"They Come in Wearing Their Rank": The Dynamics of an Inter-professional Proposal Writing Team

by

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Submitted in partial fulfilment of the requirements
for the degree of Doctor of Philosophy

at

Dalhousie University
Halifax, Nova Scotia
October 2011

DALHOUSIE UNIVERSITY

INTERDISCIPLINARY PhD PROGRAM

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DALHOUSIE UNIVERSITY

DATE: October 14, 2011

AUTHOR: Margaret Clow Bohan

TITLE: '"They Come in Wearing Their Rank": Dynamics on an Inter-professional Proposal Writing Team'

DEPARTMENT OR SCHOOL: Interdisciplinary PhD Program

DEGREE: PhD   CONVOCATION: May   YEAR: 2012

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Signature of Author

Dedication

In memory of my parents, H. Arnold and Marie (McVicar) Clow, who saw education as a source of personal enrichment, an avenue of career advancement, and an opportunity to improve society

This PhD dissertation is dedicated to a number of people:

- To teachers, students, and colleagues over the years who have been a source of inspiration
- To my children, M. Kathleen (Katie) and Robert D.C. (Robbie) Bohan, my greatest accomplishments
- To my husband, Brian C. Bohan, without whose love and support I could not have finished this project.

Table of Contents

List of Figures

List of Tables

Abstract

Working on teams with professionals from other fields is often challenging. Researchers from the fields of Management and Writing Studies have frequently emphasized the tension and conflict experienced in such inter-professional, or cross-functional, teams. Whether studying engineering project teams, groups of medical professionals, or business teams, researchers have found that inter-professional work is often complicated by misunderstanding and miscommunication due to problems associated with inter-group professional identity. This interdisciplinary research draws from the fields of Management and Writing Studies in the exploration of a modern, inter-professional proposal writing team working at a commercial enterprise. A modified version of Grounded Theory, coupled with Rhetorical Genre Studies analysis, serves as a methodological framework for the study. The analytical framework is provided by the combination of Rhetorical Genre Studies, a model of successful team interactions, borrowed from Management Studies, and an expanded version of Wenger's conceptualization of multiple communities of practice (CoPs). The research reveals the complexity of inter-professional team work. Professional identity of the team's member is also presented as more complicated than previously anticipated. The study indicates that the team has been heavily influenced by a former, or an antecedent, CoP to which some of the team members belong. The genre and leadership preferences of the antecedent CoP are shown to moderate much of the predicted tension and conflict in the work of the team. The interdisciplinary study reveals the effects of antecedent CoPs and professional identity of the team members on the inter-professional team dynamics. Both researchers and practitioners may benefit from the findings of the study and a broader interdisciplinary approach used to investigate and interpret the dynamics of inter-professional teams.

List of Abbreviations Used

BOE – Basis of estimates

CONOPs – Concept of Operations

CoP – Community of practice

EM – e-mail

MS – Management Studies

OB – Organizational Behaviour

RGS – Rhetorical Genre Studies

SME – Subject matter expert

SIT – Social Identity Theory

VP – Vice president

WS – Writing Studies

Glossary

Annex – another term for appendix; here, short documents provided at the end of the proposal providing more detailed information for the client

Antecedent genre – here, a genre that precedes and influences a current genre

Assigned / designated leadership – leadership role that is given to a person by superiors in the same organization

Basis of estimate – a document containing a short schedule of prices; it is used to cost up the work on a project

Boundary object – "artifacts, documents, terms, concepts, and other forms of reification around which communities of practice can organize their interconnections" (Wenger, 1998, p. 105)

Client – Government of Canada (a.k.a. the Crown); serviced by Public Works Government Services Canada (PWGSC)

Cohesiveness (group) – the degree of group closeness that holds group members together; group solidarity

Co-located team – a team with members working in the same location face to face

Commercial client – customer not from government sector; here, also referred to as industry

Communication – conceptualizations of communication vary greatly from the idea that communication is information transfer between people either orally or in written form to seeing it as social interaction between people in particular contexts in its fullest sense. The latter is employed in this dissertation although instances of a more limited view are noted when applicable.

Communities of Practice – a group in which people interact regularly so that their work gets done and they have an acceptable level of satisfaction with their work; in the community, explicit and tacit understanding of what is expected of members is learned over time (Wenger, 1998, p. 47)

Concept of Operations (CONOPs) – document that explains the bidder's approach to providing the services or products; originally developed as a military document allowing senior officers to outline their perspective on military operations in the field or within the organization

Constant comparative analysis – an analysis method used in Grounded Theory in which the researcher compares data being currently analyzed with previously analyzed data in a cyclical, iterative fashion so as to reach a point of saturation, or the point at which no new codes emerge

Contracts Sub-group – here, responsible for contractual documents including the assignment of the financial inputs for a bid which they develop in concert with VP Finance. In a proposal's development, the unit's employees establish pricing and review the final document so that the company's contractual obligations are clearly outlined.

Cross-cut sub-groups – sub-groups that are part of a team and also are part of an external or larger group (see nested sub-groups)

Cross-functional team – a team composed of members from a number of functional units; here used interchangeably with inter-professional and interdisciplinary team

Distributed / virtual team – a group of employees with a shared goal who work mostly or entirely at a geographical distance from each other

Emerging / emergent leaders – individuals who coordinate the activity on the team and provide a link with the larger organization and client

Engineering Firm – known here as AC Engineering or "the company"

Engineering Sub-group – the sub-group in the studied company that manages the technical (engineering) knowledge side of the company; the unit is supported by the work of technical employees who perform repair or manufacturing work.

Former Community of Practice – here, a former community of practice from which a number of current team members came

Genres – typified text types that respond to, form, and are formed by recurrent rhetorical situations in groups or communities; they both enable and constrain activity (Katz, 1998; Miller 1984/1994; Paré & Smart, 1994)

Hybrid team – a descriptor indicating that the team shares characteristics from a number of kinds of teams (e.g., a hybrid team might include employees working together face-to-face and in a distributed fashion)

Inter-individual (interpersonal) interactions – interactions between individuals based on individual attributes

Inter-group interactions – interactions between people based on social group attributes

Inter-professional (cross-functional) group – a group composed of members from a number of professions

Iteration in data analysis – a process of analysis that sees the researcher moving through the data analysis in cycles so that data are analyzed multiple times

Knowledge brokers – members of communities of practice who are able to make connections by introducing "elements of one practice into another;" it is notable that they have membership, at least to some extent, in a number of the communities of practice (Wenger, 1998, p. 105)

Leadership – a social process by which individuals in a social group influence other individuals within groups toward a goal

Mixed-presence group – a group that is composed of members some of whom are co-located (face-to-face) and some who are at a geographical distance (distributed / virtual)

Nested groups – sub-groups that are enclosed within a larger organizational unit such as when a team has members who work only on the team and not with other groups

On-going collection and analysis – a process of collecting data and analyzing data concurrently so that the researcher uses the analysis to determine requirements for more data

Participation – "the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises" (Wenger, 1998, p. 55)

Performance outcomes – what the team is able to achieve; linked to the notions of team success, positive outcomes, goal attainment, and so on

Plant Procedure Manual (PPM) – documents describing a particular procedure at the company. One PPM includes guidelines on content, responsibilities, approvals, marketing notes, and so on.

Professional identity – an identity that reflects an individual's position and a community's position within a society; professional identity is linked to competence, and in turn competence is linked to membership (Wenger,1998)

Product – here, the product or service provided by the company; introduced here in order to protect the company's real identity for confidentiality reasons

Program Sub-group – the sub-group of the studied company servicing the Product for the client; sub-group employees are distributed across the continent

Proposals or bids – complex documents that can either be written in response to a Request for Proposal (RFP), a solicited proposal or statement of interest, or as a response to an identified customer problem or company opportunity (an unsolicited proposal). Proposals vary in their length, depth of detail, authorship (sole or joint), degree of persuasiveness, and so on.

Purposeful sampling – a process of selecting participants or here a team based on a set of characteristics required by the research; this process differs from random or convenient samples

Reification – finding and negotiating meaning in the world by naming abstractions and concrete objects within communities of practice thereby shaping how members see the world (Wenger, 1998, p. 59)

Richness – the descriptor indicating "the ability of a communication medium to foster interaction and feedback and to permit people to communicate with many kinds of cues" (Meho, 2006, p. 1289)

Self-categorization theory – a theory that supports the idea that individuals see themselves as part of distinct social groups (and not as part of other social groups)

Self-enhancement (self-esteem) hypothesis – the hypothesis that individuals judge the members of their group as superior to members of others as a way to enhance their own self image

Self-managed / self-directed teams – teams that indirectly supervise or report to an external person or body but do not have a formal internal leader

Social identity – one's individual conceptualization of oneself as part of a social group

Social identity theory – a theory that explains how individuals maintain a social identity

Statement of Work (SOW) – in an engineering proposal, the document that itemizes work that is required to complete the project so that the issuing company can determine the ability of the bidder to accomplish the project's objectives

Task – work that employees perform individually and in groups in order to complete projects

Team / Group – collection of individuals with a common objective – terms are used interchangeably in the literature and here

Team processes – sets of activities that lead towards goals such as communication, coordination, and cooperation

Technical memo or memorandum – here, a short document prepared by the unit in the company that performs engineering tasks (Engineering unit) outlining the technical procedures that must be followed in order to complete the proposed work

Trajectory – on-going process of identity formation within communities of practice; trajectories could be peripheral, inbound, insider, or boundary to the community of practice (Wenger, 1998, p. 154)

Trust – confidence that individuals will not harm other members of the team; in teams trust may manifest itself through the members' confidence that the other members will get their work done; in that way, the project's goals are not harmed or left unattained; usually, is seen as developing over time, but swift trust (Gersick, 1988) has been shown to develop in particular teams

Virtualness – the degree of distributed interaction between individuals communicating with others through electronic means; here some employees work in a distributed fashion and some face-to-face; all employees, however, depend on electronic connections to a high degree

Acknowledgements

The PhD program has been a compelling, often lonely, five year odyssey complete with heroic challenges and tremendous rewards. I would like to acknowledge the assistance of the following people:

Chapter 1 Introduction

It is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail. (Maslow, 1966, p. 15)

This dissertation presents an interdisciplinary research study aimed at developing a better understanding of the work of inter-professional writing teams (i.e., teams that consist of members from a number of professions who are involved in writing a document). Such a study may be valuable for research and industry because developing a deeper understanding of the complex team dynamics, its structure, and types of communication may contribute to theory-building and research in such fields as, for example, Management and Writing Studies and eventually lead to more successful teams (Cross, 1994). After all, working with members from different professional groups has been viewed as challenging (e.g., Palmeri, 2004; Wilson & Herndl, 2007). The study provides evidence that, at least in one case, complexity derives from the influence of the conventions and practices of the professional group to which a majority of members of the studied team belonged in the past. That antecedent group influence may either contribute to team success or constrain it.

In general, teams have been a common organizational unit in the late 20th and early 21st centuries, and they are much discussed in the research literature of many fields (e.g., Devine, Clayton, Phillips, Dunford, & Melner, 1999; Simsarian Webber, 2002; Wang, Chen, Lin, & Hsu, 2010; Yates & Orlikowski, 2002). Guzzo and Dickson (1996) define a work group or team[1] as one

> made up of individuals who see themselves and who are seen by others as a social entity, who are interdependent because of the task they perform as members of a group, who are embedded in one or more larger social systems (e.g., community,

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[1] I use the terms "group" and "team" interchangeably reflecting current practice in the Management Studies literature (e.g. Guzzo & Dickson, 1996; Staples & Webster, 2007).

organization), and who perform tasks that affect others (such as customers or coworkers). (pp. 308-309)

According to this definition, team members are aware of their roles and work with others in a purposeful manner. They are not merely a loose collection of individuals.

The study concentrates on professionals working on a proposal writing team. Usually, the term *professional* encompasses members of professional organizations such as engineers, accountants, psychiatrists, social workers, and so on. Professionals undertake educational opportunities and training in order to practice in their field, thus learning distinctive ways of working. In Wenger's (1998) view, which I adopt as a theoretical lens in the dissertation, professionals come together with others performing the same practice and negotiate "ways of being a person in that context" (p. 149). A professional social identity is, thus, formed through interaction with others. A social identity allows members to fit into the group or homogeneous team, but it also excludes others not trained in that specific profession (Wenger, 1998). Effectively, a kind of boundary separates professional practices. Inside the bounded fields, professionals share "conversational conventions, 'common knowledge', ranking systems, actual task practices and operational focus, priorities, a lexicon and a general organizational 'viewpoint'" (Wynn & Novick, 1995). In other words, professionals learn how to work with other professionals from similar backgrounds (Lammers & Garcia, 2009).

A major complication in the workplace is that not all work is accomplished by a team with only one type of professional. Teams composed of employees from different professional and functional units are often a necessity and a common organizational unit in today's society (e.g., Gooch, 2005; McDonough, 2000; Palmeri, 2004; Wilson & Herndl, 2007). While necessary and common, use of inter-professional teams brings new challenges to teams and to management. One challenge has been clearly articulated: inter-professional, or cross-functional, teams encounter problems associated with differences in member education, professional experience, and culture[2] (Simsarian

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[2] For the purposes of this study, I am using inter-professional and cross-functional (as well as interdisciplinary) as interchangeable terms. The teamwork that involves professionals with different backgrounds and different organizational functions attempting to solve a problem and work toward the same goals is labelled cross-functional in some academic fields (Gooch, 2005; Palmeri, 2004). Other scholars have used the terms inter-professional or interdisciplinary depending on disciplinary preference or groups studied. In any event, the work done on this kind of team crosses professional lines or

Webber, 2002). In other words, team dynamics and performance outcomes (that is, team success or achievement of goals, or objectives) can suffer because of professional differences. In order to understand the team structure and dynamics, inter-professional, or cross-functional, teams have been studied, for the most part, from disciplinary perspectives (e.g., Keller, 2001; Lingard, Schryer, Spafford, & Campbell, 2007; Palmeri, 2004; Proehl, 1997; Wilson & Herndl, 2007).

1.1 An Approach to the Study of Inter-professional Teams

In this study, I use an interdisciplinary approach to the investigation of an inter-professional writing team in an engineering workplace by drawing, primarily, on the research conducted within the fields of Management Studies (MS)[3] and Writing Studies (WS)[4]. While scholars in these fields have, separately, studied the challenges inherent in inter-professional or cross-functional team work[5], an interdisciplinary approach offers an opportunity to produce another perspective on the complex team. WS research, for example, has shown that inter-professional teams are not without conflict and misunderstanding – often attributable to differences in professional communication practices of team members (e.g., Lingard et al., 2007; Wilson & Herndl, 2007; Winsor, 2000). In inter-professional teams, members confront sub-groups (i.e., other professional groups within the team) with "clashing narratives" (Palmeri, 2004, p. 47) caused by misinterpretation, miscommunication, discursive conflicts, epistemological disagreements, and bypassing or misunderstandings (Palmeri, 2004, p. 50).

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boundaries between professional groups (Palmeri, 2004) such as accountants and engineers. For the most part, in this dissertation I use the term inter-professional since the term captures my interest in groups that strongly self-identify as professionals.

[3] Management Studies, for the purposes of this study, is viewed as an umbrella field for a great many sub-fields interested in management and organizational practices and theory. Organizational Behaviour and Organizational Studies are two sub-fields falling under the MS umbrella.

[4] Writing Studies, for the purposes of this study, is viewed as a field of study interested in researching writing theory and practice. Business Communication and Technical Communication are two sub-fields under the WS umbrella.

[5] WS scholars such as Lingard et al. (2007), Palmeri (2004,) and Winsor (2000) have studied inter-professional teams. MS scholars such as Keller (2001), Proehl (1997), and Simsarian Webber (2002) have also studied these teams.

Some publications in MS have suggested that cross-functional teams (a term that is used in the literature and in this dissertation interchangeably with inter-professional teams) appear to offer organizations advantages, especially in terms of multiple viewpoints, varied experience (Proehl, 1997), and high levels of creative tension that can lead to inventiveness and, if the team is managed properly, positive performance outcomes[6] (Keller, 2001). Tension and conflict that may develop in inter-professional teams may produce creativity (Keller, 2001), but they can also produce disagreements and poor team outcomes (Simsarian Webber, 2002).

MS team research often concentrates on studies into team dynamics in an effort to identify factors involved in successful team work. MS research has developed models of team effectiveness (e.g., Forrester & Drexler, 1999; Marks, Mathieu, & Zaccaro, 2001; Mathieu, Maynard, Rapp, & Gilson, 2008; McDonough, 2000; McGrath, Arrow, & Berdahl, 2000). McDonough's (2000) model reflects that author's view that changing the context changes other factors in the model, thereby making it difficult for researchers to suggest best-practices to managers or other researchers. I adopt McDonough's model in the dissertation because the model shows a cross-functional team's factors including context as a major element. WS researchers, in turn, largely study social interactions on inter-professional teams through members' written communication practices. WS research often uses theories or notions of social interaction, often borrowed from other fields, (e.g., Wenger's [1998] communities of practice (CoP) model that this study also draws on) to explain differences in professional identity (an identity that reflects an individual's position and a community's position within a society; professional identity is linked to competence; Wenger,1998) and communication preferences. I adopt Wenger's conceptualization of CoPs in the dissertation, as well.

Therefore, studies from both fields investigate, describe or explore inter-professional team dynamics. I conducted a qualitative and interdisciplinary study drawing, primarily, from both contributing fields. Both fields have shown an interest in interdisciplinary team structure. They have developed insights that contribute to the present study, especially findings on professional identity formation and inter-

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[6] Performance outcomes here are seen as attainment of team goals. Outcomes can either be attained (positive) or not attained (negative).

professional/cross-functional interactions, and they have used insights from additional fields that I have drawn on in this study. This interdisciplinary approach promises to lead to a broader picture of inter-professional work, and offers a way to explain some of the complexity of the inter-professional proposal team.

I undertook this study in order to advance the current understanding of communication practices and dynamics of individual professionals in an inter-professional team. To a large extent, this dissertation explores the challenges of working with others, in this case, the challenges of working with professionals from other fields. As Maslow's (1966) quotation at the first of the chapter implies, inter-professional work, by its nature, may bring challenges arising in large part from individuals' inability to see that others may not share the same vision, the same way of working, and that sharing the same vision and sharing common work approaches are often seen as important to team success (e.g., Evans & Carson, 2005; Proehl, 1997). One of the key questions of the inter-professional team research is why some of these teams successfully meet their objectives and others do not (e.g., Evans & Carson, 2005; Gooch, 2005; Jassawalla & Sachittal, 2006). Answers to this question are important in that they may assist in forming successful inter-professional teams in different organizations.

The current study investigated an inter-professional team that wrote an unsolicited proposal, an attempt to secure an extension to an engineering contract. I was interested in how the members of the team wrote collaboratively, considering differences in communication practices, professional identification, and genre knowledge. From reading the literature from both fields, I had expected to observe the members struggling to understand other professions' ways of working through a project because of my earlier readings in the literatures, but later realized that the team experienced low levels of tension. Surprisingly, the proposal team did not seem to depend on members reaching a consensus on important project decisions. Performance success appeared to depend, to a large extent, on the power of the conventions and practices of the former professional group (to which a majority of members used to belong) to influence, constrain, and enable members coming from divergent professional backgrounds to cooperate and collaborate toward the common goal. The proposal team not only secured the extension

to the contract, but did so without acrimony, without a great deal of tension. The main focus of the study, accordingly, is to seek an answer to the question:

> Why and how was the inter-professional team under study able to work successfully, despite the presence of multiple professional sub-groups?

This overarching question includes two sub-questions:

1. How did the individual professional sub-groups use their rhetorical genre knowledge during the collaborative work on the project, and how does that knowledge affect the joint work of the inter-professional team?

2. What other factors play key roles in the development of a collaborative proposal by an inter-professional team?

This chapter described the value of teams to organizational life and the prevalence of inter-professional teams in the workplace. The research questions were posed. At this point, I offer an overview of the remaining chapters of the dissertation.

1.2 Overview of the Dissertation

The next chapter explores the scholarly research on inter-professional teams. It provides background to the study of the success of the proposal team. That chapter, also, discusses the conceptual framework of the study, which was used to analyze and better understand the writing done on the proposal team. In the third chapter, I introduce and provide details on the study's company, the proposal team, and the unsolicited proposal that was eventually produced. The methods, including the description of the data collection procedures and discussion of data analysis, are found in that chapter, too. Chapter 4 presents the outcomes of the data analysis. Chapter 5 offers an interpretive discussion of the findings. In Chapter 6 the research questions are addressed. The chapter concludes the dissertation with a summary of the study, its limitations, discussion of its implications for research on inter-professional teams, and its contributions to the practice of inter-professional team management.

Chapter 2 Review of Research on Inter-professional Teams and Conceptual Background

> Disciplines and cultures are made up of invisible ties that bind, like some sub-atomic substance that holds objects in orbit, keeping them in relation to each other and preventing them from flying off. (Paré, 2010, p. 24)

This chapter presents the conceptual background of the study and an overview of prior research on teams that have an organizational structure similar to the proposal team in order to provide more information on the dynamics of writing teams. Conceptual frameworks act as lenses through which studies are viewed (Silverman, 2000). The current study is interdisciplinary in nature, and I drew insights from several fields, as described above. I review the literature on inter-professional or cross-functional teams, primarily, from two fields: the MS literature on cross-functional teams provides deeper understanding of the social dynamics (including leadership roles) of such teams working on joint projects; WS offers research that extends knowledge of writing documents (here, proposals) by inter-professional teams. In addition, I draw on several theories and notions that originate in other fields but have been used by MS and WS, the primary fields. MS research has used social identity theory (e.g., Hogg & Terry, 2000; Tajfel, 1978; Turner, 1982), which comes from the field of Social Psychology. The notion of community of practice derives from anthropology (Bowker & Star, 1999; Lave & Wenger, 1991; Wenger, 1998), but is used in MS and WS.

2.1 One Conceptual Frame Used in Writing Studies

The first theoretical lens is provided by New Rhetoric. The lens has been extended by WS scholarship.

2.2.1 Rhetorical Genre Studies (RGS)

The term *genre* has been conceptualized in a number of distinct ways. A genre in literary studies has traditionally been defined as a particular kind or category of text. The

categorization of a text has been based on formal, textual features: a narrative poem, a mystery play, or a detective story. This definition of genre, while it has allowed literary scholars to group similar texts in categories, failed to explain the use of non-literary writing and speaking in everyday life. In the late 20th century, American rhetoricians and later writing scholars developed definitions of genre that went beyond the understanding of genre as forms of writing. In the case of the approach to genre that became known as the North American Genre School or Rhetorical Genre Studies, genres are understood as "typified rhetorical actions based on recurrent situations" (Miller, 1984/1994, p. 31). The definition is based on a social view of writing where "genres reflect and coordinate social ways of knowing and acting in the world, and hence provide valuable means of researching how texts *function* [emphasis added] in various context" (Bawashi & Reiff, 2010, p. 7). In order to use the RGS approach in this dissertation, I need to further explain the definition of genre.

Miller (1984/1994) drew insights from the work of a number of 20th century rhetoric scholars (e.g., Bitzer, 1968; Black, 1965; Burke, 1951; Campbell & Jamieson, 1978), as well as sociologists using phenomenology such as Schutz (1967) and Schutz and Luckmann (1973) in order to develop the reconceptualization of genre as social action. Genres are defined as "socially derived, intersubjective, rhetorical typifications that help us recognize and act within recurrent situations" (Bawashi & Reiff, 2010, p. 69). In other words, it seems that people are able to make sense of rhetorical situations because they have identified typical features of the situations, thus allowing them to draw from their genre knowledge, and respond. Bazerman (1994) writes: "typifications give writers symbolic means to make sense of things; in turn, those means of sense-making help set the stage and frame possible action" (p. 19).

The new view of genre hinges on two important elements: recurrent situations and typification (of rhetorical actions). Bawarshi and Reiff (2010) explain that rhetorical situations are situations that call for a communicative response or action. Rhetorical situations often recur, and people learn to identify the regularity of these situations (i.e., they understand what is happening, why it is happening, and so on) and come to recognize the requirement for particular (typified) responses. In these recurring rhetorical situations, people working in a group may need to coordinate activity with the group to

accomplish some task or desire, or they may need to respond to actions initiated by others.

The following are a number of additional concepts in RGS that inform the current study.

