Merger: Stress, coping and intergroup differences. *Stress Medicine,* 12, 105-122.

Thompson, M. (2005) Structural and Epistemic Parameters in Communities of Practice. *Organization Science,* 16(2), 151-164.

Thompson, P, and McHugh, D. (1995) *Work Organisations.* London: MacMillan Press Ltd.

Thye, S.R. and Lawler, E.J. (2005) *Preface, Social Identification in Groups* (eds.) Amsterdam: Elsevier.

Tsoukas, H. and Mylonopoulos, N. (2004) Knowledge construction and creation in organizations. *British Journal of Management,* 15, S1-S8.

Turnbull-James, K. and Arroba, T. (2005) Reading and Carrying: A Framework for Learning about Emotion and Emotionality in Organizational Systems as a Core Aspect of Leadership Development. *Management Learning,* 36(3), 299-316.

Turner, R.H. (1978) The Role and the Person. *American Journal of Sociology,* 84, 1-23.

Turner, J.C. (1982) Towards a cognitive redefinition of the social group. In H. Tajfel (ed.) *Social Identity and Intergroup Relations*. Cambridge: Cambridge University Press.

Turner, J.C. (1985) Social categorization and the self-concept: A social cognitive theory of group behavior. In E.J. Lawler (ed.) *Advances in Group Processes: Theory and Research*, Vol. 2, Greenwich, CT: JAI Press.

Turner, J.C. (1987) A Self-Categorization Theory. In J.C. Turner, M.A. Hogg, P.J. Oakes, S.D. Reicher, and M. Wetherell, *Rediscovering the Social Group*. Oxford: Blackwell.

Turner, J.C. and Oakes, P.J. (1989) Self-Categorization Theory and Social Influence. In P.B. Paulus (ed.) *Psychology of Group Influence*. (2nd ed.), Hillsdale: Erlbaum.

Turner, J.C., Oakes, P.J., Haslam, S.A., and McGarty, C.A. (1994) Self and Collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20, 454-463.

Tyre, M.J. and von Hippel, E. (1997) The Situated Nature of Adaptive Learning in Organizations. *Organization Science*, 8(1), 71-83.

Ullrich, J., Wieske, J. and Van Dick, R. (2005) Continuity and Change in Mergers and Acquisitions: A Social Identity Case Study of a German Industrial Merger. *Journal of Management Studies*, 42(8), 1549-1569.

Uzzi, B. (1997) Social structures and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 42, 35-67.

Van Dick, R. (2001) Identification in Organizational Contexts: Linking Theory and Research from Social and Organizational Psychology. *International Journal of Management Reviews*, 3(4), 265-283.

Van Knippenberg, D., Van Knippenberg, B., Monden, L and de Lima, F. (2002) Organizational Identification After a Merger: A Social Identity Perspective. *British Journal of Social Psychology*, 41, 233-252.

von Krogh, G., Roos, J., and Kleine, D. (1998) (eds.) *Knowing in Firms: Understanding, Managing and Measuring Knowledge*. London: Sage Publications Ltd.

von Krogh, G., Ichijo, K., Nonaka, I. (2000) *Enabling Knowledge Creation*. New York: Oxford University Press Inc.

Van Maanen, J. (1988) *Tales of the Field: On Writing Ethnography*. Chicago: The University of Chicago Press.

Vince, R. (2004) *Rethinking Strategic Learning*. London: Routledge.

Waddington, D.P. (2004) Participant Observation. In C. Cassell and G. Symon (eds.) *Essential Guide to Qualitative Methods in Organizational Research.* London: Sage Publications Ltd.

Waters, D. (1997) *Quantitative Methods for Business.* (2nd ed.) Essex, England: Addison-Wesley.

Weaver, R.G. and Farrell, J.D. (1997) *Managers as Facilitators.* San Francisco: Berrett-Kochler Publishers Inc.

Weick, K.E. (1979) *The Social Psychology of Organizing.* (2nd ed.) New York: McGraw-Hill Inc.

Weick, K.E. (1991) The nontraditional quality of organizational learning. *Organization Science,* 2(1), February, 1991, 116-124.

Weick, K.E. (1993) The collapse of sensemaking in organizations: The Mann Gulch Disaster. *Administrative Science Quarterly,* 38, 628-652.

Weick, K.E. (1995) Sensemaking in Organizations. Thousand Oaks, CA: Sage Publications Inc.

Weick, K.E. (2001) *Making Sense of the Organization.* Oxford, UK: Blackwell Publishers Ltd.

Weick, K.E. and Roberts, K.H. (1993) Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly,* Sep 1993; 38(3), 357-381.

Weick, K.E. and Sutcliffe, K.M. (2001) *Managing the Unexpected.* San Francisco, CA: Jossey-Bass.

Weick, K.E. and Westley, F. (1996) Organizational Learning: Affirming an Oxymoron. In S.R. Clegg, C. Hardy, and W.R. Nord (eds.) *Handbook of Organizational Studies.* London: Sage Publications.

Wenger, E. (1998) *Communities of Practice: Learning, meaning and identity.* Cambridge: Cambridge University Press.

Wenger, E. (2003) Communities of Practice and Social Learning Systems. In D. Nicolini, S., Gherardi, and D. Yanow, D. (eds.) *Knowing in Organizations: A Practice-Based Approach.* Armonk, NY: M.E. Sharpe Inc.

Wernerfelt, B. (1984) A Resource-Based View of the Firm. *Strategic Management Journal,* 5, 171-180.

Whalen, J. and Vinkhuyzen, E. (Forthcoming) Expert Systems in (Inter)Action: Diagnosing Document Machine Problems over the Telephone. To appear in *Workplace Studies: Recoverinig Work Practice and Informing Systems Design.* C. Heath, J. Hindmarsh and P. Luff (eds.) New York: Cambridge University Press.

Winter, S.G. (2003) Understanding Dynamic Capabilities. *Strategic Management Journal*, 24(10), 991-995.

Wood Jr., T. and Caldas, M.P. (2002) Adopting imported managerial expertise in developing countries: The Brazilian experience. *Academy of Management Executive*. 16(2): 18-32.

Yanow, D. (2003) Seeing Organizational Learning: A cultural view. In D. Nicolini, S. Gherardi, and D. Yanow (eds.) *Knowing in Organizations: A Practice-Based Approach*. Armonk, NY: M.E. Sharpe Inc.

Yanow, D. (2004) Translating local knowledge at organizational peripheries. *British Journal of Management*, 15, Special Issue, S9-S25.

Zimmerman, M.B. (1982) Learning Effects and the Commercialization of New Energy Technologies: The Case of Nuclear Power. *Bell Journal of Economics*, 13(2), 297-310.

Zollo, M. and Winter, S.G. (2002) Deliberate Learning and the Evolution of Dynamic Capabilities. *Organization Science*, 13(3), 339-351.