Genre knowledge is required for interaction with other people. It is learned over time and within particular social groups (e.g., Dias, Freedman, Medway, & Paré, 1999; Paré & Smart, 1994; Schryer, 2002). Whether the social groups are found in schools or workplaces, people must learn the ways of social interaction through genres. The complexity of acquiring genre knowledge accounts for the difficulty of learning genres. Bawashi and Reiff (2010) write that learning to use genres

> calls for understanding genre knowledge as including not only knowledge of formal features but also knowledge of what and whose purposes genres serve; how to negotiate one's intentions in relation to genres' social expectations and motives; when and why and where to use genres; what reader/writer relationships genres maintain; and how genres relate to other genres in the coordination of social life. (p. 4).

A primary challenge of genre is that learning to use genres is both enabling and constraining (Katz, 1998). That is, people learn what works in a particular situation (and what does not) and that is powerfully enabling. The converse is also true: outsiders are constrained by not knowing the appropriate genre for the rhetorical situation. Even insiders are constrained in that they might not select the appropriate genre, and thus not be effective in coordinating activity or motivating others. Another challenge of learning genres is that the learning is most often not explicit, and perhaps genres cannot even be taught explicitly. Rather, individuals acquire genre knowledge living within the group – whether in school or the workplace, for example. Genre learning is "often tacitly acquired, deeply remembered and affective" (Bawashi & Reiff, 2010).

Another aspect of the RGS approach that is relevant to the current study is that genres are not neutral means of exchanging information; rather, they are ideological or wrapped up in people's perspectives, their own goals, and expectations (e.g., Coe, Lingard & Teslenko, 2002; Lingard, Schryer, Garwood & Spafford, 2003; Lingard et al.,

2007; Schryer & Spoel, 2005).[7] Genres influence the actions within the group and across groups. Genres (used by the people who have enough genre knowledge to use them) are the social action in the group (Freedman & Smart, 1997; Miller, 1984/1994). Thus, genre use is seen as associated with maintaining or achieving status and power relations (Schryer, 1994). For example, not everybody has access or authority to use particular genres (e.g., physicians have more power than non-medical members on inter-professional healthcare teams, Paré, 2000). Individuals and groups that have power and privilege select genres that maintain that power (Schryer, 2002; Winsor, 2000). These groups continue to influence others by using preferred ways of responding to rhetorical situations (Palmeri, 2004). By using preferred genres, groups maintain significance and constrain others from sharing in that significance. Winsor (2000), for example, in her study of the work of engineers and technicians showed that the work of technicians is not visible to senior managers because it is subsumed into the engineering plans and reports. Engineers, thus, maintain their elevated stature in the company at the expense of the lower-level employees through use of genres that privilege the engineers' work. Winsor concludes that "genre is a profoundly political force" (p. 183).

There are a number of complications arising from acquiring genre knowledge. First, professional identities are established in part by learning to write the genres used in particular professions (e.g., Ketter & Hunter, 2003; Paré, 2000). Adaptation to the professional group means that new members come to recognize the generic conventions of the group. Accountants, engineers, lawyers, and physicians, for example, come to view themselves (and are viewed by others inside the professions and outside) as part of those professions, in part, because they have acquired the necessary genre knowledge in order to successfully interact with others. Employees who learn to recognize and use genres effectively, often, become more quickly accepted in the professional community (e.g., Dannels, 2000).

Second, learning genre knowledge is context specific, and it is often difficult to use genre knowledge that was learned in one context in another context (e.g., Dannels, 2000; Dias et al., 1999; Kain, 2003; Ketter & Hunter, 2003). That means, in workplaces,

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[7] The field of systematic-functional linguistics have studied the ideology of genre, as have RGS scholars and they continue that work (e.g. Bednarek & Martin, 2010; Young & Harrison, 2004).

employees who are moved from one group to another may fail to understand the rhetorical situations and thus respond ineffectively. A second complication, particularly seen in modern workplaces, is that members of different groups, recognizing different ways to respond to what they see as similar situations, are brought to work together. Consequently, the genres preferred or chosen as a response to recurrent situations in different groups may differ. As noted, the differences in views can cause tension and conflict (e.g., Kain, 2003; Lingard et al., 2007, Palmeri, 2004).

Genres often work in conjunction with other genres to accomplish social actions. The resulting groups of genres, or assemblages of genres (Spinuzzi, 2004) play a role in organizations.

2.1.1.1 Systems of genres

Bawashi and Reiff (2010) note that several terms have arisen to explain "the complex ways in which related genres enable their users to perform consequential social actions" (p. 87). One term is genre set, first discussed by Devitt (1991, 2004). Devitt's (1991) description of the texts used by the accountants in her study included genres that were "associated through activities and functions of a collective but defining only a limited range of actions" (Devitt, 2004, p. 57). Freadman's (1994) view of groupings of genres reflects the interplay of genres: one genre (i.e., the job posting) leads to another genre (i.e., the application letter). The genres are "in some sort of dialogical relation" (Freadman, 1994, p. 48) to each other. Another term is a system of genres (Bazerman, 1994). Genres can be viewed as forming part of a larger group of genres within organizations or cultures; the genres work together to accomplish complicated social activity in the organizations. Bazerman's (1994) term for such inter-connected, or "interrelated" (Bazerman, 1994, p. 97), genres is genre systems. The genre systems operate "as significant mediums of exchange between participants" (Kain, 2003), and serve to coordinate or structure activity "by shaping our sense of timing and opportunity (Yates & Orlikowski, 2002, p. 106). Therefore, as Bawashi and Reiff (2010) indicate, studying genre systems allows researchers to "gain insight into the social roles and

relationships, power dynamics, the distribution of cognition and activities, and the social construction of space-time…within different contexts" (p. 87).

In the current study, the genres within the e-mail archive and in the proposal are viewed as Devitt's (1991) genre sets (within the sub-groups) and Freadman's (1994) interconnected genres that sequence the work within the proposal team. The work on the proposal team could also be seen taking place within the larger company genre system (Bazerman, 1994) if viewed from a wider angle of vision.

Since genres are viewed here as social action (Miller, 1984/1994), it is important to see that genres change and then stabilize (Schryer, 1993) as they respond to changes in situations. That fact leads into a discussion of the next element in genre theory, the concept of antecedent genres.

2.1.1.2 Antecedent genres

The study benefits from notion of antecedent genres, a notion originally developed in the field of Speech Communication (Campbell & Jamieson, 1978; Jamieson, 1975) but used in WS (e.g., Artemeva & Fox, 2010; Devitt, 2004). Jamieson (1975) suggested that individuals facing new rhetorical situations draw from their past experiences with genres. She evoked Eliot's (1920/1972) dictum that the past is evident in the present. There are times that unconsciously or consciously people use a genre from another time period or a genre from another group in a new situation. In Jamieson's view, antecedent genres often constrain social action because they may or may not be appropriate for the new rhetorical situation. The situation might have benefitted from the use of another genre. Jamieson explores George Washington's use of the British Throne speech as a case in point. Washington attempted to summon audience reactions to a situation that had not occurred before in the newly founded United States. He drew on one of the few generic experiences that he had at his disposal. Despite major differences in social hierarchies and political positioning (i.e., a very different rhetorical situation), Washington used the Throne speech as a generic model (Jamieson, 1975) and that decision impacted on the way that audiences reacted. Jamieson wrote:

rhetors do perceive unprecedented situations through antecedent genres, that the

antecedent genres chosen may not be appropriate to the situation, that severe constraints are imposed on the rhetor and audience once a generic antecedent is permitted to anchor response, and that the manacles of an inappropriate genre may be broken with varying degrees of difficulty. (p. 414)

That is, antecedent genres are sometimes chosen because of the past experience of the writers, rather than because of the demands of the current situation, resulting in a less than perfect fit (Devitt, 2004). On the other hand, "existing genres serve as powerful antecedents in shaping newly emerging genres" (Devitt, 2004, p. 204). Sometimes, the genre's fit may appear quite good; however, on an inter-professional team with sub-groups having different generic conventions, even when the antecedent genre is appropriate (for the rhetorical situation), that choice may cause some sub-group members to be less than satisfied.

2.2 Complementary Notions

The following section presents theoretical concepts developed within the situated learning framework, in particular, Legitimate Peripheral Participation (Lave & Wenger, 1991; Wenger, 1998). These concepts include community of practice, professional identity formation, and boundary crossing. While Wenger (1998) is often credited with the notion of communities of practice, he drew from both Lave and Wenger (1991), as well as Brown and Duguid's (1991) work. WS research has used these notions (e.g., Tusting, 2005; Ketter & Hunter, 2003; Wegner, 2004; Zucchermaglio & Talamo, 2003).

2.2.1 Communities of Practice, Professional Identity, and Boundary Crossing

Lave and Wenger (1991) depict learning as accomplished through interaction with other learners rather than individual cognitive acts: people find meaning through interaction and thus learn. Wenger (1998) termed one of the social environments in which learning occurs as a community of practice (CoP). Individuals enter a CoP often fresh from university and begin to adapt to the expectations of the CoP. Wenger notes three characteristics in a CoP that establish and maintain this social unit: mutual engagement

(carrying out activities with other people in a practice), joint enterprise (a deep commitment to negotiated goals), and shared repertoires (all the practices, genres, symbols, stories, and so on that allow members to continue to negotiate meaning about their joint efforts). CoPs do not just happen as in a pick-up game of football, nor are they established by others. Rather, members negotiate and build the CoP over time through interaction with members (Wenger, 1998).

Gaining membership to a CoP is often difficult. Wenger (1998) refers to the membership process as a trajectory (tied to identity formation, a growing perception of the self through participation in the daily activity of the CoP and reification, a process of negotiating meaning through naming). Wenger writes that a trajectory is a continuous learning effort, a case of learning and re-learning the ways of the CoP. He writes: "the term trajectory suggests not a path that can be foreseen or charted but a continuous motion – one that has a momentum of its own in addition to a field of influences" (p. 154). Some individuals are seen on inbound trajectories (becoming full members); others are on outbound trajectories (moving away from membership); and still others sit on the periphery of several communities. The extent of the learning required for full membership is substantial and includes explicit elements: "the language, tools, documents, images, symbols, well-defined roles, specific criteria, codified procedures, regulations, and contracts that various practices make explicit for a variety of purposes" (p. 47), as well as implicit ones: "conventions, subtle cues, untold rules of thumb, recognizable intuitions, specific perceptions, well-tuned sensitivities, embodied understandings, underlying assumptions, and shared world views" (p. 47).

Wenger (1998) explains that a consequence of living and working within CoPs is development of self-images or identities that are tied to the social group: a person develops a professional identity, an identity that reflects an individual's position and the community's position within the society. Resistance to acculturation or full membership into the CoP is also possible. Resistance might be driven by personal motivations or pressure from other influences (Wenger, 1998). Within the CoP, professionals are able to gain a sense of their professional identity.

One complication of this situation of learning within CoPs is that professionals, frequently, work with people from other professional groupings who view practice very

differently. Rather than feeling competent and confident, some professionals in these circumstances can feel less competent and isolated.[8] Whether members see differences in terms of professions or other forms of identification, boundaries separate the members. Wenger (1998) writes:

> Crossing boundaries between practices exposes our experience to different forms of engagement, different enterprises with different definitions of what matters, and different repertoires – where even elements that have the same form (e.g., the same words or artifacts) belong to different histories. By creating tension between experience and competence, crossing boundaries is a process by which learning is potentially enhanced, and potentially impaired. (p. 140)

Wenger (1998) suggests that boundaries between CoPs are bridged or crossed through two means. Boundary objects, defined as "artifacts, documents, terms, concepts, and other forms of reification around which communities of practice can organize their interconnections" (Wenger, 1998, p. 105), are used by members to translate or interpret meaning across boundaries so that members in different CoPs are able to work. Another cross-boundary connection is accomplished through members referred to as knowledge brokers, members of communities of practice who are able to make connections by introducing "elements of one practice into another" (Wenger, 1998, p. 105). These brokers belong, at least to some extent, to several CoPs and aid members in establishing ways of working together.

Crossing CoP boundaries, though, continues to be challenging, in part because of the diversity of members within CoPs. Each professional may belong to multiple CoPs. Each CoP shapes and is shaped by its individual members. For example, an engineer may actively participate in CoPs in the organization, in a religion, and at a local golf club (see Figure 1 for Wenger's depiction of multiple memberships). In each CoP, members participate in the activities of the group and learn what constitutes acceptable behaviour and what does not. Individuals may adapt to all the CoPs to which they belong, but not necessarily to the same extent (Wenger, 1998). A third complication, noted by Wenger,

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[8] The MS literature has studied individuals fearing isolation within work groups, including through Noelle-Neumann's (1984) spirals of silence theory. The theory explains the failure of members to speak their opinions; they sense that the majority of workgroup members will not accept their views (Bowen & Blackmon, 2003).

McDermott and Synder (2002), is that members of a CoP may exhibit negative patterns of behaviour: the CoP may not function well and fail to have positive outcomes. Teams with low levels of trust and exclusiveness may lead to stagnation of the practice, inability to criticize negative behaviour, and so on (Wenger et al., 2002).
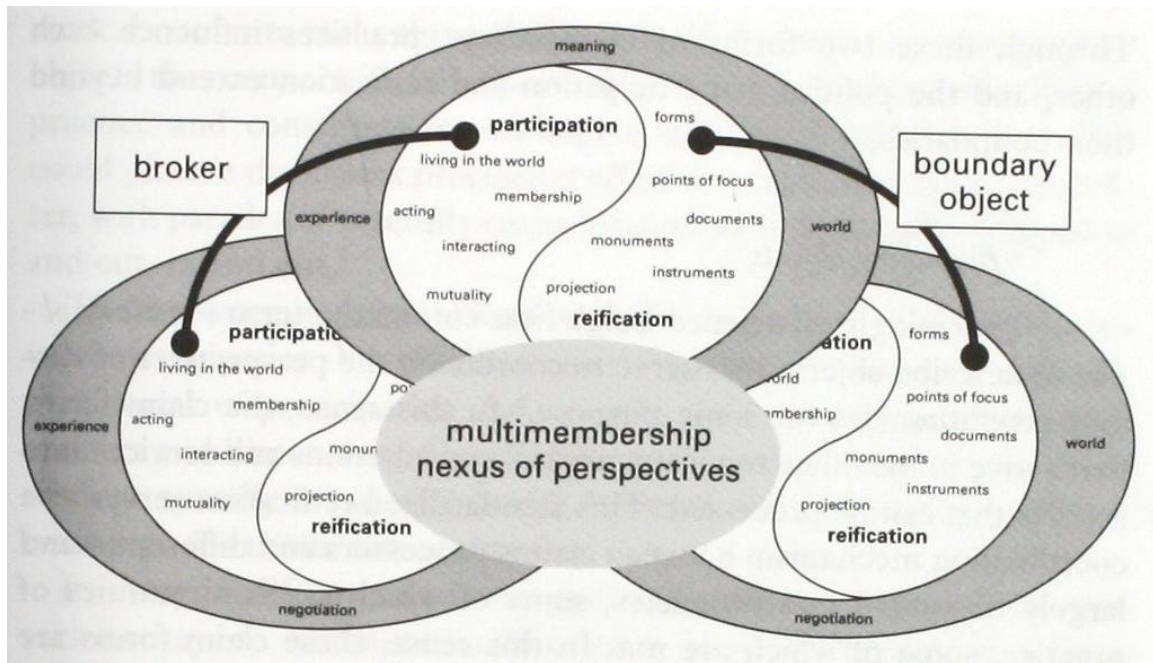
Figure 1: Wenger's (1998, p. 105) conceptualization of multi-membership nexus of
      perspectives (used with permission)

Figure 1 depicts Wenger's (1998, p. 105) conceptualization of multi-membership. The depiction shows either an individual belonging to three CoPs or an organizational unit containing three CoPs. In either case, boundaries exist between these CoPs. Within each CoP, members contribute to the viability of the group through participation in the activity and reification. The nexus of perspectives appears as a place of intersection where perspectives share some commonality. Wenger also accounts for work done across boundaries through boundary objects and/or knowledge brokers. Both boundary objects and knowledge brokers are shown in the WS and MS literature as elements that improve inter-professional team work. In both cases, common goals are realized because members of divergent CoPs come to understand, to some extent, the work of others and are thus able to contribute. In the current study's proposal team, there is evidence that boundary objects in the form of boundary genres and knowledge brokers (in the study senior

company administrators who are also on the team) help bridge the gap between CoPs. As I discuss in Chapter 5, I offer an additional avenue to boundary crossing using Wenger's conceptualization.

The current study, also, benefits from the work of Bowker and Star (1999) from Information Management on communities of practice. Drawing from Lave and Wenger (1991), Wenger (1998), and Star and Griesemer (1989), Bowker and Star discuss boundary objects as indicators of cooperative activity among CoPs. They write that the "creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting communities" (Bowker & Star, 1999, p. 297). In inter-professional teams, CoPs intersect and developing boundary objects is often seen as critical to their success, and not a case of "imperialist imposition of standards, force, and deception" (Bowker & Star, 1999, p. 297).

2.3 WS Research into Inter-Professional Teams

Researchers in WS have studied professionals writing in workplaces during the past 20 years (e.g., Artemeva & Freedman, 2001; Dias et al., 1999; Pope-Ruark, 2007; Yates & Orlikowski, 2007). At this point, I discuss a number of insights from WS research on inter-professional teams.

2.3.1 Workplace Writing

WS research often focuses on the writing practices of social groups; people within the groups – often professionals – are not merely employees working in close physical proximity but working interdependently. Many newcomers adapt to the group's ways of doing work and become members who share a sense of professional identity. Explaining the closeness of organizational groups, Paré (2010) writes that "disciplines and cultures are made up of invisible ties that bind, like some sub-atomic substance that holds objects in orbit, keeping them in relation to each other and preventing them from flying off" (p. 24). As Paré observes, those invisible ties within groups that produce the sense of inclusion (and exclusion for an individual who did not become part of the group) include explicit characteristic such as common clothing (e.g., uniforms), preferred vocabulary,

agreed upon approaches to situations, and so on, but also more subtle, tacit shared elements that by definition are much more difficult to explore but are no less an obstacle to entry into the group. Thus, studying professional and disciplinary genres has been a way for WS scholars to study both the explicit ties within groups and more tacit ones.

While adaptation to professional groups has its reward of membership, it also has its negative effect on individuals and teams. Studies have shown that the result of adaptation to a specific group often leaves individuals unaware or not appreciative of the fact that the other groups have developed different ways of working (e.g., Kellogg, Orlikowski & Yates, 2006; Paré, 2002; Winsor, 2000). Since the individual professional groups have developed communication practices that work for them, they are comfortable in their practices. To change practices might lead to feelings of loss, even loss of identity and power (Paré, 2002). Conforming to group norms, such as genre usage, is important for individuals adapting to a group, but when working with people from other groups, the situation becomes more complex (e.g., Lingard et al., 2007; Schryer & Spoel, 2005).

2.3.2 Inter-professional Workplaces or Teams

Increasingly, WS research has focused on teams composed of members from different professional groups. There has been an acknowledgement that organizations rely on a mix of professionals to produce complex documents (e.g., Geisler, Rogers, & Haller, 1998; Wilson & Herndl, 2007). Studies have explored a number of professional workplaces including software development company (Yates & Orlikowski, 2002), medical teams (Spafford, Schryer, Lingard, & Mian, 2010), marketing organizations (Kellogg et al., 2006), and a law firm (Palmeri, 2004). While studies, such as by Star and Griesemer (1989) and Fujimura (1992), explore ways for interdisciplinary groups to find a common purpose, other research has maintained that crossing boundaries between professional groups may be problematic (e.g., Forman & Markus, 2005; Palmeri, 2004).

The challenge encountered by inter-professional team members, as seen in the WS literature, stems from differences in how professionals view themselves. The establishment of an inter-professional team does not mean that the team blends together and becomes homogeneous; rather, professional distinctions are maintained resulting in

tension and sometimes conflict in teams where members work face-to-face, that is, co-located teams (Palmeri, 2004), and teams where members work at a geographical distance from one another and communicate electronically and telephonically, that is, virtual teams (Zuccchermaglio & Talamo, 2003). Tension and conflict, often, are attributed to differences in communicative practices with one group recognizing different practices as appropriate for particular rhetorical situations (e.g., Lingard et al., 2007; Palmeri, 2004; Popham, 2005). Herndl, Fennell and Miller's (1991) study into the Challenger and Three Mile Island accidents reveals how dramatic the consequences of inter-professional conflict can be: miscommunication between professional groups, specifically engineers and business managers, contributed to the tragedies. A failure to effectively communicate across professional boundaries is evident in many other studies into inter-professional teams (e.g., Journet, 1997; Ketter & Hunter, 2003; Linell, 1998).

2.3.3 Power Relations on Inter-professional Teams

WS literature has suggested that power relations in inter-professional teams play a part in undermining teamwork. Whether working in an engineering firm (Gooch, 2005; Winsor, 2000), a health research team (Lingard et al., 2007), in a hospital setting (Popham, 2005), or municipal committee (Wegner, 2004) members of inter-professional teams attribute tensions between professional groups to the social valuations inherent in our societies. Lingard et al. (2007) write that members of their inter-professional team needed to "grapple with the politics and power issues surrounding identity in a health research team" (p. 502), while Palmeri (2004) explored collaborative power dynamics associated with team members deriving power from sources within the professional groupings, the team, and external associations. He found that team members maintained links with external groups, which provided a sense of identity and power.

Winsor's (e.g., 2000, 2003) multiple studies of engineering firms attest to the complexity of working with multiple professional groupings. Even closely-associated employees, such as engineering technicians and professional engineers, struggle for dominance in the firms, as noted above.

2.3.4 Inter-professional Team Dynamics

The WS is a research field and not generally directed at practice. However, the WS literature, while seldom making recommendations for practice, does provide insight into inter-professional team conflict and tension.

2.3.4.1 Coordination of inter-professional team work

WS researchers have studied coordination practices in inter-professional teams. To a large extent, the interest in coordination or the structuring of interactions on the team (Yates & Orlikowski, 2002) has been spurred on by new technologies and distributed work practices. Yates and Orlikowski (2002) demonstrated that several genres systems enabled different groups to coordinate the workload. Yates and Orlikowski define genre systems as "sequences of interrelated communicative actions" (p. 14)[9] and "a series of genres" (p. 16). The two researchers traced electronic messages in a collaborative technology. They found that the identified genre systems structured user expectations about "the purpose, content, participants, form, time, and location of communicative interactions among members of a community" (Yates & Orlikowski, 2002, p. 31). Coordination is, thus, enabled and enhanced by systematically using genre systems, a finding that Im, Yates and Orlikowski (2005) later used to study the power of specific e-mail messages to structure and change interactions in a workplace. Kellogg et al. (2006) complicated the research situation by tracing coordination methods across different communities finding that boundary-spanning (i.e., crossing) work necessitates making work visible and legible to others. Coordination, thus, is a requirement of inter-professional teams. As Kellogg et al. (2006) suggest, it is not easily performed, nor does it solve all the challenges of working with people from very different professions.

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[9] Yates and Orlikowski (2002) drew from Bazerman (1994) for their definition of genre system.

2.3.4.2 A central team role on inter-professional teams

The WS literature has suggested that inter-professional teams benefit from people or objects that play intermediary roles on the team. Wilson and Herndl (2007), for example, propose that mediators or *translators* should sit between the professional communities on the team, thereby reducing tension and possible conflict. These translators would be able to notice when misunderstandings occur and provide translations or greater understanding into language, concepts or events used by particular professions. Another strategy proposed by Wilson and Herndl is the creation of a knowledge map or a model that would display information and reconcile diverging perspectives. They suggest that a boundary object, in their study something that allows both groups to understand what has gone on in the project such as a map or model, could create an integration of perspectives by clearly showing what is being done by each member, thus increasing understanding and willingness to work together. These strategies for helping professional group work rely on the communication professional (the writer, the rhetorician) and the knowledge map acting as avenues for finding common ground – a common understanding of group processes and a common language. Using these strategies, Wilson and Herndl claim a shared perspective can develop; documents can be produced that are agreed upon.

Often, it is the professional writer who is the translator, mediator, researcher, and drafter of documents. Wilson and Herndl (2007) picture the rhetorician as the Rosetta Stone, the key to successful collaborations. Gooch (2005) writes of the superiority of documents produced after the establishment of a group of professional writers who coach the engineering teams in writing winning proposals. Presenting writers as professionals inhabiting a middle-ground position on the team is shown, also, in Palmeri's (2004) work on the medical law team. He writes:

> Writers were in a unique position to act as mediators of nurses' and attorneys' discursive and epistemological conflicts because the writers entered the firm with little experience in law or medicine, learning most of the necessary legal and medical content knowledge 'on the job'. (p. 55)

The professional writers in the WS literature who are seen most often as quasi members of the team do provide an example of roles on inter-professional teams and to different degrees of membership (Wenger, 1998) that will inform the findings of the current study.

Other inter-professional team roles have, also, been studied. Jones' (2005) work suggests that writers become information coordinators. Lauzon's (1999), on the other hand, envisions members working together to remap or decenter their perspectives so that they can participate in the teamwork and began to reify ideas as a team. In the scenario, a new community of practice (Wenger, 1998) surfaces and problems of misunderstanding and miscommunication lessen (Lauzon, 1999). Lauzon suggests that the new inter-professional community is a product of modern technology or virtual communities, and that the decentering strategy liberates team members by allowing them to see multiple perspectives / communities.

WS research offers foundational studies on professional identity, workplace writing, and power relations. My interest in understanding the team dynamics is the impetus for looking more widely in the research literature for insights that would help explain the participants' experience within an inter-professional proposal writing team.

2.4 MS or Used in MS for Studies into Cross-functional Teams

The following section presents a number of theories, notions and a model that have been either developed in MS or used in the MS fields of study.

2.4.1 Ways to Describe Teams

Understanding the characteristics of the proposal team is important. MS does not categorize teams based on any one accepted typology (Devine et al., 1999). Teams are most often classified by the kinds of tasks performed (e.g., Hafer & Gresham, 2008; Jassawalla & Sashittal, 2006). For example, new product development teams would be one category for teams. Sometimes, teams are classified through comparisons with other teams within individual organizational contexts (e.g., Cohen & Bailey, 1997; Hackman, 1990; Webster & Wong, 2008). Whatever classification scheme is chosen, classification

often allows researchers to study and understand teams across contexts (Devine et al., 1999). Also, placing teams in distinct categories enables researchers to understand whether prior research findings are applicable to current studies.

In order to understand how the proposal team fits into the literature, I describe its compositional or structural factors including size (number of members), group development, degree of management, and presence or degree of virtualness.

Determining the size of a team is, generally, a straightforward matter of counting the membership: there are 10 members or there are 24 members, much as one would discuss a sports team's roster (e.g., Devine et al., 1999; Milliken & Martins, 1996). Group development, on the other hand, is more problematic. It has often been seen as reflecting the length of time the team has been working together (e.g., Tuckman, 1965; Tuckman & Jensen, 1977). In this widely held view, knowing the length of time contributes to the understanding of the team processes. For example, a newly established team often is seen as following a different trajectory from an existing or on-going team (Tuckman, 1965). Tuckman's model, a commonly used stage model, conceptualizes new team development as occurring in four-phases: groups form (come together), storm (experience conflict, uncertainty), norm (establish standards of behaviour, set timelines, etc.), and perform (accomplish goals). Later a fifth phase was added: adjourn (Tuckman & Jensen, 1977). Many MS researchers thus see teams moving through phases in a rough sequence from initially exhibiting lack of knowledge, skills, and willingness to work together to finally working jointly and successfully delivering team goals.[10] Moving through stages may require intervention, something not anticipated in the original Tuckman model (Rickards & Moger, 2000). Gersick (1988) depicted teams working at different speeds during different stages: initially working slowly as relationships form; then, increasing the speed of work as the deadline approaches.

An additional factor used in the description of the proposal team is the degree of management or how much supervision the team receives or requires (Devine et al., 1999; Foote & Li-Ping Tang, 2008). Teams are most often separated into two management structures: supervised teams (i.e., teams having a manager or supervisory lead) (Foote &

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[10] Alternative views of team development have, also, been proposed. Richards and Moger (2000), for example, view project team development as dependent on creative leadership.

Li-Ping Tang, 2008) and self-directed teams (i.e., teams working independently often on a project) (Douglas, Martin, & Krapels, 2006).

Another way to situate a team is determination of the extent to which the team members interact (Staples & Webster, 2008). In the MS literature, teams have often been identified in a binary fashion, as either co-located/face-to-face or distributed/virtual teams (Staples & Webster, 2008). Recently, there has been growing interest in the degree of *virtualness* of teams, as scholars and practitioners realize that definitions of team context do not capture the complexity of organizational structures or work situations (e.g., Hertel, Geister & Konradt, 2005; Staples & Webster, 2008). Staples and Webster (2008) note that teams often do not work in extremes, such as exclusively co-located or exclusively distributed settings. Even traditional, co-located teams nowadays rely on e-mail, electronic attachments, and other forms of computer support, while distributed teams members take the opportunity to meet when possible (Martins, Gilson, & Maynard, 2004). The challenge of defining hybrid or mixed-presence teams must, then, go beyond the description that they are composed of members working together and others working at a distance because the definition describes organizational units that have not been adequately defined. In order to capture the compositional complexity of an organizational unit, it is necessary to find a way to define the two main structural components (co-located and distributed) of hybrid teams.

In order to describe the degree of virtualness, Fiol and O'Connor (2005) suggest that researchers need to understand what is meant by a team being co-located, face-to-face or virtual. Fiol and O'Connor define team virtualness as "the extent of face-to-face contact among team members (encompassing amount as well as frequency of contact) and [they] suggest that technological support and dispersion represent tendencies, rather than definitional attributes of virtual teams" (p. 20). The Fiol and O'Connor scale of virtualness depicts teams as having one of the following structures: face-to-face with frequent face-to-face contact; hybrid (mixed) with occasional face-to-face contact; or pure virtual with a notable absence of any face-to-face contact. Fiol and O'Connor do not attempt to define the team's structure by how many computers it has, how diverse the technology acquired is or even the geographical distance between members. Rather, they

allow researchers to identify the main factor in studies of team dynamics: do team members interact and with what level of richness?[11]

Another factor in team composition is member function in the organization (Devine et al., 1999). Members may come from the same functional group such as a group of engineers. Cross-functional teams, on the other hand, draw from different functional or professional units usually within the same organization.

2.4.2 A Model of Team Interactions

The current study benefits from the use of McDonough's (2000) model of cross-functional team success factors (see Figure 2).
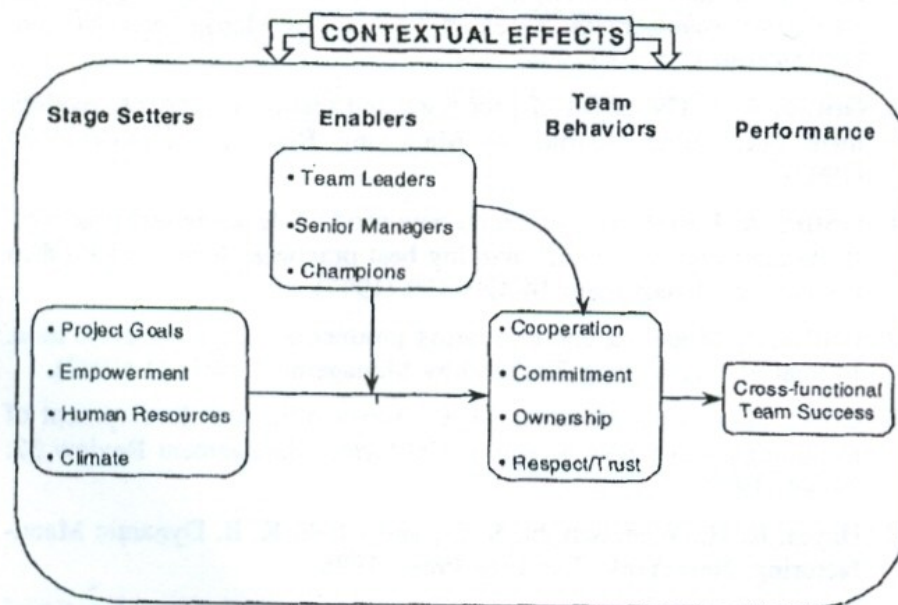
Figure 2: McDonough's (2000, p. 233) model of interaction on a team (used with permission)

While McDonough's work was published in the product innovation literature, his research falls under the management umbrella of fields.[12] The factors include: stage

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[11] Meho (2006) defines communication richness as "the ability of a communication medium to foster interaction and feedback and to permit people to communicate with many kinds of cues" (p. 1289). In other words, communication media are compared with the rich interactions achieved when people are in physical proximity to each other.

setting elements have an indirect effect on performance through influencing the most critical elements, the team behaviours (e.g., cooperation). The same indirect effect is shown for enablers such as leaders; however, enablers also can moderate effects by stage setters, thus giving these employees additional power in the model. In other words, "managers are responsible for both establishing stage-setting elements and, while the project is underway, engaging in behaviors that can significantly influence the behaviors exhibited by the team" (p. 233). In the end, arching over the model of the team are contextual effects such as size of company and industry.

At this point, I introduce the social identity theoretical approach (e.g., Tajfel, 1978; Turner, 1982) from Social Psychology. It offers further insight into the inter-professional proposal team and is used in MS as an explanatory lens.

2.4.3 Social Identity Approach

MS research on teams, in general, in the last quarter of the 20th century and into the 21st century has frequently benefitted from the use of social identity theory approach (SIT) (e.g., Hogg, Abrams, Otten, & Hinkle, 2004; Tajfel, 1978; Turner, 1982) as a way to explore team member behaviour. SIT was developed by researchers in the field of Social Psychology and later drawn upon by other fields, for example, in MS. Often the research centres on understanding social identity, intergroup relations, group-to-larger organization relations, and so on. Notions about self-categorization processes (i.e., ways in which individuals come to identify with groups or develop a social identity) have extended the theory allowing for deeper understanding of organizational phenomena such as leadership and group cohesiveness[13] (Hogg & Terry, 2000; Hornsey, 2008; Turner, 1982). These notions contribute to the present study's focus on social (here, professional) socialization.

On the basis of SIT, inter-professional teams are broken down in the literature as either nested or cross-cut groups (Hornsey & Hogg, 2000). For the purposes of the

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[12] The model was published in *Journal of Product Innovation Management*. Cross-functional teams often are seen in product innovation teams. McDonough is a management professor at Northeastern's College of Business Administration.
[13] Group cohesion and group cohesiveness are used interchangeably here to reflect MS practice.

current study, the term cross-cut is most applicable. Cross-cut groups work in a situation where members belong to a number of sub-groups, such as professional groups. The inter-professional members have affiliations with employees outside of the inter-professional team. In situations where cross-cut groups are present, researchers study the strength of the bonds between members in the sub-groups and across the sub-groups. In terms of bonds felt by members, Hornsey and Hogg (2000) report that cross-cut group members are "not as intimately bound by a superordinate group [i.e., the larger group, here, the proposal team] as are nested sub- groups [a situation where the sub-groups only work within the shared team and are not connected to external groups]" (p. 249). In other words, sub-group members retain their primary affiliations, rather than form strong bonds with the new team.

SIT explains how these primary group affiliations form: the social categories (or sub-groups in studies of teams) form through identification with other members (Tajfel, 1978). One mechanism by which individuals increase self-esteem (a valuing of the self) is through interaction within groups; people establish a social identity through inter-group social comparisons or self-categorization (Hogg & Terry, 2000). According to Hogg and Terry (2000), people evaluate their place in the world by judging that members of their group (with whom they form attachments) are better (in some way) than people who are external to the group (the self-esteem or self-enhancement hypothesis). Self-categorization theory (Hogg & Terry, 2000; Turner, 1982) contains a further hypothesis: people need to confirm that their evaluations of fellow members and members of other groups are accurate, which leads to the notion of prototypes: "fuzzy sets [of personal attributes] that capture the context-dependent features of group membership, often in the form of representations of exemplary members (actual group members who best embody the group's ideals) or ideal types" (Hogg & Terry, 2000, p. 123) such as group leaders for the current study. The consequence of reducing uncertainty about personal views of reality (feeling that they are justified in their evaluation of people and situations) is described by Hogg and Terry as:

> Certainty [of their assumptions of superior value] renders existence meaningful and confers confidence in how to behave and what to expect from the physical and social environment within which one finds oneself. Self-categorization

reduces uncertainty by transforming self-conception and assimilating self to a

prototype that describes and prescribes perceptions, attitudes, feelings, and

behaviors. (p. 124)

Hogg and Terry claim that members of inter-professional teams retain their primary

social affiliations while working together toward common, inter-professional goals. In

other words, these researchers suggest that team members maintain affiliations with their

sub-groups while working with larger teams.

The question of leadership, using the SIT approach, is important to consider.

Hogg et al. (2004) write that "group membership is psychologically more salient, and

members identify more strongly with the group, [sic] leadership endorsement and

leadership effectiveness are increasingly based on how prototypical the leader is

considered to be" (p. 261). In other words, successful leaders are seen as part of the group

and not as individuals apart from the group or sub-group. In turn, leaders must view

themselves in that way in order to be successful.

SIT and self-categorizing theory (Hogg et al., 2004; Hogg & Terry, 2000; Tajfel,

1978; Turner, 1978) as a combined approach help explain member behaviour on inter-

professional teams such as the surfacing of dominant groups and emergence of leadership

in the proposal team.

The empirical research from MS on cross-functional teams provides additional

findings (i.e., insights) that are used in the current study.

2.5 Management Studies Literature on Cross-Functional Teams

Sub-fields under the MS umbrella study individuals, teams, and organizations in an effort

to understand workplace cultures. While theory development is a major thrust of the

research in MS, practice implications remain an additional focus. In the last few decades,

for example, management has increasingly used teams of employees as a response to

changes in the global economy (e.g., Guzzo & Dickson, 1996; Hollingshead & McGrath,

1995; McGrath, Arrow & Berdahl, 2000). Researchers, noting the prevalence of teams

within organizations, investigated team processes (e.g., Chiocchio & Essiembre, 2009;

Flammia, Cleary, & Slattery, 2010; Sarker, Sarker, & Schneider, 2009), determents of

successful outcomes or effectiveness (e.g., Bushe & Coetzer, 2007; Cohen & Bailey, 1997; Wang et al., 2010), and so on. Initially, most studies dealt with homogeneous or single-function teams or teams in general (e.g., Gilley, Morris, Waite, Coates & Veliquette, 2010; Martins et al., 2004; Tekleab, Quigley & Tesluk, 2009); in time, though, other team structures have been examined including cross-functional (e.g., Carlile, 2002; Evans & Carson, 2005, Gebert, Boerner & Kearney, 2006).

2.5.1 Cross-functional Teams

Cross-functional teams are teams that display functional diversity, a situation where membership is drawn from across the organization. Lovelace, Shapiro and Weingart (2001) define cross-functional teams as teams that "bring together persons from different disciplines and functions who have pertinent expertise about the proposed innovation problem" (p. 779). Lovelace et al.'s definition serves as a definition for the current study. Generally, cross-functional teams are pictured as temporarily-convened innovation teams or project teams tasked with developing new products or services under time constraints. While the proposal team did not produce a new product, members did write a proposal offering a new service for an existing product and did so under time constraints, thereby exhibiting the required definitional attributes.

The literature on cross-functional teams includes studies examining the relationship between these teams and measures of performance; the relationship between success and characteristics of the team; and the relationship among what is termed stage setters (e.g., human resources, climate, goals for the team), enablers (e.g., leaders) and team behaviours such as cooperation, commitment, ownership, and mutual respect (McDonough, 2000) as noted above.

2.5.1.1. Advantages to cross-functional teams

Insights garnered from cross-functional team studies inform the current research study, especially in terms of communication and leadership, as I explain shortly. Cross-functional teams present organizations with advantages: the fact that members are drawn

from a number of functional units may ensure that teams hear from multiple viewpoints and varied expertise (Proehl, 1997). Functional diversity has been found to provide high levels of innovativeness (a result of the multiple viewpoints and expertise), necessary in a competitive marketplace (Lovelace et al., 2001). Another finding is that cross-functional teams tend to be successful in getting new products to market faster than homogeneous teams (single-function groups), probably because of the availability of expertise from multiple professions in the organization (Kessler & Chakraharti, 1996). High product quality, budget and schedule performance, and member satisfaction with outcomes were also in evidence in these teams (Hauptman & Hiji, 1996).

When cross-functional teams work well, higher levels of creative tension are noted and that tension leads to innovative thinking (Keller, 2001). Keller (2001) explains that creative tension springs directly from the functional diversity. He writes that the teams enhance the organization's ability to respond to competitive pressures:

> having multiple forces pulling in different directions stimulated creative thought and resulted in technical achievement. A cross-functional project group can provide this sort of environment with the stresses and strains of different functional, educational, and cultural perspectives from members of upstream and downstream units, as well as pressure for speed to market. (p. 553)

Proehl (1997) adds that functional diversity, which may result in tension in general, also means that the team has a variety of employees to relate to other units in the larger organization and to customers. For example, the team members from sales can talk to customers, while the engineers can discuss detailed applications with technical staff from the customer's company. The relationship of team members and external (to the team) employees is viewed as a positive benefit of cross-functional teams.

2.5.1.2 General challenges of cross-functional teams

While Jassawalla and Sachittal (2006) reinforce the idea of the positive potential of cross-functional teams in their study of collaborative practices, they also indicate that there are challenges to the organizational unit. They found that cross-functional teams were characterized by "micro-cultures and calcified boundaries between *us* and *them*" (p. 2). In

order to achieve collaboration, they suggest greater levels of transparency, mindfulness, and synergy. In their estimation, team members, senior management, and organizational culture play a role in attaining positive, team collaborations.

Other researchers have also found that the same creative tension that produces technical achievement and positive outcomes, also contributes to appreciable problems (Parker, 1994; Simsarian Webber, 2002). The differences in professional experiences, education, and culture lead to misunderstanding and miscommunication among the functional units on the cross-functional team (Simsarian Webber, 2002). In addition, members experience divided loyalties as they report both to the team supervisor and functional unit supervisory staff (Proehl, 1997). Studies have concluded that the conflict in cross-functional groups often has a direct effect on job stress, job satisfaction, and higher employee turn-over rates compared to homogeneous teams (Keller, 2001). Keller (2001) suggested that the situation produces an indirect effect of lower levels of group cohesiveness.[14]

Many of the studies negate the commonly held belief by the public that team membership diversity automatically leads to positive results. A number of reasons have been suggested for the situation including, as previously discussed, differences attributable to professional socialization. Task has, also, been found to play a role in whether teams (including cross-functional teams) teams experience successful performance outcomes (e.g., Bullen & Bennett, 1993; McGrath, 1991; Salas, Sims & Burke, 2005). An early study by Ancona and Caldwell (1992), in fact, found that except for innovation teams, which require multiple kinds of expertise, homogeneous teams perform generally better than cross-functional teams. Chen, Sanchez-Burks and Lee (2008) argue that the affects of functional diversity must be reduced by an integration of the team members' social identities. Positive performance outcomes will, accordingly, improve. Stewart and Barrick (2000) found that team task moderated structural characteristics of the team and its performance outcomes. De Dreu and Weingart (2003) found that when teams had a highly complex task (such as developing a proposal),

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[14] Keller (2001) found that innovation teams (e.g., product development teams) benefit from a cross-functional team structure. Whether the proposal writing team was an innovation team has been debated. In the end, we can certainly see that the team was producing knowledge and not screws on a shop floor. It has its innovative characteristics (e.g., development of a new repair procedure and writing of an unfamiliar genre). The team benefited from the diversity of its membership.

conflict had a more serious impact on team performance. In other words, the kind of task affects the level of conflict, and since conflict impacts performance, task indirectly impacts that performance as well. Some research, however, has disputed the idea that cross-functional team structures are only appropriate for innovation teams. As noted below, McDonough (2000) suggested that the positive performance outcomes are more generalized: cross-functional team success is achieved in innovation teams and many other kinds of teams. In his view, context changes team performance. Context, naturally, includes task but also other factors (McDonough, 2000). Pinto, Pinto, and Prescott's (1993) study findings indicate that obtaining member cooperation – regardless of the task – was a significant predictor of team success. In fact, Pinto et al. found that if cooperation was evident, team members perceived that they had accomplished their task, whatever it was.

2.5.1.3 Proposed interventions for cross-functional teams

The MS literature offers a number of proposed interventions for improvement of the cross-functional team. MS researchers, as noted above, are generally interested in improving the effectiveness of teams. The first intervention takes a generalized approach where many factors are considered critical to success. Proehl's (1997) study of one of the largest transit companies in the United States during a time when the company was experiencing a flattening of the organizational structure reveals a number of interventions. The whole company in Proehl's study was reorganized into cross-functional teams. Through leadership training, development of open-minded employees, management support, and adequate levels of internal and external communication, the cross-functional teams developed into units where "respect, open communication and mutuality among members were factors critical to success" (p. 144). While the study is a valuable exploration of organizational transformation, it does not illuminate what a relatively small cross-functional team would experience in a traditional, functionally divided company. Whether the interventions used would produce the same results is questionable. Other studies have focused on selection of team members (Randel & Jaussi,

2003) and on increasing social capital (Evans & Carson, 2005), as moderators of the negative effects of diversity so as to improve performance.

The next section reviews selected MS studies on cross-functional teams; in particular, the review offers findings that provide insight into the role of communication and leadership on these teams. No attempt was made to extensively review the literature on individual team elements or team structures such as the literature on leadership in organizations. I selected studies focused on cross-functional teams in an attempt to understand the proposal team. It must be noted that MS is large grouping of fields encompassing thousands of researchers, each attempting to understand organizations. The selected studies may indeed yield conflicting findings from other studies from the MS literature. The reviewed studies provide insight into the current study.

2.6 Studies Exploring Communication in Cross-functional Teams

Unlike in WS, in MS communication is often conceptualized sometimes as a by-product or conduit for work (Miller, 2005); however, communication is rarely discussed as merely information transfer or a simple process of moving ideas completely from one individual to the next. Communication is often viewed as complicated, essential, certainly social and a powerful team process in need of constant improvement by individuals.

From the early 1990s, the MS literature explored the role communication plays in cross-functional team success. Ancona and Caldwell (1992) found that external communication[15] had, in their view, a mediating effect on cross-functional team performance success. In particular, they saw that communication content and not the frequency of external communication is pivotal for work that crosses boundaries (Ancona & Caldwell, 1992). External communication occurs when team members connect with groups outside the team. Typically, team members communicate with employees from their substantive functional units, thereby allowing team members to gain additional expertise. The team members, then, take the information back to the team environment

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[15] External communication is here viewed as communication between team members and their substantive units (Ancona & Caldwell, 1992).

and team project. The team diversity, in this case, brings with it higher levels of expertise, often a requirement for successful project completion.

Cross-functional teams do experience difficulties associated with functional diversity and often attribute the difficulties to communication challenges; thus, researchers have looked for ways to improve communication (Ancona & Caldwell, 1992; Keller, 2001; Lovelace et al., 2001). Ancona and Caldwell (1992) recommended that team members experiencing communication difficulties should practice negotiation and conflict resolution skills to improve internal communication and other group processes. Keller (2001) suggested that managers should select team members who are "the proper mix of functions and people to enhance external communication" (p. 2001). Additionally, managers should moderate job stress in order to increase group cohesiveness, often an indicator of positive performance outcomes. Finally, Keller (2001) argued for the establishment of dialogue groups in which team members could address concerns and grow in understanding of others. While Keller identified the positive effect of connections with external groups, he failed to identify exactly what would constitute "the proper mix" of team members who drew on the expertise of external units. Also, he neglected to notice that external communication might lead to complications, including in reporting structures (Proehl, 1997). Proehl (1997) addressed the situation where team performance is affected by members feeling pressure to work for both their substantive group and the project team. Stress and dissatisfaction were noted if the goals of the two groups are not aligned.

Other research has focused on studying the complexity of communication across functional units. Lovelace et al. (2001) addressed the issue of the "inevitable disagreements" (p. 779) that occur in cross-functional teams, where members differ in professional socialization experiences. The researchers concluded that performance success is improved through collaborative communication, a situation where members are trained to communicate in a manner in which they feel that their ideas are listened to rather than dismissed.

2.6.1. Coordinating work through communicative interventions

Interventions involving improvement in communication and coordination across sub-group boundaries have been proposed. Santa, Ferrer, Bretherton and Hyland (2010) suggest that teams need performance objectives or goals, especially regarding the quality and speed of work, which cannot be attained without member understanding and agreement. Their strategy for improving the team processes, including coordination, is the addition of boundary-spanning agents or conciliators who are "the members of the cross-functional team in charge of translating and sorting the language of managers, engineers and operators or general users, so the information is meaningful to all members" (p. 163). In this case, agents manage the conflict between groups through the development of common language. While never using the term "professional writer" the job description of agent, conciliator and translator is remarkably close to the WS notion of the boundary crossing professional writer's role.

Rather than agents bridging the functional units, other research has advocated for the use of boundary objects. Carlile (2002) studied the use of boundary objects used by the functional units on a team as a way of investigating functional knowledge that is "localized, embedded, and invested" (p. 442) within the sub-group. Using Lave and Wenger's (1991) notion of community of practice, Carlile suggests that knowing is established through practice, learned through experience with others, and valued because it is what is known as workable. Carlile's view of knowledge generation allowed him to recognize the nature of knowledge within the communities of practice (referencing Lave & Wenger, 1991) within the functional sub-groups. A suitable boundary object that will be used by the sub-groups must exhibit a shared language to represent knowledge; it must be a concrete means to identify differences across boundaries; and it must provide an opportunity for members to transform their knowledge together. Carlile acknowledges, however, that there is no "magic bullet" (p. 452) because situations change, and more work then has to be done by the cross-functional team.

In addition to communication, MS research has addressed the issue of leadership on cross-functional teams, a topic discussed in the next sub-section.

2.6.2 Studies Exploring Leadership in Cross-functional Teams.

The importance of studying team leadership is understood by MS scholars. Leadership is viewed as a basic element of any organizational unit. Leadership is often examined through lists of attributes, and it is described as a power relationship, or even seen as an instrument of goal achievement (Northouse, 1997). In the following MS literature, a number of perspectives on leadership can be ascertained including assigned and emergent leadership. In either case, Northouse writes: "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). It must be noted that individuals displaying leadership qualities and playing leadership roles are shaped by the group and must conform to group expectations (e.g., writing conventions) in order to be taken as part of the group, even while asserting individual exigencies. This is a characterization which adds a social perspective to a role typically viewed as individualistic (Northouse, 1997).

Much of the literature on cross-functional teams has touched on the issue of leadership, although little discussion has taken place on the nature of the leadership required, an issue that the current study tackles. In fact, leadership is often conceptualized as assigned by top management (also referred to as positional or legitimate leadership in the literature) such as when a manager assumes control of a cross-functional team so that activities can be regulated in ways deemed appropriate by management. Lovelace et al. (2001), for example, suggested communication on the team must be managed or moderated by leaders; thus, placing a manager into the team is seen as a key element of performance success.

Other factors have been identified as contributing to team success that at first do not seem to link to leadership. As noted above, Pinto et al. (1993) investigated whether antecedent constructs, such as manager goal setting, affected project outcomes through influencing cross-function cooperation. Cooperation has been identified as an important team process. They found that establishing goals, physical member proximity (i.e., closeness) and formalized rules and procedures contributed to positive outcomes and improvements. These three antecedent constructs, it was noted, were achieved through strong management. Assigned leadership, thus, was determined to be crucial.

36

Another factor in team success, not initially linked to leadership, is trust. Simsarian Webber's (2002) conceptual article discussed the development of a climate of trust on teams as a method of improving team performance, and thereby organizational effectiveness. Noting that effective teams depend on team processes, especially communication, cooperation, and coordination, she posited that trust is the key process in team success; it allows members to feel comfortable with others and get on with the work. In this situation, information is more freely exchanged (Goddard, 2003). Simsarian Webber posits that barriers between groups are minimized through development of trust because high levels of trust allow members to overcome the natural tension between groups. Describing the diverse groups, she indicated that "value differences stemming from functional diversity, time allocation heterogeneity and differences in reporting structures result in lower trust with the team" (p. 204). That was a situation that Simsarian Webber maintained could be improved by strong leadership. Leaders, in this case assigned leaders, should have input into member selection; they should select employees from similar levels within the wider organization; they should choose employees who have worked together or on other cross-functional teams; and they should manage relationships on the team.

The kind of leader required by cross-functional teams has been debated. While Simsarian Webber's (2002) conceptualization of a leader might reflect one more integrated into the team, Jassawalla and Sashittal (2006) suggest that leaders should be selected by senior management and not appointed by a powerful sub-group; they should sit in intermediary positions between sub-groups: they should "hold no clear functional group affiliations, and often symbolize equality of status and stature to all participants" (p. 17). In either case, once again, assigned leadership is seen as a powerful key to team success.

2.6.2.1 The context of the team

MS research into factors that contribute to successful team outcomes (such as leadership) is notable by its quantity and quality. Some researchers, though, contend that little has been done to identify the specific circumstances, or context, in which cross-functional

teams are able to succeed despite the team's structural importance to organizations (e.g., Johns, 2001; McDonough, 2000). In other words, research often fails to acknowledge that context may influence or affect other factors. The same team may succeed in one context and fail in other (Johns, 2001). While in McDonough's (2000) model team success factors fall into three categories, the factors are presented as working together to facilitate team success. Most importantly, McDonough claims, *context* changes teams and expectations of what might enhance positive performance outcomes. Devine et al. (1999) insist that "teams cannot be understood independent of their context, and knowledge pertaining to teams in one setting does not necessarily generalize to teams in other settings" (p. 681). Bryman, Stephens & à Campo (1996) found that context influenced the way leadership was viewed by team members. For example, if senior management is changed and becomes unsupportive, the team is not resourced in a manner that enables successful completion of the project. In fact, many factors within specific contexts work together to achieve successful team outcomes (Johns, 2001; McDonough, 2000). McDonough suggests that "the route to project success is a complex one and may involve the intricate interplay among different elements [e.g., goals] from different categories [e.g., team behaviours] and in different combinations to bring about successful performance" (p. 231-232).

Rather than only emphasizing the role of assigned leaders in cross-functional team success, I now look at a second leadership role on cross-functional teams: emergent or emerging leadership.

2.6.2.2 Emergent leadership

Emerging or emergent leadership is a focus of some MS research. Often emerging leadership is associated with and, therefore, studied in self-managed (or self-directed or autonomous) or virtual teams (e.g., Carte, Chidambaram & Becker, 2006; Tagger, Hackett, & Saha, 1999). While self-directed and/or virtual teams may have supervisors directing the overarching work of the team, members often take on leadership responsibilities as time goes on. These leaders often emerge when teams require direction (i.e., coordination or better communication practices) in order to improve productivity

(Yamaguchi & Maehr, 2004). They emerge because of personal or team characteristics including individual differences such as gender, group differences such as group composition, and differences in context (Yamaguchi & Maehr, 2004).

As noted, emerging leadership has often been studied in self-managed or self-directed teams where team members or peers work interdependently without direct supervision (Yukl, 1998). In order to establish and then accomplish joint task objectives, often one individual becomes pivotal, and he or she exhibits leadership behaviours that contribute to positive team outcomes. Research into virtual teams has also included discussion of the role of peer or emerging leadership (Carte, Chidambaram & Becker, 2006). With members working in geographically dispersed locations, often without any supervision, leaders emerge as time constraints press the members to complete tasks and projects (Yukl, 1998).

Kickul and Neuman's (2000) study looked at the personality traits and cognitive abilities of emerging leaders in order to distinguish what kind of personal characteristics emerging leaders have and whether those characteristics assist the team in its work. Their study reflects an interest in individual rather than social traits of team members.[16] The researchers found that extroversion and openness to experience (two personality traits), as well as cognitive abilities, contribute to leadership potential and that, in turn, correlated to teamwork effectiveness. Of the personality trait of "openness to experience" Kickul and Neuman write that it "is characteristics of individuals who are curious, broad-minded, creative, and imaginative as opposed to individuals who are unanalytical and possess conventional and narrow ideas" (p. 44). In my study, I see openness to experience as including broad-mindedness, which I would define here as a growing understanding and acceptance of the work of other groups.

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[16] There are many researchers in psychology (and related fields) who study personality factors in an attempt to understand and predict behaviour. Models and tests for factors have been developed from a number of perspectives. The work here centres only on Kickul and Neuman's (2000) findings as a tentative explanation of one aspect of emergent leadership on the team. No attempt was made to assess or measure formally openness to experience or any other trait/personality factor.

2.7 Using Insights from the Literatures

In the current study, the research benefits from combining aspects of the social and individual perspectives of WS and MS (and selected insights from a number of other fields). Using SIT's approach to groups (Tajfel, 1978) and Wenger's (1998) notions of CoPs, I view team members as socialized into professional communities where members form social (here, professional) identities that allow them to function as members of those communities. Practicing their professions entails participation in accepted activities and reification of those activities. Those ways of working, including genre preferences, are brought to the proposal team and result in positive and negative consequences for the group, individual, and performance outcomes. Rhetorical Genres Studies' conceptualization of genres as social action (Miller, 1984/1994, Schryer, 1994) allows for study of the sub-groups', team's, and larger organization's communicative responses to the rhetorical situation of needing to write an engineering proposal. Influences on the proposal team, member status, power relationships, and team behaviours including cooperation, coordination, and communication flow are notable through RGS analysis of the genres used by the team members.

Tension and conflict resulting from professional differences have been studied in both fields with researchers advocating, implicitly or explicitly, various approaches to improving team dynamics and outcomes (e.g., Jassawalla & Sachittal, 2006; Lovelace et al., 2001; Palmeri, 2004; Popham, 2005; Proehl, 1997; Wilson & Herndl, 2007; Yates & Orlikowski, 2002) . For example, in MS Lovelace et al. (2001) found that homogeneous teams experience less conflict and called for collaborative communication practices in cross- functional teams, but failed to note specific practices. Lower levels of group cohesiveness, job satisfaction, and trust, resulting in higher member turnover, are seen on inter-professional teams (e.g., Simsarian Webber, 2002). The nature of the task, in some studies, has been identified as a potential moderator of the effectiveness of functional diversity on team performance (e.g., Hoegl, Parboteeah & Gemeuenden, 2003; Hollingshead, McGrath & O'Connor, 1993). In other words, researchers have wondered whether the kind of task (its complexity, its innovativeness, and so on) might indicate a

higher or lower potential for team success. At this point in time, little consensus on findings is seen in the literature.

WS studies illuminate the level of disharmony often experienced by professional sub-groups as they attempt to work through projects using their own written discourses (e.g., Geisler et al., 1998; Gooch, 2005; Lingard et al., 2003; Palmeri, 2004), while MS studies concentrate on factors that might lead to successful completion of projects (e.g., Jassawalla & Sashittal, 2006; Keller, 2001; McDonough, 2000). The proposal team (with various professional groups, short project time and little experience with inter-professional teams or writing proposals) might have indicated a high probability of failure or at least high levels of conflict.

In the next chapter, I describe the methodology for the study: I situate the company, team, and team members within their context; I introduce the data collection methods; and I explain the data analysis methods.

Chapter 3 Research Methods

> By studying texts within their contexts, we study as well the dynamics of context
> building. In particular, by understanding texts within the professions, we
> understand how the professions constitute themselves and carry out their work
> through texts. (Bazerman & Paradis, 1991, p. 3)

In this chapter I discuss the research design decisions made for the qualitative and
interdisciplinary study presented in this dissertation. In many ways, the study's focus on
the inter-professional team is a case of "an intersection of concerns" (Bazerman, 2011, p.
19), an opportunity to explore the problem from a number of disciplinary perspectives.
The chapter introduces the context and describes the overall research design, the role of
the researcher in the study, followed by the data collection methods and data analysis
strategies.

The current study's over-arching research interest is focused on professionals
"Carry[ing] out their work through texts" (Bazerman & Paradis, 1991, p. 3). Watching
the proposal team brings up one major question: Why was the team under study able to
work successfully together on a proposal, despite the presence of multiple professional
groups? We need to understand how the inter-professional proposal team developed a
text that responded to a particular rhetorical situation. Therefore, it is important to situate
the team within its specific context before the research methodology is discussed.

3.1 Context of the Study

ABC Engineering, a medium-sized North American firm with 600 employees, with a
considerable staff with a military background, focuses on providing engineering services
for commercial and government clients. ABC Engineering is an agreed upon pseudonym
for the company, chosen to protect confidentiality as outlined in the approved application
to the Dalhousie Social Sciences and Humanities Research Board. ABC Engineering's
organizational structure is hierarchical with an executive level, managers, and
subordinate employees working in distinct units. The units reflect functional necessities
of the business with some unit employees providing engineering or finance services and

others running specific programs for the company. One unit, for example, services the multi-year, complex contract that ensures the maintenance of government products.

ABC Engineering has a number of facilities including a head office located in a metropolitan area and fifteen off-site service depots located across the continent. Rather than an impressive corporate structure, head office consists of 11 warehouse-like buildings located on a two-kilometre stretch of property. While the executive level and central services' employees work in a well-appointed main building, other employees are scattered in other buildings more notable for their repair facilities than their office decor. The distance between buildings is a barrier to easy face-to-face communication. Compounding the challenge of employees' physical separation are two notable characteristics of the workplace at ABC Engineering: most employees drive to work and securing parking spots is difficult. Once parked, employees are reluctant to move their vehicles, drive to another building, struggle to find a spot, and then return to their own building and struggle again. A second feature of the workplace is a slow adoption of communication technology. The company has an Oracle-based common hard drive, which is not adequately used. Up-dating business or technical material is seldom done. Knowledge of the material's existence is even limited. An example of such material is a manual (PPM # 704) outlining the steps required for proposal development. Employees did not access the manual, although it was easily available. Generally, employees rely on e-mail and phone connections to overcome the distributed situation, and yet the employees do not have up-to-date means of electronic communication. Laptops and smart phones, such as Blackberries or IPhones, appear to be viewed either as threats to company security or financial extravagances; their absence and the distance between buildings (and off-site distances), limit and control communication connections considerably.

A majority of ABC Engineering's employees work off-site – away from headquarters. These distributed employees have the same challenges as the employees at headquarters, but the challenges are compounded by greater distances. The employees at the off-site locations work in client organizations, effectively making them almost part of the client-company and part of the client's group. Physical distance between the off-site ABC Engineering employee groups and headquarters, limited communication tools, and

tendency to integrate into the client's organization result in management challenges. Managers must travel frequently in order to ensure proper employee supervision, as well as client relations. They spend a great deal of time e-mailing and phoning employees. Working on an inter-professional team across physical distances brings these challenges to the fore.

The proposal team selected for the study was one that had been working on the unsolicited bid for approximately six months when I started the research. The proposal called for additional repair work under an existing contract with the client. The proposal team represented a loosely-structured organizational unit with members pulled from a number of professional groups: Engineering (a technical group), Contracts (business employees who work on developing contracts) and the program (largely technical employees handling the repair work on the product). The proposal team consisted of 12 foundational members: five professional engineers, two Contracts' people[17], and five technical[18] employees. From the technical group, two members were top-level managers of a program (from now on referred to as the Program; the objects that required repair will be referred to as the Product). Two more members were site managers and, therefore, worked in a distributed fashion both with the proposal team and in general. The last member worked as technical support for the engineering unit often planning logistics for operations. An additional, thirteenth person, with both an engineering designation and a Master's of Business Administration, played a peripheral role on the proposal team at various times, as did a large number of other company employees from various levels and units who were called upon to contribute expertise. Another individual played a peripheral role on the proposal team and, also, functioned as one of a number of key informants. In this group of 12 members, eight members were former military members. Ranks varied from mid-level military personnel to senior officers. The thirteenth individual was not from the military. Few team members at first worked full time on the

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[17] Engineers run businesses and thus are business people. However, for the purposes of the study the term "business people" is used to denote the people who deal with the accounting and contractual aspects of the company's work. Engineers in the study are not employees who have worked in firms running the business side of the practice. The business people are corporate people with accounting backgrounds and wholly commercial experience.

[18] Technical employee is a descriptor for non-engineer and non-business employee. Most of these people were trained in the military to service or manage the Products.

proposal's development, with the exception of an engineer from Engineering and the lead writer who was an executive. Later, as the deadline approached and then again in the subsequent work (Phase 2), a number of other members from the Program unit assumed an increased team workload.

3.2 Proposal Team Description and Its Work

ABC Engineering's proposal team defied an easy head count because it changed with the phase of work and member perceptions (i.e., membership was fluid). For example, initially the executives selected members from the units. From the executives' perspective, the proposal team included them. The selected members, sometimes, included executives from their own sub-groups, but excluded executives from sub-groups with which they did not work. Much of the proposal team's work was directed through a few early meetings and then through phone conversations, corridor discussions or e-mail exchanges. As work was assigned or agreed upon, team members turned to their own sub-groups to complete the directives or requirements. The team, therefore, functioned as a cross-cut team (Hornsey & Hogg, 2000), one that has strong ties to external groups. When discussing proposal team's membership, some members included lower level employees within the individual sub-groups and others did not. Member perceptions also changed over time because employees sometimes were called upon to contribute during an initial phase and then returned to other work. At other times, distributed members self-identified as team members and at other times they did not.

3.2.1 Group Development

The proposal team's development could be viewed as commencing at an executive-level meeting in April 2009. The Engineering sub-group presented a case for improvements for servicing the Product. The existing contract for the Product did not include the proposed work; consequently, the proposed repair work was potentially a new income source for the company. Jordie, the VP Engineering, wrote in a summary e-mail (a text much like meeting minutes[19]):

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[19] I discuss a number of kinds of e-mail correspondence in Chapters 4 and 5.

In order to get agreement from the client in a timely manner, Henry proposed that we form a team to prepare a proposal that is based on the assessment being conducted at HQ facilities utilizing resources from off-site and HQ. This e-mail is to summarize the agreement on the approach reached in our discussions today and to propose the next steps. (Jordie-EM-May19, 2009)[20]

The proposal team was established that same month.

Jordie's e-mail identified a number of necessary roles on the proposal team. Several members were already assigned, notably the members from the Program (Henry, Kevin and Lawrence). A number of key members were not identified at this point, while several people who were named did not contribute in any notable way. Despite the e-mail misidentifications or subsequent changes in role status, Engineering, Contracts, and the Program team members were already busily tracking down information for the proposal.

The proposal team's development differed from Tuckman's (1965) description of team development. Generally, teams that are newly established are presented as having a definite inception point and a notable end point. In organizations, team members are brought together for projects, the work is completed, and members then go on to other work. The proposal team certainly developed over the months; the artefacts such as e-mails and interviews reflected establishment of social relationships, task assignments, and finally completion of the proposal. However, there were complications in team development; the proposal process was broken up into two distinct phases with a gap in time between them: completion of an initial phase in July 2009, re-establishment of a slightly modified proposal team in January 2010, and completion of a modified proposal in the next month. The proposal team, thus, moved from a new, temporarily instituted team to a more established team. ABC Engineering's proposal team continued to work on the versions of the proposal from May 2009 to at least February, 2010, a fact that necessitated on-going discussion, decision making, and realignment of work flow.

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[20] As explained later in the chapter, direct quotations from participants and documents follow a name, document, date format.

3.2.2 Degree of Management of the Team

The proposal team took direction from the executives on most matters, including decisions about company preferences for the location of the Program's work on the Product, contractual matters, and financial issues. In fact, the client was frequently consulted, and decisions often reflected client preferences or demands. At the same time, though, members of the proposal team representing sub-groups, such as Engineering, worked day-to-day in a self-directed fashion, at least to some extent. Most members were experienced employees, and they carried out their duties without undue supervision.

3.2.3 Presence or Degree of Virtualness of the Team

The proposal team in terms of its presence or degree of virtualness again is notable for its hybrid nature. Members were both co-located and distributed. The proposal team's overall description, therefore, reflects a level of complexity seldom depicted in studies in that it was hybrid in its membership composition, size, group development, degree of management, and presence.

3.2.4 The Hybrid Nature of the Proposal Team

Figure 3 depicts the proposal team's inter-professional structure.
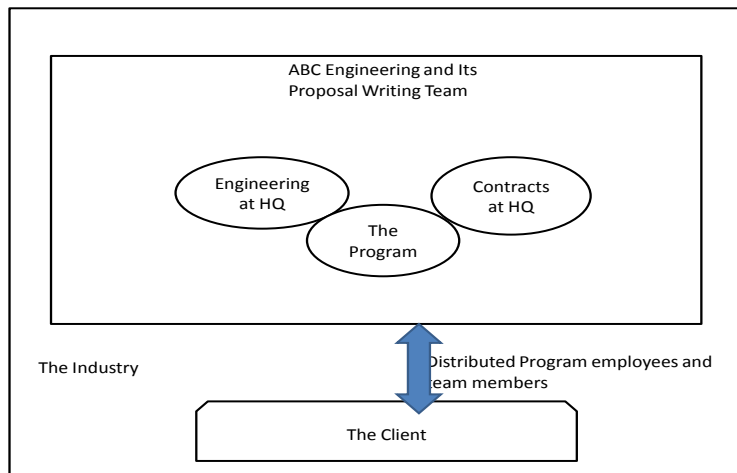
Figure 3: The proposal team in the company and industry

The main sub-groups include Engineering, Contract, and the Program, which are described below. Other units participated to a more limited extent. Noteworthy is the link between the Program and the client organization.

3.3 Proposal Team Membership Composition

Each sub-group is described briefly below along with its contribution to the inter-professional team. Although the sub-groups are typically known as units within the company, for the purposes of this study when I discuss the proposal team, they will be referred to as sub-groups until Chapter 6 when I return to the literature from the fields and employ the theoretical lenses. At that point, the sub-groups will be discussed as communities of practice (Lave & Wenger, 1991; Wenger, 1998).

3.3.1 Engineering. The employees in the Engineering Unit are university-educated engineers with military or civilian work experience. They are trained to identify and solve technical problems with products or services, and they work primarily in teams. On the proposal team, the engineers served as technical experts, determining repair-work specifications for the Product and ensuring that the proposed solution succeeded in ameliorating the situation for the client. Without their technical expertise, the problem would not have been identified, nor would the solution have been developed.

3.3.2 Technical support. Technical support employees have been trained in the military or at community college to work on the products built and/or serviced by ABC Engineering. Some technical employees, rather than doing hands-on repair work, support ABC Engineering's contracts by providing logistical support. In the case of the development of the proposal, a number of technical staff members at headquarters and off-site provided the detailed information that allowed others to plan for servicing the Product. The engineers required the support of these employees. Without the knowledge of the Product provided by technical employees, the engineers could not have written the proposal's technical annexes. The Program Unit employs a large number of the technical employees. For the purposes of the study, this group of employees is subsumed into the Engineering group or the Program since they work in conjunction with these units.

3.3.3 Contracts. This unit is composed of business-directed, civilian-trained employees most with accounting backgrounds. In a similar fashion to Engineering, Contracts works as a central unit serving the needs of all the other units. Contracts' employees provide contracts advice and guidance. In addition, the unit acts as a watchdog for the company's interests through careful reviewing of all contracts to ensure compliance to national and international standards, fulfillment of contractual obligations, and attainment of the company's financial well-being. The proposal team could not have developed the business case for the various options, nor the final costing schedules without the unit's employees. When the proposal was finished, the Manager of Contracts reviewed all sections of the proposal, and he was one of two people who released the document to the client.

3.3.4 The Program. The Program Unit is an independently functioning department at ABC Engineering in that its employees include employees who service a multi-year, multi-million dollar contract. The work focuses on products owned by the government. The Program's employees sometimes self-identify with the Program and the client, rather than the company. Employees from other units in the company often do not see the Program employees as employees since most of the servicing work is done off-site. The Program's employees on the proposal development team played pivotal roles since they were most familiar with the Product. These employees also realized from the outset that they would continue to work with the Product upon acceptance of the proposal.

3.4 The Individual Team Members

3.4.1 Team Members' Writing Experience

The team members' professional backgrounds, time in the workforce, experience with inter-professional teams, and writing efforts on the proposal team varied. At this point, I want to describe the team members' experience writing since that knowledge impacts on their roles on the proposal team. As noted above, eight of the 12 foundational members came from the military. In the military, mid-level and senior members follow

professional development courses including a number of communication courses. The vice presidents on the team, in particular, were articulate about effective writing and skilled at military-style documents. Their mid-level counterparts had also been trained as administrative writers and wrote very competently. They had developed openness about external review and criticism of their writing. The technical employees were self-admittedly less skilled in writing and expressed a disregard for most non-technical and non-military writing finding that civilian-trained employees took too much time to get to the point in their writing. Employees from the commercial world, whether they were engineers, Contracts' employees, or technical staff, noted differences in writing styles between the military and civilian/commercial worlds. Civilian employees had had little opportunity for writing instruction within their educational programs and little opportunity at work to improve their skills or increase their writing comfort level in the workplace.

3.4.2 Team Members' Backgrounds

Team member are introduced in this section by their sub-group affiliation, professional background, and role on the proposal team. The first four members (Jordie, Gene, Angus and Patrick) work in the Engineering Unit. The fifth member is Thomas, the initial lead writer. The next five members (Henry, Kevin, Lawrence, Jim and John) work within the Program. James and Stephanie are Contracts Unit employees, while the last member, Carey, is the VP of Marketing.

Jordie.

Vice President, Engineering – Jordie's background as a senior member of the military prepared him for his executive role in the company. His engineering background gave him understanding of the logistics of working on the Product. Although he had been with ABC Engineering for only a few months, he served as the gatekeeper and the key informant. He was able to explain the general operation of the company, inception of the proposal team, its purpose, and its writing processes. His unit initiated the discussion of repairing the Product, and he participated in the initial executive-level strategy discussions and subsequent decision making process. Drawing a group of employees

together who could accomplish the task, delegating the engineering work to his subordinates, reviewing drafts, and continuing a relationship with the client were some of his other contributions to the proposal team's efforts.

Gene.

Senior Engineer, Engineering Unit – Gene participated in any general meetings and offered his engineering expertise to the development of the engineering annexes. Although he wrote small sections, his contribution was limited on the proposal. His expertise was sought and received on specific areas that required technical input.

Angus.

Engineer, Engineering – Angus was assigned the task of providing the required engineering expertise for the proposal. His unit had identified the problem with the Product, and he became an enthusiastic, hardworking advocate for its resolution. A civilian-trained professional engineer with no proposal writing experience, Angus worked in an almost exclusively military-trained unit. His experience with similar products allowed him to understand the requirements of the Product. Angus came to play a pivotal role for the successful completion of the project.

Patrick.

Technician – Patrick played a support role on the proposal team. In fact, he was not normally invited to the team meetings, nor did he consider his contribution as warranting inclusion; however, he and his technical unit developed the logistics for the proposal that allowed Contracts to determine the cost of the project. Patrick was civilian trained at the community college level and had been at ABC Engineering his whole career.

Thomas.

Vice President, Quality – As the initial lead writer, Thomas was tasked with developing an outline of required material for the proposal, writing significant portions of the main text, and integrating the contributions of others into the main text. His military experience and engineering background prepared him for the demands of writing for the client, for the proposal's technical content, and for team situations. Working in the company for 13 years, most of that time as a vice president, he had the difficult task of actualizing ideas from the executive level of which he was part, reflecting client

concerns, accepting comments on the drafts from a wide variety of members (and others), integrating the comments, and organizing the work. He maintained that while he functioned as the lead writer, the proposal was really Henry's project. In Phase 1 he worked on the proposal from late April until the first week of July when Henry assumed control of the writing. A reason was not given.

Henry.

Vice President, The Program – Although the proposal team depended on participation from a number of units, the Program was the organizational unit actively involved in the repair of the Product. The proposal's work would be an extension of current business if successful. As the vice president in charge of the Product, an engineer by training, and a former military member, Henry understood what needed to be done in order to achieve a resolution of the problem encountered with the Product. His military background furnished him with knowledge of the client and its requirements.

Kevin.

Mid-level Manager, the Program, under Henry – Kevin was familiar with the servicing of the Product, and it was natural that he was involved in the development of the proposal. Increasingly, he moved from being a member who participated in the meetings and activities to being much more involved in the day-to-day coordination. He coordinated access to information from the technical people including the off-site members and helped write the annexes on the Product's program of service. By Phase 2 he had moved into a more pivotal role.

Lawrence.

Mid-level Manager, the Program, under Kevin – Lawrence was responsible for much of the repair logistics for the Product and worked normally within the Program's organization. On the proposal team, he continued to secure and analyze information on the Product for the proposal.

Jim.

Off-site Manager – Site managers ensure that ABC Engineering's work is completed at particular locations. As a manager and as a former military employee, Jim understood what it would take to include the proposed repair work on the schedule. He participated in a very peripheral way on the proposal's development. In a distributed

fashion, he secured requested information needed to complete the logistical data. He never saw the finished proposal.

John.

Off-site Manager – John managed the company's work at a different, less remote location. He was involved in the e-mail correspondence more often than Jim. His background was as a technical support person in the military. When the engineers and technical members could not visualize the work, they were assisted in their work by John. They visited the site, and John was able to explain procedures and show the actual work on the Product. His information was valued, although he was not considered an active member of the proposal team. He never saw the finished proposal; he thought it must have been ultimately successful because he saw repairs listed on the master schedule.

James.

Manager of Contracts – James was rarely identified as one of the team members, although he attended early meetings and was copied on most pivotal e-mails. James' organizational position brought him into the circle of vice presidents making most of the critical decisions. In the inner circle, his civilian training in business differed sharply from the backgrounds of the vice presidents. His continuing, behind-the-scenes guidance of Stephanie's business-directed work was crucial to the proposal team's success. Additionally, in the end, he reviewed the whole document ensuring that contractual issues were resolved. His signature was required on the document before it was released to the client.

Stephanie.

Junior member of Contracts – In the end, Stephanie was an integral member of the proposal team, securing information from Engineering and Technical Support units in order to account for the business side of the proposal's development. In many ways, Stephanie guarded the company's confidential information releasing financial information to only those members of the proposal team who required it or had the organizational right to see it. She developed the Basis of Estimate. She made a distinction between "writing" part of the proposal and costing up the required personnel, space, and equipment.

Carey.

Vice President Marketing – Carey was the only vice president without a military background. He did share the other VPs' engineering training, but his background was supplemented with a Master's of Business Administration, and years working in marketing at several large, international companies. During the course of the proposal's development, Carey functioned as a resource, mostly in the initial stage when the executives were considering whether to go forward with the work. His combined expertise in engineering and business gave him a key role in the data collection work on the study. He was able to comment on the professional groups, as well as the military background of other members of the proposal team and how that might influence the work on the proposal.

3.5 Writing on the Proposal Team

As indicated earlier, the initial proposal was written between May and July 2009. That proposal was submitted to the client and rejected because of budgetary constraints. A second, very similar proposal, written in early 2010, was approved and work commenced in June of that year. By that point, the client agreed that the proposed work was crucial, that the budget allowed for the commencement of the work, and that the work fell inside the scope of the existing contract.

Collaborative writing, such as done on the proposal team, differs from team to team. Scholars have developed collaborative writing models that depict ways for team members to share the writing workload (Ede & Lunsford, 1990; Gooch, 2005; Killingsworth & Jones, 1989). In the case of ABC Engineering's proposal team, members understood their roles on the team and, for the most part, they wrote small sections of the proposal or collected information for particular sections. For example, the main engineer, Angus, was tasked with amassing the technical information. He realized that he needed to write a technical memorandum so that his unit, the executives, and the client understood the extent of the problem with the Product, as well as the options for inspections, repairs, and service locations. Angus proceeded with the work, asking for input from other engineers and technicians and furnishing Stephanie in Contracts with information that

54

enabled her to analyze and account for the financial side of the proposal. In similar fashion, other members of the proposal team wrote the sections that reflected their subject-matter expertise (SME). Often the sections that required a high level of expertise such as the basis of estimates (BOEs) and technical Concepts of Operations (CONOPs) texts ended up as annexes at the end of the main document, a standard way to present detailed information in proposals.

The lead writers (first Thomas and subsequently Henry) took the information provided by other members and wrote the proposal's main document. A number of employees, including senior executives and select members of the proposal team, reviewed the document and annexes. Few members were allowed to review documents that contained financial information or detailed intellectual property. The distributed team members did not see any section of the final document.

3.6 The Proposal

Engineering companies are financial enterprises that develop and/or service technical products for other companies. In most cases, engineering companies develop proposals for these services as a method of securing contracts with other firms or government departments. The companies know about the need for services or products through a solicitation genre referred to as a Request for Proposal (RFP) posted by client companies or governments. Engineering companies develop a response genre called a solicited proposal or a bid, based on specifications furnished by the clients. These proposals are assessed through point-rated criteria and are awarded most often to the lowest bidder who meets the evaluative criteria. One of the competing companies wins the contract and benefits financially. The other companies absorb the cost of proposal development and go on to write other proposals, in order to secure contracts and maintain company solvency. Development of proposals is a costly, time-consuming, highly competitive enterprise, but a necessary process in order to ensure work for their companies.

ABC Engineering's proposal team worked under different conditions from the above description of the process of winning a solicited proposal competition. The company was already fulfilling a multi-year contract on the Product. The proposal was a potential extension to a pre-existing contract; as such, it was written as an unsolicited

proposal (meaning it was not written as a response to a Request for Proposals). The document reflected a sole-source environment in which government contracting operates under certain conditions (MonPere McIsaac & Aschauer, 1990). The proposal included a justification of the work, discussion of the technical requirements, the level of required expertise and management ability, a proposed schedule for work, and a rough order of magnitude (ROM) or estimate of the cost of the work. The client assessed the technical merit of the proposed work and determined whether the costs were justified.

Over a three month period, the Phase 1 proposal developed into a 108 page document. It reflected the efforts of a large number of people, in addition to the proposal team, as noted above. The table of contents indicates the sections that were included:

1.0 Background
2.0 Aim
3.0 Scope
4.0 Engineering Assessment
5.0 Engineering Assessment Conclusions
6.0 Current Situation
7.0 The Way Ahead
8.0 Repair Benefits
9.0 The Who and the Where
10.0 Option 1: First Location
11.0 Option 2: Second Location
12.0 Product Availability
13.0 General
14.0 Option No. 1
15.0 Option No. 2

List of Annexes
Annex A01 TMXX-0111 Methodology
Annex A02 TM XY-0112 Content
Annex A03 Concept of Ops (Option 1)
Annex A04 Concept of Ops (Option 2)
Annex A05 Pricing Summary (Option 1)
Annex A06 Pricing Summary (Option 2)
Annex A07 Product Schedule and Plan (from Table of Contents, Proposal July 17, 2010)

3.7 Research Methods

In order to explore the communication interactions of the proposal team, so as to develop further understanding of how teams successfully work on joint writing projects, I

designed a qualitative study. The lack of research on my questions and the emphasis on obtaining greater understanding of genre use and the role of leadership led me to eschew quantitative methods, which would have necessitated a deductive rather than inductive approach to the work. I was interested in the individual, subjective perspectives of the multi-faceted situation (Eisner, 2001).

Qualitative researchers study people in context in an attempt to understand the individual's (or the group's) perspective or condition (Athens, 2010; Lincoln & Guba, 1985; Richards, 2009). In order to answer my research questions, it was important to use qualitative methods to study the team members as they worked through the proposal's development, and as they worked through their everyday lives with all the contextualized complexity that might involve. A qualitative methodology placed me squarely in the participants' milieu and demanded sensitivity to context (Bryman, Stephens & à Campo, 1996).

The decision to use a qualitative approach also reflected the preferred methodology in the literature on the topic as demonstrated in the previous chapter. MS and WS scholars have used qualitative approaches to study teams (e.g., Gersick, 1988; Im, Yates and Orlikowski, 2005; Lingard et al., 2007; Palmeri, 2004; Scheck McAlearney, 2006; Yorks, Neuman, Kowalski and Kowalski, 2007; Winsor, 2000; and so on). Generally, qualitative studies are characterized by[21] a preference for analyses of words and images, observation of people in context or in a natural setting, interviews, and documentation of the situation from the participants' perspectives while not using a natural science model, and not attempting to produce hypotheses (Silverman, 2000, p. 8). My research focused on studying the participants in their everyday context, and qualitative methods allowed me to pursue that research interest in the participants' individual work lives.

The study is also described as interdisciplinary (e.g., Bazerman, 2011; Repko, 2008). In order to understand what happened on the proposal team, I drew insights primarily from WS and MS research findings. In addition, I used the notions of communities of practice (Lave & Wenger, 1991; Wenger, 1998) developed in a number

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[21] This list is not meant as a comprehensive enumeration of all known qualitative means, nor is the discussion meant to evaluate the merit of each method.

of fields, and social identity theory from Social Psychology (Hogg & Terry, 2000; Tajfel, 1978; Turner, 1982). Together, the insights from the fields offer an opportunity to see the social dynamics that allowed the proposal team to find ways to accomplish their goal of writing a proposal. To a large extent, however, the work remains a Writing Studies research project in that the primary focus was always on the team members as writers. The resultant interpretive, interdisciplinary account is useful in that it has the potential to resonate with professionals in the setting and scholars in the academy.

3.7.1 Role of the Researcher

I see myself as Srivastava and Hopwood (2009) see researchers: as an interpreter of situations and not as an impartial observer recording the events. In Charmaz's (2006) conceptualization, the researcher is also envisioned as the co-constructor of the data (along with the participants). Working under the qualitative paradigm, I see my work as anchored in methods that help me grow in understanding of communication practices in particular, natural contexts. That understanding derives from a combination of participant and research interpretations of the situation or problem, and achieved through methods that have a strong dialogic element – a discussion that moves back and forth. My "angle of vision", as Thorne (2008, p. 50) refers to the perspective brought to the study by the researcher, is defined by my experiential background as a business communication and administrative (federal government) communication instructor, journalist, and faculty member in a writing centre. Finally, the PhD program in Interdisciplinary Studies, with its five-year opportunity to read widely, has increased my understanding of the scholarly work of a number of disciplines. Years of teaching professional communication and reporting on corporate and government initiatives have widened my perspective and that perspective includes an interest in collaborative or joint business writing. Information about engineering culture has been garnered from family connections and opportunities to interact with engineers and engineering students. Family history and teaching opportunities have also acquainted me with Canadian military culture to some extent. In the end, I entered the engineering firm under study with what I thought was a fairly good understanding of communication practices, business operations, and engineers. I had, admittedly, still much to learn.

The angle of vision is also a function of the researcher's relationship to participants and the research site. The emic, or insider, position is often deemed most appropriate for qualitative research (Chia, 1996). I cannot write that my angle of vision came wholly from inside the company or proposal team; rather, I describe my position as that of an interested observer, viewing the proposal team from primarily an etic position. My interpretations, accordingly, have been broadened and strengthened by iterative, in-depth interviewing, close reading of the data, questioning of my findings (Srivastava & Hopwood, 2009), sharing ideas with several key informants, and at the end all the participants who were directly quoted in the dissertation. In other words, I practiced iterative cycles of research (Bassett 2009; Crichton & Childs, 2005). Thus, my angle of vision determines what I can see and cannot see (Burke, 1984/1935). By carefully and thoughtfully interrogating my own interpretations on the situations, writing memos and developing tentative models I have broadened the angle so that I have produced a picture that can be shared, at least partially, by readers and the study participants. Since I follow the view that all knowledge is socially constructed (Berger & Luckmann, 1966), my constructed picture of the proposal team is the basis of the interpretation of the findings recorded here in this dissertation. In summary, the constructed picture is informed by my personal and educational background, the literature in the fields pertaining to the research situation, and on-going discussion with participants, PhD committee members, and interested colleagues.

In the next sections, I offer the preliminary notes on the study, followed by the data collection and analysis methods.

3.7.2 Entering the Field

The first requirement for the study was finding a research site. The study required a fairly large firm offering engineering services with an organizational culture that used inter-professional teams. I had not anticipated that the presence of a researcher might be construed as one more complexity in a complex enterprise. An outsider could also be a potential interloper who might divulge financial information to competitors or the press. Accordingly, I used a purposeful sampling approach meaning that I selected the research team (within the company) based on its characteristics (e.g., inter-professional, hybrid,

and so on) and the team's potential to answer my research questions (Marshall, 1996). The sample might also be viewed as one of convenience (Miles & Huberman, 1994) because obtaining access to engineering companies initially proved difficult.

While exploring possibilities for a research site, my research proposal to the Dalhousie University Social Sciences and Humanities Research Ethics Board was approved on November 4, 2009. The approval rested on a series of procedures and consent forms developed to protect, as much as possible, the employees and the company from harm (see Appendices A & B). With a company VP's backing, the executive level of the company agreed to sign a confidentiality agreement. In the dissertation all personal names have been changed. The company's name is fictitious. A legal agreement specifies that identification of the company, its industry, and its location is not allowable. Accordingly, I describe the company so that its confidentiality is protected without the organizational dynamics being altered. Working on a small team rather than a big team and working in a large organization rather than a small one are very different experiences, and I needed the study's description in the dissertation to reflect the situation that I had actually studied.

The research phase of the PhD commenced formally in 2009 and continued well into the fall of 2010 since it was completed iteratively (Bassett, 2009) with collection and analysis of data occurring in cycles (Charmaz, 2006). Iterative data collection and analysis enabled me to assess whether I required further data such as documents from the team members or additional interviews.

3.8 Data Collection Methods

As a researcher interested in individuals working in specific contexts and cognizant of the need to understand participants' perspectives and my own, I realized that I needed data collection methods that allow me to more deeply understand the participants' work. I used the research questions as a guide to methods of data collection, but kept an open mind in case further insight into the participants' situation gave rise to the use of additional methods or changes in the study's focus. I also followed Maxwell's (2005) suggestion that a variety of methods and sources triangulated findings, not to discover a universal truth or grand theory, but to reduce "the risk that your [my] conclusions will

reflect only the systematic biases or limitations of a specific source or method, and allows you [me] to gain a broader and more secure understanding of the issues" (pp. 93-94). Rather than a description of the writing process from only my perspective or a description of it from *in vivo* or direct comments from the participants' perspectives, resulting in a journalistic-style story of the proposal team, the conclusions are more of a joint interpretation[22] (the researched and the researcher, Thorne, 2008), and therefore the conclusions achieve a fuller, more credible analytical picture for future researchers and practitioners to use in their work.

According to Richards (2009) two kinds of data collection methods are employed in qualitative work: (1) methods that require the researcher to step into the research site and, to some extent, become part of the participants' world (e.g., interviewing and observing) and (2) methods that secure available data, including participants' extant written work and other documents (e.g., company annual reports). I decided to use both kinds of data collection methods in order to ensure that I gained an in-depth view of the proposal team's writing efforts.

3.8.1 Interviewing

The hybrid nature of the proposal team complicated the situation of arranging interviews. For example, because my opportunities to meet and observe all participants were limited, I chose an e-mail interview method (Hunt & McHale, 2007; Mann & Stewart, 2000) in order to reach all study participants. This was the first interview method used. I could become more familiar with the participants through this method before I met them individually. Face-to-face interviews were conducted in late November through to early January. I could not travel across the country to interview the distributed members because of time and financial constraints; therefore, I phone interviewed (Shuy, 2003; Sturges & Hanrahan, 2004) these particular members. In both phone and face-to-face interviews, I took the time to talk generally before getting to the areas of interest so that

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[22] While the researcher maintains the pivotal role in the interpretation, the participants, in telling their stories and offering their own interpretation of events, play a role in the interpretation. I also was required to have participants approve the use of direct quotations. Thus, some level of member checking was done.

participants had a chance to relax at least to some extent. There are, admittedly, differences in interviewing or speaking to co-located and distributed people due to differences in communication richness (Zornoza, Ripoll, & Peiro, 2002) afforded by face-to-face encounters.[23] By using phone interviews for the distributed team members, I was able to experience what distributed members experience normally when trying to conduct business over the phone. In general, as Maxwell (2005) notes, interviewing is "an efficient and valid way of understanding someone's perspective" (p. 94) and using e-mail interviews, as well as face-to-face and phone interviews, allowed me to understand the team members' perspectives on the development of the proposal.

3.8.1.1 E-mail interviewing

E-mail interviews are a relatively new approach to interviewing made possible by the introduction of electronic mail connections during the 1990s (e.g., Burns, 2010; Bryman, 2008; Hunt & McHale, 2007; Mann & Stewart, 2000; Meho, 2006). E-mail interviews are not to be confused with web-based surveys sent to multiple addresses as attachments; rather, e-mail interviews by their nature imply that there is opportunity for a flow of conversation between participant and researcher (Burns, 2010). Most members of the proposal team work at a geographic distance from head office's main building and rely on e-mail and phone connections; therefore, interviewing through the e-mail system, as an initial approach, was appropriate.

E-mail interviews, as a data collection method, have significant advantages for researchers and participants: e-mails are inexpensive to send compared to driving or flying to interview participants and effective in securing data (Burns, 2010; Meho, 2006); they give participants time to reflect on the questions due to the asynchronous nature of the electronic medium; and, rather than potentially feeling overwhelmed, frightened or disconcerted, participants can benefit from the disarming nature of non-face-to-face communication situation (Hunt and McHale, 2007). Self- disclosure has been found to increase in e-mail interviews (Mann & Stewart, 2000). E-mail interviewing has been

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[23] Skype, a Voice over Internet Protocol technology, might have been a richer communication medium. Unfortunately, access to the technology was not available at the company facilities due to company security restrictions. See glossary for definition of communication richness.

found to reduce interviewer effect (i.e., undue influence of the researcher on the participant's responses) (Selwyn & Robson, 1998). Disadvantages include ethical issues such as the ability to distribute the responses to third parties; potential to overwhelm participants with the number of questions; potential for the researcher to be confused by responses, sometimes, without an opportunity for researcher follow-up questions; and potential to experience missed communication cues (Hunt & McHale, 2007; Meho, 2006). Despite the downsides to the method, given the nature of modern work with its reliance on electronic connections, the objectives of this study, the proposal team's hybrid environment in terms of presence, and the volume of work done by e-mail on the proposal, an e-mail interview seemed a sensible and revealing method to employ. It had great potential to give me insight into the participants' backgrounds and work experiences (Burns, 2010).

I sent out the e-mail interview questions to the participants after first notifying them that the interview e-mails would be arriving on a particular day (see Appendix C for the questions). The questions elicited information on the participants' work and educational backgrounds, reflections on their conceptualization of their own professional identities, and thoughts on the proposal's development, writing on a team, and writing in general. I was most interested in participants' inter-professional experiences generally and specifically on the proposal team. Asking them how they contributed to the proposal team enabled me to start to understand their perspective on collaborative or joint writing and teams at the company. Often, participants' comments lead to a more focused discussion in the face-to-face and phone interviews.

Equally important, answers to the e-mail questions often revealed participants' thoughts on other people's roles and contributions. I became aware that I needed to ask questions that I had not anticipated. In the end, my decision to use e-mail interviews, as the first source of data, provided me with detailed data on the company and team dynamics. I began to understand more deeply who the participants were, what they thought, and what they did on the team. All but two participants returned their interviews by the appointed time; the remaining two sent them in during the month of December because of work commitments.

Although I had not planned to continue the e-mail connection to secure data, as time went on I sent additional questions to a number of key participants. For example, I wanted to understand the participants' perspective on several genres, specifically the Statement of Work (SOW) and the Concepts of Operations (CONOPs). Using the e-mail connection allowed me to get the data I required without overly taxing the participants. Often e-mail proved the only way to elicit a response from employees who travelled much of the week. In order not to unduly burden them with additional questions, I obtained agreement from them on answering questions beforehand. All the participants agreed to follow-up questions and most responded with few delays. See Appendix E for the additional questions.

3.8.1.2 Face-to-face and phone interviews

As in the case of the e-mail interviews, all participants were interviewed, either by phone or in person. Concern over the quality and comparability of the data derived from two different interview methods (here phone and in-person methods) has been expressed and studied (e.g., Creswell, 1998; Jackle, Roberts, & Lynn, 2006, 2010; Sturges & Hanrahan, 2004). Findings, however, suggest that in qualitative research both forms of interviewing are used concurrently without major problems (Creswell, 1998; Sturges & Hanrahan, 2004). Miller (1995) reported no significant differences between data generated from in-person interviews and telephone interviews.

Given the nature of ABC Engineering with its high degree of confidentiality and security, I felt that individual sessions would allow members to feel more comfortable with the research project. The face-to-face interviews occurred in the participants' offices or boardrooms except for the off-site or distributed members of the proposal team. A digital audio recorder was used with the permission of the participants. (Two participants declined to be recorded. Notes were taken during the interviews.) The recordings became sources of data. Playing them over between interviews or in the analysis stage gave an intimacy that notes and transcriptions failed to produce: recordings brought me back to the workplace, back to the exchange with the participant.

Face-to face interviewing is an opportunity for the researcher to notice social cues (Opdenakker, 2006), and I made a habit of noting posture, excitement levels, gestures, and so on. For example, I started to see that when the engineers and technical members were asked questions about procedures or processes, they often quickly moved out of their chairs and to the white boards that decorated their office walls. They explained things visually and in a linear fashion, compared with other members of the proposal team. It seemed important to them that I understood the process and not have a rough understanding.

Although I developed a guide for the interview questions (see Appendix D), I formulated open ended questions as much as possible in order to encourage the participants to discuss communication practices in general and the proposal development in particular. Keeping an easy, questioning style as suggested by Ulin, Robinson and Tolley (2005), I attempted to help the participants to respond fairly openly. Asking for comments on a situation is preferable to a yes-no question (Ulin et al., 2005). For example, asking them "Could you tell me about your role on the team?" produced a better answer than "Were you the lead writer?" Although I followed the guide of possible questions, I allowed the conversation to flow. Asking follow-up questions gave clarification to points raised, such as about differences in communication practices and general organizational dynamics. For example, Henry mentioned the term "generalist" in describing leadership traits. Asking additional questions, I was able to understand more fully his ideas on the value of strong leaders on inter-professional teams. In the end, I used the pre-existing questions when the conversation lagged, or when I felt that the direction was moving completely off-topic.

The distributed members were phone interviewed and digitally recorded. At the time of the phone calls, the members were in their offices. Neither distributed member had heard of the research study, unlike their counterparts at headquarters. I had sent them information, but found that I had to explain more about the study. I deliberately kept my guide questions on the desk and used the speaker feature on the phone in order to maintain attention. Voice and intonation become more important in understanding the conversation (Opdenakker, 2006). In the case of all interviews, I took between 45 and 90 minutes of the participants' workdays.

After each interview (face-to-face and phone), I wrote reflective notes so that I could capture my thoughts on the participants and their situations. These notes became additional data for analysis. For example, noting the physical environment in which each participant worked was a way to see the position of the employee within the company. Executives had offices in the main building in a hallway paneled in mahogany; that fact set these employees apart from others who worked in much smaller, utilitarian offices. Other times, I noted frustration in a participant's comments on the writing process. A distributed member mentioned that he had not seen the finished proposal, a potential factor in his assessment that he was not a member of the proposal team despite his contribution and his e-mail presence in the work.

3.8.2 Observation

As noted in previous chapters, the company's work was confidential because of corporate financial disclosure concerns and client security issues. As a result, my opportunities to observe the participants were limited. One challenge was that while the work on the proposal continued into 2010, the main part of my study focused on Phase 1, which had already concluded. The situation with distributed members also contributed to a decision to limit observations since these members could not be observed. Maintaining flexibility or making decisions that respond to study requirements in qualitative research is critical (Buchanan & Bryman, 2007). I decided to attend meetings, spend some time before and after interviews talking with other company personnel, and learn as much about the company's communication practices and team dynamics as I could during my time at the head office. Accordingly, the study took on a slightly retrospective, investigative tack and that worked well. I felt that participants who were well aware of confidentiality concerns talked freely about practices in general and in Phase 1 because they did not involve current information. Taking about the work gave them an opportunity to filter any sensitive (e.g., pertaining to corporate security) information out of the discussion, an act that they might have found difficult if commenting on the present day's work. Thus, at times, the team members did probably react (e.g., change their behaviour or comments) to researcher presence; however, using a number of data sources, including documents, minimized that effect.

3.8.3 Available Data Collecting Documents

Research studies are, often, enriched by archival of documents about or used by the participants (Richards, 2009; Thorne, 2008). I had the opportunity to secure documents written by the participants or written for employees (see Table 1). Available documents are under-used in qualitative research (Thorne, 2008). That latter comment is perhaps accurate in many fields including MS, but WS research depends on securing documents. Given my research interest, it was natural then that I collected a wide variety of documents.

Even before I entered the research site, I was collecting material on the company, the industry, and communication practices in engineering and accounting from newspapers, peer-reviewed literature, the Internet, and industry magazines. Once on site, I worked through the company's librarians to obtain access to additional documents. All required company material was archived on computer disks and then signed out to me. E-mail correspondence, written during Phase 1 of the proposal's development, was archived in NVivo 8. Drafts of the proposal, eight participant reviews of the drafts, meeting agendas, cover letters, meeting minutes, and examples of company guidebooks were obtained. Documents such as organizational charts and maps of the various company buildings and locations were also secured. Photographs of the Product and visuals of communication tools rounded out the company provided documents. It must be noted that much of the company material was of a confidential nature, and it cannot be presented in the dissertation. See Table 1 for a list of data sources.

In order to use examples from the data sources and cite them appropriately, I developed the following abbreviations for the data sources. Refer to Table 2. Readers can easily understand which participant is being quoted and from which data source. Participant quotations are referenced in a Name – Data Source – Date sequence (e.g., Gene – INT – 20 Dec 09).

Table 1: Data Sources for the Study

Data Sources	Number of items
E-mails from 15 participants (team members and key informants)	306
E-mail Interview Responses	13
E-mail Second Set of Responses	5
E-mail Third Set of Responses	4
Transcriptions of Sections of Audio Interviews	12
Audio Files	12
Interview Notes	14
Versions of the Proposal (reviewers' notes included)	5
Final Copy	1
Meeting Minutes	1
Plant Procedures Manual	1
Cover Letter and Response Letter	1 each
Photographs and visuals[24]	10
Diagram of Company Sites	
Organizational Chart	1

Table 2: Abbreviations of Data Sources

Data Sources	Abbreviations
E-mail correspondence –	EM
E-mail interviews –	EMI # 1
E-mail Second Set of Responses –	EMI #2
E-mail Third Set of Responses –	EMI # 3
Audio Files of Interviews –	INT
Additional Notes –	AND
Transcriptions –	INT T

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[24] The company did not permit the disclosure of photographs, visuals, site diagrams, and other not publically accessible, copyrighted material. In addition to the data sources noted in Table 1, information on the company, industry, and military (e.g., military writing) was archived.

3.9 Data Analysis Methods

As noted above, data collection and analysis was iterative and commenced as soon as the research project commenced. I reflected on what analysis methods would furnish answers to the research questions, while still allowing for flexibility. Buchanan and Bryman (2007) argue that methodological decisions are a process that "evolves as a project unfolds, as the researcher's understanding of the issues and also of the organizational research setting develops" (p. 496). In the next sub-section, I revisit the research questions.

3.9.1 Research Questions Revisited

The primary research question reflected the major finding that the proposal team had indeed been successful. The question was: Why was the team under study able to work successfully together, despite the presence of multiple professional groups?

This overarching question includes two sub-questions:

1. How do the individual professional sub-groups use their rhetorical genre knowledge during the collaborative work on the project, and how does that knowledge affect the joint work of the inter-professional team?
2. How do other factors play key roles in the development of a collaborative proposal by an inter-professional team?

The questions required analysis methods that could create meaning from a number of data types and sources. Accordingly, I decided to use a series of analytic approaches: the combination offers a number of vantage points of the proposal team's efforts. The combination, also, contributes toward strengthening the trustworthiness of the analysis through triangulation[25] of analysis methods (Maxwell, 2005).

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[25] Triangulation occurs when researchers use a variety of methods or theories, so as to provide multiple perspectives on the research site (Maxwell, 2005).

3.9.2 Close Reading

Stapleton Watson and Wilcox (2000) describe close reading as a method of careful reading, a way to read between the lines or to open up the data. They indicate a three-step method, although individual readers may vary their approaches: a quick reading to situate the text; a more focused reading to identify key players, activities, conflicts, tone, and so on; and a distancing that moves the reader to see patterns and attain greater understanding (pp. 60-63). Investigating the data through reading allows researchers to become familiar with the data without premature coding or other methods of analysis (Thorne, 2008). I made a practice of closely reading the data as it came in. Material was read quickly to grasp an overview, followed by a more careful reading to see if key events, roles on the team, coordination methods, and other patterns could be identified. Expressions and word choices were noted. Finally, I moved the data into the software where I could begin to analyze the data in another way.

Close reading allowed me to become familiar with the data. Reading the review notes, for instance, was the first indication that professional groups and individuals within those groups differed in their approaches to reviewing other people's documents. Some participants focused on communication strategies, some on content, and some on surface concerns. Stylistic preferences such as word choices, amount of description, and level of formality dominated the review notes. Reading pushed me to think about dynamics that might be going on behind the texts. The close reading approach proved a way to obtain an initial perspective on the company's work and flag issues from the participants' perspective that could be followed up in subsequent analysis methods.

3.9.3 Coding as an analytic method

I loosely used practices from the version of Grounded Theory that Charmaz (2006) calls Constructivist Grounded Theory (CGT) following the method used by Varpio, Spafford, Schryer and Lingard (2007) and Artemeva and Fox (2008) in WS. The traditional Grounded Theory approach to qualitative data analysis draws on the work of Glaser and Strauss (1967, 1971) and Glaser (1978), Strauss and Corbin (1998), and Corbin and Strauss (1990). Generally, Grounded Theory reflects a view that people create structures in their lives through social processes. Grounded theorists view people as individuals

constructing meaning (i.e., seeing 'reality') through communicative interaction with other people in specific contexts (Charmaz, 2006; Mills, Bonner & Francis, 2006). In terms of research practice, Grounded theorists study "fundamental social and social psychological processes within a social setting or a particular experience" (Charmaz, 2006, p. 7), in order to establish theories about problems encountered by people. Grounded Theory researchers, typically, step into the research site without "preconceived ideas to prove or disapprove" (Mills et al., 2006).

While Grounded theorists share a fundamental interest in grounding their work in their data and viewing social activity as contextualized (Mills et al. 2006), differences in approach, including in terms of the guidelines for steps in the research process are apparent. Charmaz's (2006) method, following the modified approach, differs from traditional Grounded Theory (e.g., Glaser & Strauss, 1967). In the modified approach, the researcher is viewed as co-constructing the data and, in the end, the theoretical understanding of the research problem and situation. Through immersion in the data, writing more fluidly about the data, and construction of a conceptual analysis, Charmaz's approach reveals "the researcher as author of a coconstruction of experience and meaning" (Mills et al., 2006, p. 7). Charmaz argues that the position of co-constructor of the research outcomes is particular suitable for the study of social process (such as in the current study). For the same reason, I used many of the techniques of the modified Grounded Theory method. The method allowed me to link past and present work practices in a way that lead to the construction of a deeper understanding of the inter-professional team's writing efforts.

MS and WS studies have employed Grounded Theory analysis methods. Primarily, MS research uses traditional Grounded Theory (e.g., Flammia et al., 2010; Ng & Hase, 2008; Rodon & Pastor, 2007), but research into leadership practices has included modified Grounded Theory (e.g., Georgieva & Allan, 2008; Parry, 1998; Rowlands & Parry, 2009) and even critical Grounded Theory (Kempster & Parry, 2011). Pearse and Kanyangale (2009) write of the suitability of using Grounded Theory; they conceptualize organizational cultures as situations where basic social processes are enacted. A method that produces a social theory of phenomena (Kempster & Parry, 2011) is suitable, therefore, to studying organizational cultures – in the current study, organizational teams.

WS research has also benefitted from this analysis method with Artemeva and Fox (2008), Palmeri (2004), and Varpio et al. (2007), for example, stating that their analytic method was modified Grounded Theory. So in order to explore the inter-professional team's interactions, practices from modified Grounded Theory provided an appropriate and an acceptable analysis approach to explore social interactions (Charmaz, 2006).

In order to illustrate the use of coding as an analytic approach and increase the validity of my work, I have included the following description of my method. Please refer to Table 3 for an example of the development of a conceptual code or theme.

Charmaz (2006) explains that qualitative coding is "the process of defining what the data are about" (p. 43). To begin the coding analysis, I read carefully through the participants' e-mail interviews, e-mail correspondence, research diary, field notes and so on and listened to the audio files trying first to understand the participants' perspectives on the proposal's development and writing within professional groups. Often I came to a section of text or audio that gave me a glimpse into the participant's perceptions on the proposal team's process or understanding of writing or reaction to use of genres by others.

The first step in coding was identifying initial or descriptive codes. I identified a section of text or audio file that gave me a glimpse into the participants' experiences. My unit of analysis was a segment, or chunk, of the data that expressed a complete thought; often a sentence or two sentences typically was selected; sometimes, the thought was conveyed in a few words. I named the selected material; I wrote an annotation that defined the selection, and then I saved it. The code appeared within the growing list of codes. For example, here is a selection from Lawrence's interview:

> Rule: Resolve issues at the lowest level then 'kick it upstairs'. They don't need to worry about things that they don't need to worry about (Lawrence INT T 3 Dec 09).

The descriptive code for this selection of text was "know their level". Another descriptive code "a way of life" (Jordie – INT T – 29 Nov 09) became an *in vivo* code (a code arising from a participant's own words, usually a descriptive code). Another example of a code was an *in vivo* entitled "Park Your Pride of Authorship". The code describes how one participant saw the role of lead writer on the proposal team:

One of the most substantial character adjustments that I had to make a long time ago was park your pride of authorship when you're in the proposal business and don't look for the end product to reflect you as an individual. That sometimes takes a little bit of sucking it up and getting on with the work. (Thomas-INT-X Dec 09)

In this case, the initial, descriptive code later came under the analytic category (a unit or grouping of a number of descriptive codes) "Forms of Leadership" along with "The generalist", "Listening", "Follow or get out of my way", "Mentoring", "A smoother and a merger", and so on. The theme of "Leadership" later emerged from the data.

Reading continued with more selections from the texts fitting under the previously named codes and new codes being constructed. The process of reading and coding has been described as constant comparison method, a method of sorting through the data identifying what researchers know and what they did not know, constantly thinking about the data and comparing new ideas identified in the analysis process to older ideas in the same process (Charmaz, 2006; Glaser & Strauss, 1967; Miles & Huberman, 1994). Constantly comparing allowed me to accept that patterns that had been emerging were indeed ones that required attention. I coded 114 initial or descriptive codes during the first substantial analysis phase. Later, I coded 48 additional descriptive codes for a total of 162 codes. A code, thus, included a name, a description, and references (selected material from the text or audio) as seen in Figure 4 on page 88.

I initially decided to code audio recorded interview data directly from the digital file rather than transcribe the audio material and then code. Listening to the participants' own voices gave closeness to the data (Smith & Short, 2001) that I found informative. I had not been given permission by the company to use a transcription service for security reasons; therefore, my preference for audio coding was fortuitous. I proceeded with audio coding according to the procedural description adapted from Crichton and Childs (2005) and Gwin Mitchell, Peterson and Kaya (2004) for use with NVivo 8. As indicated above, coding text calls for close reading of the material, identification of salient segments, and naming and saving the segments. Audio coding follows a similar process: interviews are listened to; salient segments are identified, named, described, and saved.

As I coded the audio files, I found that I wanted to transcribe already coded

sections that I suspected were important to the data analysis process. My decision was made for two reasons: first, at times, listening to the voices on the recordings was overwhelming. So much was being said; sometimes, so much was salient. Taking notes and audio coding sometimes felt inadequate – too full of potential for overlooking points. I needed to slow the process down and look at the text of the conversation. Second, I felt that in the end, any section of interviews that would be used in the dissertation would need to be transcribed. During coding, I listened carefully multiple times to the audio recording, and transcribed the participants' words. At that point, I also wrote up annotations so that the section of audio/text could be searched more easily and its salience understood more quickly.

The development of categories and then themes formed the next steps in the coding analysis. The steps often followed the act of writing memos, as suggested by Charmaz (2006). Sometimes, writing memos forced me to understand that what I had thought of as a descriptive code was related to other descriptive codes; categories sometimes emerged into higher level themes. Ryan and Russell Bernard (2003) describe techniques for identifying themes including scrutiny techniques such as reading and noticing a repetition of ideas or expressions, noting indigenous expressions used by participants, use of metaphors, and so on. At other times in the analysis, questions would arise from a code that required further investigation. For example, the *in vivo* code noted above was identified. Comments on the differences or similarities between one participant's views of leadership and another's views on the topic began to be noted. I would then write notations on steps that needed to be done and literature that might need to be consulted. That process of writing could then be applied to further coding. A preliminary memo on leadership in writing teams reads as follows:

> Leadership is a construct that keeps surfacing as I analyze the e-mail interviews and think about the interviews. Often people identify somebody as the lead - perhaps, Thomas or Kevin, but then quickly speak of others who are the lead people. Those people can be somebody such as Henry - he is the VP of the area in which the proposal's work will be located. In some real ways, he will feel the weight of responsibility for the eventual work and so much be consulted and give consent to the work as it is laid out by others many of whom are outside the

proposal team. The person most often credited as being "the lead" is Thomas, the principal writer of the proposal. However, he indicated quite emphatically that Henry was the lead. At other times, slightly less senior people, such as Angus, refer to the senior administrators (e.g., Jordie and the executives) as the leaders. James' comments on leadership probably reflect many participants' views on leadership: he feels that projects benefit from a strong leader telling others what will be done and by whom. He feels that a central, experienced person is required in order to bring such a diverse group together.

During the coding analysis, I attempted to stay within the data, an expression used to describe an immersion in the data and a distancing from previously written material (Charmaz, 2006), in order to understand the participants' perspectives on the situation. I found that reading the data alone, however, led to so many ideas that I later returned to the methodological literature to understand how to focus my analysis. A number of methodologists present a series of questions that direct analyses (e.g., Richards, 2009; Srivastava & Hopwood, 2009[26]). Interestingly, while these questions pushed me to look at different perspectives on the participants' comments, they also allowed me to focus on the research interest rather than on the myriad of topics that arose in the data. Thorne's (2008) discussion on making sense of the data drew my attention to the importance of capitalizing on outliers and engaging my own critical powers to question my assumptions and tentative conclusions. Richards (2009) provided a guide that opened up the data and then reduced them into themes that provided a fuller picture of the situation.

When I returned to coding in early 2011, I proceeded to read through all the texts and listen to the interviews again. As the descriptive codes increased in number, the categories and themes also began to develop. I noticed that some descriptive codes were actually conceptual codes such as "Military influence." I looked more closely at the references under that code and developed other descriptive codes including "An officer first," "Training to be", and "Relationships with client". I continued to open up the data while also reducing them. For example, coming across the code "Amending somebody else's version" made me want to understand how the participant had used the word

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[26] I used the questions to understand more deeply the data. Using the questions did not imply that I followed a particular approach to coding such as Richards' (2009) version of grounded theory.

"amending" in a particular context. By listening again to that section of audio, I determined that the word linked to the idea of power and control; the participant had control over what information was used. He had the power to shape the proposal in a way that the client preferred. He had made a decision on the rhetorical strategy for the proposal. The participant, as the lead, found himself in a team role where he molded the text to the dominant group's way of seeing writing: he used the genre he was most familiar with, the one that he had learned in the military. See Appendix G for the four main themes.

A more detailed coding tree is provided in Chapter 4. As the coding analysis moved toward completion, I saw that my methods of analysis were revealing interdisciplinary interests (e.g., leadership, a strong research interest in MS; influence of the audience on the writing process, an interest in WS).

3.9.4 Data Management

Data management is critical to presenting well thought out, valid findings. The data were collected initially in a number of formats including Microsoft Word documents, audio files, PDFs, hardcopies, e-mail archived on computer disks, and so on. The data then were imported into the NVivo 8 software, a program produced by QSR International. Computer assisted qualitative data analysis software (CAQDAS) is increasingly used in qualitative data analysis rather than more laborious, paper-based methods (e.g., Hoover & Koerber, 2011; Smith & Short, 2001). As with many segments of modern life, computer technology has enabled management of vast amounts of data; consequently, improvement in data management, reduction in paper use and handling, and more complex analyses for qualitative research have been noted in the literature (Bassett, 2004). Hoover and Koerber (2011) suggest that CAQDAS increases data analysis efficiency (compared with methods such as using pen and highlighters), multiplicity (archive different kinds of data, work in an iterative fashion to a greater extent) and transparency (able to display work to other researchers). It has been noted, however, that discussion of CAQDAS' impact on data analysis has taken place only to a limited extent (Bassett, 2004).

The software programs used in qualitative research studies shape to some extent the research process and findings (e.g., Richards & Richards, 1994) such as in the case of NVivo 8 with its emphasis on theory building. In the program, the data are deconstructed and then built into a framework that can then be tested through queries and displayed in models (Bassett, 2004). The program's capacity to handle larger data sets and ease of management of that data can move the research away from the lived experience of the participants causing researcher distancing. Researchers may feel more objective, more in control through technology (Bassett, 2004).

In order to achieve my research objectives, I used a combination of digital and tactile, or manual, (Bassett, 2004) methods to analyze study data. I moved from NVivo 8 to Microsoft Word and from Microsoft Word to paper as research needs changed. NVivo 8 was purchased because of its cost and access to a workshop on the program. Recommendations for CAQDAS selection include knowledge of assumptions held by the program's developer(s) so that researchers make good study decisions and are not overly or unconsciously influenced by the software's architecture (Mangabeira, 1995). In the case of NVivo 8, a Grounded Theory approach to data analysis is built into its architecture (Richards & Richards, 1991). The program's organization of data privileges data reduction by coding (reducing the data and divorcing it from its context), theory development, and theory testing (verifying through outliers and so on) (Richards & Richards, 1994).

Archiving the materials in one place allowed for sorting and organizing of the data in a way that would have been difficult if the data appeared only in hardcopy or in computer files. Existing files (e.g., the e-mail interviews, audio of the interviews, all drafts, e-mail correspondence, photographs, charts, field notes and research diary) were managed in the software. I coded and retrieved data and wrote annotations and memoranda (memos), which were linked to the codes.

In addition to using NVivo 8, data were archived in other formats, sometimes for back-up or security and sometimes based on analysis preference. Microsoft Word's format (e.g., docx or rtf formats) often was the first format that I used to both store and analyze documents. For example, I coded, annotated, and wrote memos in NVivo 8 but continued to memo/journal in my research diary, model ideas outside of the software, and

play with the descriptive codes and concepts/themes in Word documents. Often I would use manual practices: I would print off documents (e.g., list of codes or a particular memo) so that I could write marginalia. Working with pen, highlighter, PostIt Notes, and clean white paper produced more thoughts than I could sometimes achieve with the computer screen within the program.

Appendix F depicts the code "Military influence" within the NVivo 8 program. The references, including coded text and audio recordings, appear in a list in the space to the right of the page. By clicking on the reference, the originally selected material in a text or at the exact point in an interview recording appears.

NVivo 8 enabled management of the data. Using the program, word searches for identifying examples and finding relationships between codes were accomplished. For example, if I wanted to refresh my memory about the *in vivo* code "Wearing Their Rank" I could go to the codes feature and find the data pertaining to that code. Audio files also were coded directly into identified codes within the program. I wrote descriptions of the audio segment, so that when retrieved I could quickly understand what was discussed before I played it. I transcribed key coded segments in the analysis stage, as I needed them for writing a memo or part of the dissertation. As in any transcription process, a technique of listening, transcribing, reviewing the audio, and checking the transcription for accuracy was employed. I could then search and find whatever was necessary within paper-based or audio-based files. Compiling the data into the program also provided a way to track changes or additions to documents and files, while annotations and memos were added to capture on-going analyses and reflections. Together with Microsoft Word documents such as charts, models, and analysis documents and paper files, NVivo 8 files now offer an audit trail of decisions made in the research project.

3.9.5 Rhetorical Genre Studies Approach

In this sub-section, I discuss the RGS approach to analysis of the written genres used in the proposal's development. Scholars using RGS see genres usage as a way to understand the structuring of the work in situations including teams within organizations (e.g., Kellogg et al., 2006). Im et al. (2005) explain that "genres reveal what communities do or do not do (purpose), what they do and do not value (content), what different roles

members of the community may or may not play (participants), and the conditions (time, place, form) under with interactions should or should not occur" (p. 93). The RGS lens offers the current study a view of the research site that includes seeing how the work was structured by the genres. It must be noted that structuring work through genre usage is not a neutral act (Bawashi & Reiff, 2010); work is not structured in an objective, de-personalized, standardized way – devoid of all the complexities of human interaction. Rather, looking at the structuring of the proposal's development reveals the struggle of participants and sub-groups to get the proposal completed. Seeing conflicting ideas, preferences for particular ways to respond to perceived recurrent situations, and perspectives on work in general reveal much about the proposal team's efforts.

Two complementary RGS methods of data analysis were employed: one method derived from the work of Yates and Orlikowski (2002, 2007) and the other from Devitt, Reiff and Bawarshi (2004). For the most part, Yates and Orlikowski's (2002, 2007) questions were used to analyze the e-mails, while I used Devitt et al.'s questions, primarily, to understand the use of the other texts. An explanation for my decision to use the two series of questions follows shortly.

In the case of the e-mails, I read through the documents several times, finally answering Yates and Orlikowski's (2007) questions that focus on analyzing the rhetorical situations to which the documents responded:

- Why use the genre? (why)
- What is the content of the genre? (what)
- Who is involved in the genre's use? (who)
- What form does the genre use? (how)
- What temporal (time) characteristics does the genre indicate? (when)
- What is the context of the genre's use? (where).

Through this series of questions, I was able to identify and situate the genres so that I could see how they were used to structure the work on the proposal team. Yates and Orlikowski's method allowed me to identify particular genres used to coordinate the production of the proposal.

Devitt, Reiff and Bawashi's (2004) RGS method of analysis again employed a set of questions. I read through the documents identifying the rhetorical situations, genre

preferences, and patterns in the genres such as linguistic features, formats, and so on. This time, the focus became more the social responsiveness of the identified genres. A picture emerged of a socially complex team structure. I began to view the writers and readers as social participants with assumptions, expectations, and goals that all did not share. All sub-groups had mandates; they needed to get things done. But they did so, sometimes, at the expense of other groups. Genre choices privileged some groups and limited others. The significance of that genre usage revealed a number of important findings: how professional sub-groups recognized the recurrent rhetorical situation (i.e., development of the proposal); how they attempted to respond to that situation in profession-specific ways; and how they managed to work together to complete the project. The RGS approach highlighted the social dynamics of members writing the proposal and enabled me to see the connections among professional identity, genre, and rhetorical situation. (See Appendices I and J for questions and a sample analysis.)

3.9.6 Writing Memos and Developing Models

The fourth part of the analysis has already been touched on: writing field notes, the research diary, and memos. The act of writing about the research situation and my role in the process of research often lead to surprising results. Additionally, spending time developing models of the proposal team's organization and relationship with the client offered a different perspective on influences on the proposal's development. Combined with a return to reading the literature on inter-professional teams, writing and modeling, in the end, produced a coherent, logical story of the research situation.

The next chapter presents the findings from the data analysis.

Chapter 4 Findings

> The negative side [of inter-professional team work] is that the commercial world is on the opposite side of the pendulum … a lot less paperwork, a lot less bureaucracy … So the challenge with the military approach is that it sometimes adds a lot of costs, a lot of delays because things take a lot longer and the commercial world doesn't see a lot of value. (Carey-INT-17 Dec 2009)

In the previous chapter I described the data collection and analysis methods employed in the research study. The findings of the analysis are discussed in this chapter. Team member, Carey, notes in the snippet of conversation quoted above that two very distinct worlds operated on the proposal team and in the company.

4.1 Findings from Coding Analysis

As described in Chapter 3, I used coding as an analytic technique to understand the data borrowing practices from modified Grounded Theory (Charmaz, 2006). Four overarching themes emerged: Professional Background, Military Influence, Leadership, and Control of Information. In order to explain my analytic thinking during the coding, I present the coding for the theme "Military influence". The other three conceptual categories are then discussed, followed by explanation of relationships among themes.

4.1.1 Military Influence

While I was analyzing the data, I began to note that a large number of codes reflected a perspective on life in the military. Descriptive codes, sometimes, came straight from participants (e.g., "double-edged sword"); at other times, the name of the code was assigned (e.g., "formal writing training"). Later, I placed the codes that related to the participants' military past in a grouping, a category. The category was defined as "occasions when members discussed the influence of the military culture and personnel on writing practices." In each code under this category, the participants' views of how their military past was present in the current workplace were discussed. Even later, that category rose to the level of a theme. See Table 3 for several examples of data selected as

descriptive, categorical, or thematic coding. Under the theme of Military Influence, sits the category of "A Way of Life." In the table, under "A Way of Life" came the descriptive codes "Knowing Their Level" and "Writing in the Military."

Table 3: The theme of "Military Influence"

Document Code	Participant Selection	Descriptive Code	Conceptual Code – Category	Theme
Jordie – INT T – 29 Nov 09	It's a way of life - not a job.	A way of life (moved up to conceptual code later)	A way of life	Military Influence
Lawrence – INT T 3 Dec 09	Rule: Resolve issues at the lowest level then 'kick it upstairs'.	Knowing their level		
Thomas – INT T – 5 Dec 09	If an individual comes into the company too fresh from the military and they start to write or speak, we say you're not speaking to us here in the commercial world, you're speaking to the military people.	Writing in the military		

From the data analysis, it was evident that, without exception, participants felt the influence of the military backgrounds of the majority of team (and company) members. Former military members spoke of their past careers as not just careers but as "a way of life" (in vivo code); that people were not just employees at the company but "officer[s] first" (in vivo code); and that former military employees felt comfortable "working in a hierarchy" (in vivo code). The nature of their careers in the military was fundamental to

how the former military team members worked and interacted – even now in a commercial enterprise. They viewed commercial work as essentially an extension of their military careers. Kevin noted the seamlessness of the move into a civilian job: "I just had different clothing on" (Kevin – INT – 5 Dec 09). There was little acknowledgement from the former military participants that life in the military might be significantly different from life in the civilian world. For example, all work in the military had been predicated on battle preparedness, even in times when Canada was at peace and not participating in peace-keeping operations. Preparedness produced many distinctive organizational and employee characteristics. Command and control was one such characteristic. The military organized itself on a tightly-knit hierarchy ensuring that employee roles were well-defined, operational plans were prepared in detail, orders were carried out promptly and without question, and leaders understood the value of obtaining pertinent information in order to make effective decisions. When former military members made up the majority of the employees at the company, they obviously brought those values into the company. Whether the military values were appropriate or would hold the company in good stead with commercial clients was a matter of debate – at least among the civilian-trained employees who recognized the two worlds operating in the company.

On the proposal team and in the company, company status/positions reflected former military rank. For example, team members who were senior officers took on executive positions at the company. Mid-level and lower level military personnel went into the company at approximately the same level. Participants reported that, in essence, a continuation of the chain of command (and control) was apparent. These members felt comfortable in perpetuation of the hierarchy. It did result, occasionally, in problems, but only if a lower level military member became a higher level company employee. At that point, members who had enjoyed the benefits of being former military (e.g., fairly close relationships with other former military personnel) felt the "double-edged sword" of former membership status: they would realize that climbing above one's rank was often not viewed positively.

Despite the large number of former military personnel at the company, civilian-trained team members often commented on the downsides to the military influence at the company. In an industry where commercial customers were increasingly important,

civilian-trained team members lamented the lack of business experience or commercial outlook of some former military company employees. To their credit, however, James, head of Contracts, noted that most former military senior administrators adapt well to the business exigencies. Despite eventual adaptation, there were fundamental differences between military and civilian perspectives. As Carey noted in the quotation that opens the chapter, there were cultural differences in what he called the two worlds. He had explained:

> The military is very good at delegation: everybody has a role, a very well-defined role and that way at senior levels in the Forces the tasks are disseminated and delegated and brought down to everybody. And everybody understands their role and executes their role well. That's great when you have an organization that has a boundless number of individuals that you can have pigeon-holed into various tasks. The commercial world is the exact opposite: the same person wears many hats. And therefore, the lines [between people and tasks] aren't that clear, and people are expected to handle more than one task and things don't have to be drawn out into excoriating detail. It's about getting the job done with the resources we have as quickly as possible. So the challenge with the military approach is that it sometimes adds a lot of costs, a lot of delays because things take a lot longer and the commercial world doesn't see a lot of value. (Carey-INT-17 Dec 2009)

Two pictures emerged from the data: one of a civilian world dominated by financial concerns; another world, the military, differed in its work practices, writing conventions, and genre preferences. The concept of "Military influence," thus, was a significant theme arising from the data. I discuss its relationship to the other concepts later in the chapter.

4.1.2 Professional Background

Data analysis indicated that professionals worked through the proposal writing in divergent ways. The participants involved in the development of the proposal self-identified as belonging to professional groups, although the professional group most often identified was the military. For example, rather than identifying as engineers, all the military-trained engineers (Thomas, Jordie, Gene, and Henry) insisted that they were

former military officers first and engineers second. In fact, Henry described himself as "senior management" (Henry – INT – 3 Dec 09), rather than an engineer. Few had actually worked as engineers in their military careers. Rather, they had become project managers and then senior administrators. Other professionals, also, reflected some ambivalence to what at first seemed straight-forward professional affiliations.

The two civilian educated and trained engineers differed from each other, as well as from the former military engineers. Angus was not ambivalent. He saw himself as very much the professional engineer (PEng) and worked as one in the Engineering Unit. Initially, his role was to identify the engineering problem with the Product and find a solution. Later, he assumed the subject matter expert (SME) role and developed (with the help of his unit and technicians) the required technical information for the proposal's technical annexes.

Carey, an engineer with a Master's of Business Administration and a VP of Marketing, saw himself as having transitioned into a business person. From his perspective, business people had an ability to focus, to move the detail aside and get to the heart of the matter. However, he mentioned that whenever he encountered complex situations, his engineering background allowed him to sort through the detail by using problem solving techniques such as network analysis. Speaking of one incident, Carey said: "I guess the engineer in me came out. I started writing everything down in a diagram…You needed to map it [the situation] out, connect the dots and see where the lines were drawn, who reports to who … then I understood the relationships" (Carey – INT – 17 Dec 09).

The proposal team members working in the Program sub-group, for the most part, were not engineers, but had technical backgrounds and identified with the particular Product, which was serviced for the military. Their conceptualization of a professional appeared to align with former military positions such as site managers.

The team members from Contracts self-identified as civilian-trained business employees, and they had been most definitely shaped by a business educational background. As was often the case with the team members, Stephanie defined herself by noting how different "others" were. She remarked:

Some engineers are business people – but not all of them. They [the engineers] have a way of thinking, an engineering way – and when it comes to writing or describing or anything like language, even communicating in general, it's a little bit more difficult [for them] because they don't have to do it. Those little things make the proposal process more difficult. (Stephanie-INT-10 Dec 09).

Stephanie explained that, in the end, work on the proposal was accomplished by having sub-groups use their SME. Engineering would have meetings with the engineers; Contracts would have their own meeting. In that manner, the groups could concentrate on the parts of the proposal for which they were responsible without a great need to explain work procedures to others.

4.1.3 Leadership

As noted previously, the proposal team was composed of a core group of members but drew from the members' units for information and expertise at head office and offsite. With such a hybrid team composition, it might have been expected that leadership would be a concern for members. The executives stood as formal, designated or assigned leaders and were referred to as the executives who worked in the Mahogany Corridor. Without doubt, they made most of the decisions and were in contact most frequently with the client.

These executives appointed employees to act in major team positions. For example, the executives selected Thomas as the lead. He described himself as the "capture [of the contract] manager" (Thomas – INT – 5 Dec 09). Henry, the man who would in time take responsibility for the repair work, was most often termed "the owner" (in vivo code). Henry, himself, referred to team-level leadership as requiring "generalists" (Henry – INT – 3 Dec 09) or leaders who had experience working in a number of fields. These generalists could understand what needed to be done because of their ability to see all the work and not just segments of it. They have "a broader view" (Henry – INT – 3 Dec 09). In his view, generalists drove the work by knowing what direction to take and by not being afraid to ask questions about the work.

Views of leadership differed depending on team members' backgrounds. The former military team members expressed the idea of the importance of leadership;

comments often implied a high degree of acceptance of command. For example, working in a hierarchy implied "follow[ing] or get[ing] out of the way" (Hunt – INT – 3 Dec 09). The military members had been taught to trust leaders (Alberts & Hayes, 2006; Siebold, 2007). In fact, Henry had thought out leadership to the point that he could articulate the circumstances under which people would follow a leader. People are comfortable with decisions under three conditions: (1) if people believe that decisions are well thought out; (2) if the decisions were made in a timely fashion; and (3) if the members were given the opportunity to provide input (Henry – INT – 3 Dec 09). The civilian-trained members did not often articulate their views on leadership, but they did write to senior personnel with greater formality than to other employees, perhaps because of their lack of familiarity with the former military members. No matter how the proposal team members described leadership and leaders, they agreed on the necessity of having leaders to make the tough decisions. Due to the distributed nature of the proposal team, many of those decisions by leaders needed to be communicated through e-mail correspondence, which made writing directional messages important.

4.1.4 Control of Information

Most team members talked about a need for control of information. Sometimes, a remark was made about financial information; at other times, it was a more general comment about who needed to know details or plans and who did not. For the most part, attitudes to access to information followed sub-group reasoning. For example, at the highest levels of the company, executives railed at allowing information to flow downward. They feared that the release of financial information would allow competitors to win future contracts.

The Contracts Unit pictured itself as "protector of the company" (in vivo code) and as "keepers of the purse" (a term that was also used for Public Works Government Services Canada in its role as the watchdog of the federal government's funds) (James – INT – 10 Dec 09). As the employees who developed the pricing and reviewed the proposal to ensure that promised services could be delivered on time and on budget, they controlled information moving across company units and proposal team sub-groups. In

order to limit the amount of financial detail released to other groups, and yet guarantee that Contracts had adequate access to required technical information, Stephanie developed Excel spreadsheets. Once subsumed into pricing estimates, the financial information never flowed back to the technical units – except to senior administrators.

Information in the Engineering unit appeared less controlled compared to financial information.[27] The flow often started with technical support personnel. Technicians provided detailed information on repair requirements or Product specifications. Engineering took that information and moved it into more formal engineering documents. The level of detail moving out of Engineering to other units was limited, purposefully, by the knowledge that few other members understood the complex data. Either engineers were aware that other company employees, including team members, were unable to understand the technical information, or they came to understand that the information needed to be presented in other formats (such as Excel documents) provided by Contracts. Non-technical employees could, then, understand the pertinent (to their work) parts of the technical information. Engineering, though, knew when writing the technical sections of the proposal that the critical readers would be government engineers, the only employees for the Crown who would understand the technical annexes. These sections, accordingly, included detailed information on the technical side of the proposed work.

The theme of "information control" emerged throughout the development of the proposal. The complex movement of information from the SMEs flowed into an inner circle of team members. At first, the flow was directed at particular team members and it furnished details to complete documents such as costing sheets, inventory tallies, and so on. Later, it moved to Thomas and Henry who wrote up the proposal's body. Even here, control was in evidence as the main writers and the executives reviewed the document. A complex "feedback loop" (Lawrence – INT – 3 Dec 09) sent versions up the organizational structure for comment, back down for revision, and then back up for approval. Versions of the proposal became examples of control as reviewers and writers struggled to produce a document reflecting perspectives of what a proposal should look

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[27] A great deal of technical information governed by copyright is controlled. I was not privy to that kind of information or I was not aware that I was privy and therefore could not assess control.

like. In the end, few team members saw the completed proposal. The distributed members, in fact, never knew that the proposal was ultimately accepted until they noticed the repair work on their work roaster.

4.1.5 Relationships among the Themes

Thorne (2008) writes that "identifying which data pieces are important, grouping and sorting them into patterns, and considering relationships between pieces and patterns are all aspects of the complex inductive reasoning process through which you move closer to something that could constitute findings" (p. 163). In the case of the current study, I constructed a picture of the proposal team's work through coding. Figure 4 depicts the data analysis tree.

Military World	Commercial World
⇓	⇓
Professional Identity	**Professional Identity**
Learning to by osmosis	Seeing the big picture
Speaking the same language	Not understanding each other
Being in a hierarchy	Being trained
Information Control	**Information Control**
Amending somebody's version	Keepers of the purse
Need to know limited	Info flow as a way to control
Control by client	Persuasion
Influence of the military	**Influence of the military**
A way of life	Cannot always see the cost
Relating to the client	Cannot always see the differences in the two worlds
Know their level	Recognizing former rank
Leadership	**Leadership**
Being necessary	See it as informal
Needing generalists	Not everybody wants to be one
Knowing that experience counts	Know what to do

Figure 4: The Tree of Concept Codes showing the two worlds on the team, as well as the four main themes with descriptive codes beneath each theme.

89

The two primary "worlds" (commercial and military) are positioned at the top of the hierarchy. Military influence, professional background (identity), leadership, and control of information are presented as major themes. Under the themes are descriptive codes. The descriptive codes reflect the different world views on the themes.

Through the process of constructing the conceptual hierarchy, I noticed that the military backgrounds of a majority of the proposal team members influenced how the members viewed the proposal's development. The military training had shaped the perceptions and work habits of its members, and the former members, in turn, influenced how the proposal team worked. A commercial enterprise, working in both the commercial world and military world, had produced a proposal team with distinctive bi-cultural characteristics. The business members and the former military members dealt with the differences that stemmed from both professional backgrounds and commercial/military "worlds." Their views of leadership and their need to control information, also, reflected differences associated with the worlds from which they came.

Coding as a data analysis technique (borrowing techniques from Charmaz, 2006) produced results that revealed the major concepts/themes involved in the process of writing the proposal. The professional groupings worked on their own sections of the proposal and contributed information to the lead writers. A strong military influence was exerted by the former military team members and the client. That influence was stronger than the influence from the commercial world from which some team members had come. While a military code of conduct that emphasizes group cohesiveness and trust (Alberts & Hayes, 2006; Siebold, 2007) may, also, have been present, I suggest what held the group together and ensured coordination was the presence of strong leadership. The former military members, in particular, looked for and demonstrated strong leadership behaviours.

At this point, I discuss the analysis using the Rhetorical Genre Studies approach to texts in an effort to understand better the activity on the proposal team.

4.2 The Rhetorical Genre Studies' Analysis

As noted in the previous chapter, I analyzed the genres produced by the company, the proposal team, and the client to understand patterns of genre usage, participant involvement in the writing, and sub-group genre preferences. Identifying the written genres that enabled the proposal to be completed was critical to understanding the proposal's development.

The first step in the RGS analysis was identification of the rhetorical situations. As explained previously, a rhetorical situation is one that calls for a communicative response or action (Bitzer, 1968; Campbell & Jamieson, 1978). While many rhetorical situations developed, the over-riding situation led to the requirement to write a proposal. During the proposal's development, many other, every-day situations demanded communicative responses: e-mails requested information; letters from the client demanded changes in direction; requests arrived for review of the proposal. I needed to identify responses to major situations. In other words, the genres used to respond required identification, so as to understand the development of the proposal.

4.2.1 Written Genres

The proposal team pursued completion of the proposal through a number of steps that required the use of a host of texts. Many of these texts are seen as genres, or "typified responses to recurrent situations," by RGS scholars (Miller 1984/1994, p. 31). For example, the executive meetings, which were held in May 2009, were arranged by e-mail correspondence. Distribution was targeted in that the e-mail invitations were not sent to a broad spectrum of ABC Engineering's employees; rather, VPs, senior administrators from whose units team members would come, and engineers working on the Product were invited. A series of e-mails moved from executives to invitees explaining the situation and soliciting input from that level of the company. Primarily, the executives required information on the problem and the Product. E-mails, informal meetings, and the executive meetings solidified the idea that the company did, indeed, have a solution to the problem. A strategy to convince the client of the urgency of the solution was developed, and it was sent out to the members of the newly established proposal team.

Table 4 lists the pivotal rhetorical situations involved in the proposal's development, along with the documents that responded to the situations.

*Table 4***:** Documents used in the development of the proposal

Rhetorical Situations	Responses
Executive meetings	E-mail invitation to participants E-mails back and forth securing information on technical specifications (to create the initial technical memo) – sometimes with attachments in Microsoft Word or Excel E-mail giving a picture of the proposed inspection and indications of who might be appropriate team members E-mails among potential team members, executives and senior managers (seeing who is interested and who is available to work on this project)
Kick-off Meeting (initial meeting with team members and executives)	Proposal outlined in meeting agenda E-mail summary of meeting activities and action items (widely distributed)
Requests for technical information	Development of the technical memo (using various genres) Development of the Concept of Operations (technical) Use of multiple documents (in Word, MS Project, Excel) listing requirements, ROM estimates of services, person years, and so on for pricing)
Need to write the body of the Proposal	E-mails requesting and sending information E-mails requesting and returning versions of the proposal Versions of the proposal
Need to write the executive summary and cover letter	Versions of the documents E-mails sending versions and receiving comments

4.2.2 Analytic Approach to E-mail Correspondence

In order to understand the use of e-mail messages during the development of the proposal, I primarily used Yates and Orlikowski's (2007) questions as a guide for analyzing genres. Yates and Orlikowski have used the questions as the basis for understanding use of genres in workplaces. Im, Yates, and Orlikowski's (2005) study of temporal coordination practices in a virtual start-up organization was particularly relevant to the current study. Im et al. found that e-mail genres structured the work of the team and contributed to the building of group cohesiveness. Their study identified three specific e-mail genres (status reports, bug/error notifications, and up-date notifications) that responded to specific rhetorical situations. I used their questions to identify genres in the e-mail correspondence that responded to situations the proposal team's encountered while writing the proposal.

4.2.2.1 E-mail Usage.

E-mail messages were archived during Phase 1 of the proposal (see Tables 6 and 7). Rhetorical genre analysis enabled identification of participation or involvement on the proposal team. It also showed how members used texts to further their work. Messages within the e-mail were seen as genres that worked with other e-mail genres to get the work done, a complex system of messaging needed to accomplish the task of writing a proposal. Discussing the idea of a wider system of genres in organizations, Bazerman (1994) explains that complex activity in organizations is accomplished "through performance of genres that have highly specific, systematically contextual requirements and well-defined consequences for further generically-shaped social acts" (p. 79). Im et al. (2005) illustrate the idea of a genre system by using the example of the job application process with its series of interrelated genres (e.g., an ad, cover letter, and job offer) working together to find suitable employees. The concept of genre system allows the researchers to view the actions within organizations (here teams) as interrelated, as working together to accomplish a purpose and not isolated actions. The action is

responded to (in other words, here understood as coordinated) through the genres. As they continue to discuss the example of the job application process, Im et al. remark:

> The genre system coordinates or choreographs the interactions between job applicant and hiring manager. Using a genre system lens enables us to view group interactions as paced and meaningful sequences of events, rather than as single, isolated occurrences, thus directing our attention to the very process of temporal structuring, and the coordination of communicative and work practices. (p. 94)

Through an analysis of the e-mail usage by team members in the study, following the method outlined by Yates, Orlikowski and their colleagues (e.g., Im et al., 2005; Kellogg et al., 2006), a picture of the level of coordination and cooperation required to write the proposal was obtained.

As discussed previously, a majority of the team members worked in a distributed fashion, even when they had offices in the same building or same site. E-mail messages, and their accompanying attachments, aided the proposal team in attempts to secure SME information and obtain revisions or comments on versions of the proposal. By close reading, I identified the six aspects of communicative expectations the purpose, form, content, participants, time, and location[28] of each e-mail (Im et al., 2005). For my purposes, I was most interested in the identifying the genres, determining patterns of genre usage, assessing the volume of specific genres, and focusing on the senders and receivers of pivotal genres in order to ascertain pivotal roles on the proposal team.

The following section presents an example of how e-mail messages were identified as genres. Table 5 displays a message from Thomas. It was identified as a sample of a temporal coordination genre.

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[28] Location, here, is viewed as where the members were in relation to headquarters.

Table 5: E-mail from Thomas

From:	Thomas
Sent:	June 3, 2009 4:57 PM
To:	Henry; Other person; Other person; Other person; James; Kevin
Cc:	Executive VP
Subject:	Proposal Timeline
Importance:	High

All,

I propose, subject to your inputs, the following Proposal submission schedule (NB, of necessity a very abbreviated one!):

- 05 June   Technical Solution Working Group
- 08 June   Business Solution Working Group
- 09-14 June   First Draft Preparation
- 15-17 June Draft circulation for review & edits
- **18 June   Brief Technical Proposal**
- 19-22 June   Pricing development
- **23 June   Brief Pricing Proposal**
- **25 June   Submit Proposal to client**

In Table 6 the process of identification of the genre is outlined. This process of identification was repeated for all the e-mails in the archive, so as to categorize the separate genres.

Table 6: Process of identification of a genre within the e-mail

Question	**Answer**	**Other comments**
Purpose (why?)	Thomas's e-mail message outlined a number of activities that required completion by a particular time. This genre indicates a deadline or gives a time line to the project.	-The distribution lists on these e-mails are critical. -It is assumed that the person receiving the e-mail needs to know this information. The assumption is that they need the dates in order to get moving on their work and complete it. -Inequalities are certainly apparent in that people who don't receive these e-mails cannot complete the work by that date. These people would be up-dated on the project where others aren't (e.g., distributed members). -This genre coordinates the activity on the proposal.
Content (what?)	In this message, Thomas gives an overview of what needs to be done and when. Often these messages give a date for completion of a project or indicate a change in dates.	
Participants using it or reading it	Senders send these messages to people who need to know the	

(who?)	timelines. The circulation is fairly tight with the anticipation that only people who need to do something for the sender needs to have the message. However, the VPs tend to send them to other VPs in order to keep them apprised of what is going on in the project.
Form (how?)	Looks like an e-mail. Some are quite formal and contain a discussion; others are brief and give only necessary details. Trying to arrange a meeting or a phone conversation are common examples.
Time (when?)	Time is often critical in this genre.
Place (where?)	Message has assumptions about where people are in the course of their daily work lives, but they could be accessing it anywhere.
Claim	Claim: The writer has the right to tell receivers when things need to be done. (It seems as if the sender sometimes has the ear of the client and is passing along the required information. There is never a justification for the request or information on times.)

Naming the genre: Temporal Coordination Genre

I identified 12 e-mail genres in the 306 e-mails by using Yates and Orlikowski's (2007) questions. Table 7 provides a list of the genres identified, their abbreviations, volume as a percentage of the total volume, and descriptions used to identify genres in the analysis phase. See Appendix H for e-mail genre usage by month.[29]

Table 7: Descriptions and usage of e-mail genres

E-mail Genre	Abbreviation	Percentage of Volume of E-mails	Descriptions
Meeting summary	MSG	6.2%	Recounted details of a meeting
Request for information	RFI	11.4%	Asked for information
Response to work	RTW	8.2%	Acknowledged that

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[29] See sub-heading "Member Involvement" below for a brief comment on analysis of e-mail volumes and usage.

			work had been sent
Provision of information	POI	42.8%	Sent along information
Response to provision of information	RPOI	3.3%	Acknowledged that work had been sent
Work to review	WTR	7.6%	Requested the work was available for review
Temporal coordination	TCG	4.6%	Managed task completion
Invitation to meet	ITM	1.3%	Invited attendees
Other (combined)	O	.65%	Described other messages
Directional	DG	3.3%	Gave direction or orders
Response to client	RTC	.32%	Written to the client
Response from client	RFC	.32%	Written to company by client's representatives
Total	306 e-mails	100%	

Table 7 Column 3 depicts the volume of the 12 kinds of e-mail. Most noticeable is the number of Provision of Information (POI) messages during the four-month period. These straightforward, fairly informal e-mails contained information critical to building the technical and financial (i.e., costing) annexes, two components upon which the proposal hinged. Many e-mails began with "as requested" in order to situate the receiver to the attachment's contents, and the overall tone reflects the time-sensitive nature of the provision. Everything needed to be done as a priority. Without the provision of information, the document could not have been written. The Request for Information, the genre that sparked the urgent activity, is consequently an important genre; without the RFIs, the information would not have been provided. The requests indicate that the person making the request has the right to ask for the information and normally did so with minimal explanation. Many are so direct that they have an air of an order with the sender in a superior or lateral position within the company hierarchy.[30] Certainly, the

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[30] An interesting aside is that the Requests for Provision of Information often were followed by at least one phone call indicating that e-mail may not always provide enough information for the receiver to

sender had the right to ask for the information, and he/she had the expectation that the work would be completed quickly. For example, Kevin corresponded with a person external to the proposal team. He writes: "Sam, could you plse [sic] outline what mods 34077 is scheduled to receive in Oct. Thanks. Kevin" (Kevin – E-mail – June 2009). The Temporal Coordination genre might appear of minimal significance compared to more widely used genres; one of the criteria for this genre was the mention of time. However, the RFIs could easily be seen as a part of the Temporal Coordination genre. Its only difference is the failure to mention time or timing in the RFI.

Equally critical to the proposal team's writing process were Directional genre e-mail (DG). Each Directional message responded to a crucial rhetorical situation that, in turn, required a change in direction of the proposal team's work. Through the infrequent messages, pivotal team members, company employees, and the client changed the direction of the writing. The DG e-mails give direction, first to the people who coordinated much of the work, and then to senior executives and the client as a confirmation or written archive. For example, Henry writes: "Here are my thoughts on the two fundamental questions we need to address in our proposal to the Crown. I would ask you to consider these in writing the proposal, along with any other thoughts from the others that I may have missed" (Henry – E-mail – June 2009). DGs are not open to discussion; they impart a decision already agreed upon by senior administrators. Inclusion of action items strengthens the imperative nature of the message. Even their more formal tone and letter-like format serve to impart a "senior level" ethos to the messages. A sense of urgency is always noticeable in the messages. The impact on the proposal's content is evident. Henry writes at one point that the work on the Product has been "in a totally reactive mode to deal with the problem as it gets discovered on an ad hoc basis" (Henry – E-mail – May 2009). Later in the proposal's main body, the subject is written about in the following manner:

> All corrective maintenance activity is assumed to be within the capability and
> capacity of maintenance resources and performed at sites only able to do that
> work. However, experience has shown this not to be the case as major repairs due

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understand the request. The initial e-mail had not been clear. This fact appeared to cause a high level of frustration on the team.

to the problem have become an increasing challenge to the capabilities of current expertise and facilities. (Proposal – July 2009)

The writing of the e-mail genres, certainly, reflects professional sub-groups in that engineers write with a great deal more technical detail and business team members are primarily interested in securing financial information. In addition, the e-mails also indicate a distinction between the writers who are former military members and civilian-trained team members. For example, above I noted that the RFI took a direct approach to the request. Angus's RFIs were much more formal and indirect. For example: in Figure 5 Angus writes to off-site managers requesting information.

5/26/09
From: Angus
To: Off-site employees
c.c. Lawrence, Kevin, and Angus

Sampling Inspection for Product

Gentlemen,

As you probably know, ABC Engineering is preparing a Proposal for the Crown recommending that a Sampling Inspection of the Product be performed. The purpose of the inspection would be identify the problem areas and are yet undiscovered or have not been exhaustively investigated. Inspection for …[31] is also in scope but as a secondary consideration. Work to scope the content of the inspection has begun in engineering and to support the engineering review of the comprehensiveness of the other inspections, I'd like to solicit feedback and input from the off-site managers.

I'll leave it to each off-site manager as to who and how many respond from each site but feel free to distribute or request input from your personnel as you see fit.

The question right now is very general. [Question removed.]

Please provide feedback to Angus at this e-mail address. I plan on being at the meeting to discuss further but please provide the response in advance of that as the schedule for the initial planning tasks for the inspection is very aggressive.

Any and all comments on the problem are welcome.

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[31] Information has either been changed or removed to ensure confidentiality.

> Thanks in advance.
>
> Angus

Figure 5: Request for information e-mail from Angus

Angus carbon copies himself and two other proposal team members. The formal tone and detailed correspondence contrasts with Kevin's request quoted above. It is apparent that Angus is not familiar with his proposal team mates. He is not familiar with their involvement in the proposal's development (e.g., "Gentlemen" and "As you probably know"). While the receivers are all well-acquainted, Angus remains the civilian addressing former military personnel. He wisely uses the e-mails to build his circle of company connections. His strategic writing, as well as his technical expertise, goes a long way to make him a recognized team member.

4.2.3 Member Involvement

Member involvement was determined in part through the analysis of e-mail genres. I paid attention first to the volume of e-mails used by members, not because volume necessarily indicated a valuation of contribution; rather, volume often indicated participation. The member sending or receiving the most e-mails certainly played an active role in the process. Later, the identification of the particular e-mail genre used by members served to reflect member relevance or valuation. Members did not participate equally in the proposal's development. Although the activity levels of senior administrators and the client's representatives were evident early in the proposal's development and again at the end, they spent little time corresponding with lower level team members. Carey explained that long-term contracts allow for the development of closer relationships with the client, and hence the client's involvement in the writing process. The three main units (the Program, Engineering, and Contracts) were represented by three individuals who wrote the most e-mails. Kevin from the Program directed the flow of e-mail with his unit colleague, Lawrence, who also contributed significantly to the e-mail volume. Angus from Engineering showed that he not only needed to correspond with others to gain technical information, but increasingly he was copied on correspondence from other

units. Stephanie, representing Contracts, also proved a valuable team member as witnessed by her volume of correspondence and importance or relevance of the content of this correspondence to the proposal team's objective[32]. See Figure 6 for a chart of the e-mail correspondence usage by individuals.
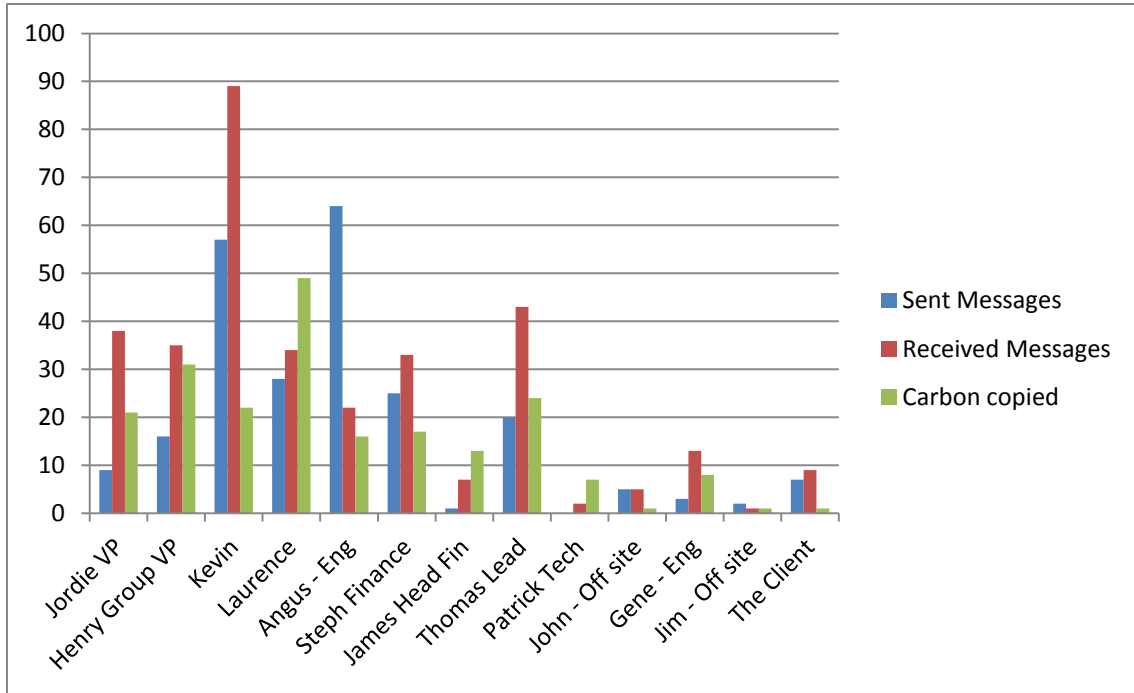
Figure 6: E-mail correspondence usage indicating activity by individuals sending mail, receiving mail, and carbon copying mail.

In terms of member usage of specific e-mail genres, Table 8 indicates that membership roles differed significantly.

Table 8: Participant usage of specific e-mail genres

Members	MGG	**RFI**	RTW	POI	RTPOI	WTR	TCG	ITM	**D**	RTC	RFC
Jordie	1	**0**	6	1	0	0	0	0	**1**	0	0
Angus	7	**8**	3	21	2	17	1	0	**2**	0	0
Henry	1	**0**	0	7	1	4	1	0	**3**	1	0

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[32] Thomas has a higher volume of correspondence (in and out) than Stephanie. However, Thomas' role ended at the mid-way mark of the team effort, thus reducing his involvement toward accomplishing the team's over-all goals. Also, Thomas is viewed as part of the executive-level of the company, and the VPs did not participate in the day-to-day activity on the team except at the beginning and end of the project. He already played an assigned leadership role as a VP.

Kevin	2	**8**	4	22	2	8	5	0	**3**	0	0
Stephanie	0	**9**	1	11	0	4	2	0	**0**	0	0
Lawrence	0	**2**	7	9	0	7	0	0	**0**	0	0
Thomas	0	**0**	2	1	0	8	1	0	**0**	0	0
Gene	0	**0**	0	2	1	0	1	0	**0**	0	0
James	0	**1**	0	0	0	0	0	0	**0**	0	0
John	0	**1**	0	0	0	0	0	0	**0**	0	0
Client	2	**0**	5	0	1	1	0	0	**1**	0	0
Others	5	**5**	0	51	2	5	3	2	**0**	0	0

Senior executives continued to write fewer messages than others, but using the DGs and MSGs allowed them to play critical roles, especially in terms of decision making. The fact that individuals from outside the proposal team, and sometimes outside the company, contributed a large number of e-mails indicated that external communication was a method of extracting information required by the proposal team. Team members' continuing participation in external units played a critical role in the access to information and development of the proposal. The WTR genre acted as a request for document revision. Thomas, the initial lead writer, requested members read parts of the proposal's main body. Kevin and Lawrence requested readings of technical and logistical material, while Angus needed engineering work to be reviewed. In fact, Angus' high number of review requests may indicate the importance of the technical decisions and/or his lack of experience with the Program Unit and proposal writing. Finally, it is notable that Kevin, Angus, and Stephanie increasingly (see Appendix H for a month-by-month breakdown) wrote more correspondence including messages outside their own units and to senior people. In the case of Kevin and Angus by the end of Phase I, they wrote several DG messages showing the emergent nature of their roles on the proposal team. These three unit representatives on the proposal team not only wrote many of the e-mails, but they increasingly were recognized as important members, and they were sent, received, and were copied on more and more messages.

In the RGS analysis, I kept in mind Bazerman's (1994) concept of systems of genres (and used in Im et al.'s (2005) work). The 12 genres within the e-mail system

could be seen as "interdependent sets of genres" (Im et al., 2005, p. 94) that worked together to accomplish the team's task of writing the proposal. In terms of the study, coordination of activity on the proposal team centered on the team members who wrote the genres that solicited, secured, and used the technical and financial information.

4.2.4 The Role of Other Genres in the Proposal's Development

As mentioned previously, only Thomas had been a member of a proposal team. The other members drew on experiential backgrounds in the company and former careers to produce the proposal. Many of the former military team members had dealt with private contractors during their time with the Forces, so they were familiar with practices such as estimating costs, preparing budgets, justifying technical repair work, and so on. Civilian-trained team members had, also, dealt with contracts and recognized different genres as appropriate in different rhetorical situations.

The following section provides the RGS analysis of the genres that contributed to the development of the proposal, apart from e-mails. I followed Devitt et al.'s (2004) guidelines for analyzing genres (see Appendix I). I identified the participants, rhetorical situation, genre features, language used, patterns of language use, and the implications of using particular genres. Devitt et al.'s questions were particular useful for ascertaining the social dynamics involved in the rhetorical situation as shown in the choice of genres by participants. (See Appendix J for an example of the RGS analysis. In the example, the Basis of Estimates is analyzed.) In the study, I began to see genre choices as driven by participants' backgrounds and training. Often choices were not consciously made; rather, they appeared to the participants as the only way to get the job done. Other options did not seem to be entertained.

4.2.4.1 Proposal Body July 17, 2009 Version

The initial section of the proposal is a 17 page document that explains and justifies the proposed work on the Product. The cover page is signed off by James (representing Contracts) and Henry (representing the Program). The proposal's objective is clearly identified:

The aim of this proposal is to detail the requirement for conducting repairs on the Product. It assesses the inspection, work requirements, and schedule impact in order to propose how the repairs would be conducted. Finally, options are considered as to where to best conduct the repairs and recommendations are presented. (Proposal pp. 4-5)

In the case of a solicited proposal, the client would have already identified that the work was necessary through a Request for Proposal. Unsolicited proposals must convince the client company that the engineering company has identified a problem with the client's product; the engineering company knows how to fix it; and the company can do the work economically. In the study's proposal team, however, financial concerns do not appear as important as technical issues and location choices. In the Executive Summary, for example, the company minimizes the topic of costs, only mentioning money when the two location options are compared: the advantages of X "outweigh the modest difference in ROM cost between the two options" (Ex. Sum. July 17, 2010).

The proposal team's main writers, Thomas and then Henry, clearly and concisely acknowledge that maintaining the Product is the paramount issue. They take the client through the identified problem and location options. Mitigating the need for a detailed background on the Product, problem or the company is the long-term relationship with the client. The writers do not need to convince the client of the company's ability to perform the service, nor of its expertise with the Product. The fact that the proposal is written in a sole source environment (MonPere McIsaac & Aschauer, 1990), though, allows the client to play a part in the development of the content of the proposal. Analysis of the versions of the proposal indicates that the Client, at times, approved a decision (often in meetings or by phone), and from that point onward the writers dispensed with sections relating to the decision and moved on to other sections. For example, as the proposal process unfolded the client agreed with the need for the repair work, and the proposal moved from that persuasive tactic to an attempt to persuade the client to have the work done at the company's preferred location. The client insisted that the company include a second location option (the client's initial preference). Accordingly, the completed proposal's main section (version July 17th) strongly argues for the company's preference, while conceding a few advantages to the second, cheaper option.

The main body of the proposal reflects the lead writers, VP reviewers, and client's military backgrounds, and, in many ways, the technical backgrounds of the engineering team members (military or civilian). The writers anticipate that multiple readers will access the proposal for diverse purposes: military engineers will assess the technical annexes; military financial administrators (as well as PWGSC employees) will evaluate the costing annexes; and senior military personnel will read the executive summary and the body. In deference to the client and in accordance with their backgrounds, the writers developed the main document to appear much like a standard military and technical report with numbered, single-spaced paragraphs, and numbered headings and sub-headings. The 12 point font in Arial appears typewriter-like. Word choices remind the client of the company's and its employees' close connection with the military and engineering: "Although the xxxxx Product[33] falls under a different xxxxxx, the accumulated wisdom and extensive experience that forms the foundation for the CF maintenance doctrine is no less pertinent to an xxxxxxx, which is not part of the xxxx program" (Proposal, July 17, 2009). A composite picture of the Product appears on the cover. The discussion of its value to the military ties the company to the military culture of service and preparedness. Acronyms are used frequently through the text (as seen in the quotation above), and the text eschews adjectives and adverbs in favour of strong verbs such as drive, impact, and dispatch. Headings often are formal (e.g., Engineering Assessment Conclusions), but at other times reflect military-style expressions (The Who and The Where).

The following sample of the proposal indicates the company's efforts to link their work with the military culture. "The Product's culture" involves a number of militaries that use the Product. The company sees itself in that culture.

7.0 The Way Ahead

7.1 The Product's community needs to take a much more pro-active approach to dealing with existing and the real potential for further areas of repair problems in order to regain control of the situation, minimize impact on product availability and enable reliable forecasting for operations.

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[33] Material has been changed to disguise the company and product.

7.2 The recommended course of action to accomplish this is through the conduct of an xxxx as the best and only way to determine the full extent of the problem. With this knowledge, proper planning and repair activity can be systematically carried out in coordination with all stakeholders, particularly with operations, so the xxxxxx can be controlled, predicted and dealt with in the most efficient and effective manner. In fact the proposed work is similar in approach, as a Third Level Activity, to UK products". (Proposal – July 17, 2009)

The proposal's body privileges military and engineering readers in terms of its form, expression, and content. Business-trained team members and government employees were not as comfortable. The main part of the proposal would be easily understood by those groups and reflected the generic expectations of the majority of readers. The proposal writers knew the client (military and specifically engineers in the military) and knew what genres and writing practices would be found most acceptable to them.

4.2.4.2 Annex 1& 2: Technical Memoranda

The two technical annexes present detailed accounts of the Product's problem and proposed solution through a complex, data-driven discussion complete with breakdowns of repair procedures, equipment requirements, charts and diagrams of parts, and so on. In the first annex, the methodological approach to the work is presented. Assumptions and definitions explain and limit the company's proposed work. Diagrams, charts, and reference lists round out the information provided. In the second annex, the work is broken down by Product zone or section. Initial findings from regular repair work give the readers an indication of the extent of the problem. Again diagrams, charts and this time photographs aid the reader comprehension.

Angus, the proposal team's engineer, wrote the annexes and the tone is typical of engineering reports: the high level of technical detail for proposed procedures gives the impression that convincing the client is a matter of detailed data and not text-based, rhetorical, persuasive strategies. In the proposal's evaluation by the client, the only

competent readers of these two sections would be engineers from the military and PWGSC. The initial text summaries of the work provide non-engineers with sections that act as introductions to the work, but the persuasive elements are the pages and pages of information attesting to the company's knowledge of the Product. If the pricing summaries had distilled the technical information into bottom line capsules of the repair work, the technical memoranda established the depth of technical expertise required to achieve the project goals.

4.2.4.3 Annex 3 & 4: Concept of Operations

CONOPs were written for each location option, and each outlined the requirements for the repair work. Organizational charts allow readers to understand the availability of support for the work. The two documents include short needs assessments, the current situations, major stakeholders, maintenance policies, assumptions, and constraints, the organizational interface (structure of the organization that supports the work), and manpower support for the work.

In format, the genre reflects the body of the proposal displaying a cover page with the Product, its pages bordered with a dark line, numbered paragraphs, large two-columned tables with the descriptors on the left and the details on the right, an organizational chart, and so on. The CONOPs explain where the resources are, and what the company needs to do to ensure a positive result. It does not deal with financial issues.

Kevin's and Lawrence's signatures appear on the CONOPs' covers testifying to their role in the Program and lending support to the credibility of the company, since these individuals once held key maintenance positions with the client's organization. The documents take the reader through the requirements for the actual work, rather than justifying the options or the work in general. The depth of planning and knowledge of the Product's requirements attempt to convince readers that the company knows what is necessary for a positive outcome. The documents highlight the company's preferred location; therefore, resources from the other location are not put in as positive a light.

In the private sector, much of the information in the CONOPs appears in a Statement of Work (SOW), and the civilian team members were familiar with the SOW

genre, having used it previously. Even the military's civilian public procurement employees from PWGSC prefer to use the SOW (personal communication with PWGSC employee). Thomas, in fact, indicated early on that a SOW would be written. The choice of the CONOPs demonstrates the former military sub-group preference for a genre that had often met their needs while in the military. The client, in turn, would have been comfortable with the annexes developed as CONOPs: like many military operations, the CONOPs testified to the company's ability to accomplish the critical operation of repairing the Product. While both the CONOPs and SOWs deliver logistical information, the CONOPs reflect the military's preference for extensive detail and the former military members' experiential backgrounds.

Table 9 presents the opening sections of the CONOPs for Location J. The justifications for the work and the preferred location, outlined in the proposal's main body, are reiterated here. Together, the two annexes are written to persuade the client that the work is necessary.

Table 9: CONOPs for Location J

Annex A03 to Proposal Concept of Operations For The Product INSPECTION ***At Location J*** Submitted by: _____ _ Endorsed by: _____ **SECTION 1:** **1.1 Requirement(s) and Need(s)** • The requirement is to determine the level of xxxxxxx extant in the xxxxxxxx. [rhetorical situation] • Failure to do so puts the work at risk due to unforeseen accidents and events. [justification for work] • The third-level facilities and third-level skill sets necessary to perform an inspection as well as the anticipated repairs are not available at the MOBs.[justification for the preferred location] • Currently scheduled inspections and modifications must be carried out concurrently to the work.[indication that the company knows current and future needs]

1.2 Capability Gap

In considering location, the requirement to provide responsive engineering support during the critical discovery phase of the inspections is essential and this will have to be delivered from within the preferred location as required. [the word "responsive" works to make the preferred location sound like the only choice – military responsiveness is highly prized]
As the MOBs are set up to complete xxxxxxxxxxxxxxx maintenance utilizing a second levelfacility, there may be a requirement to address facility deficiencies to accomplish third level tasks. Likewise, the technicians primarily perform first and second level tasks and are unfamiliar with Third Level inspection concepts. While this can be provided through instruction and demonstration, the experience level is not there. Required repairs will need to be assessed to determine the expertise necessary, and will be dealt with outside this proposal. [this is a strong justification for the work to be done at the company's preferred location]

1.3 Current Situation

If xxxxxxxxxx is inducted at Location J into currently schedule, modification, and known repair activities, the potential risk is that more major problems will be found anyways as a consequence of known problem areas and the level of xxxxx inspection, including potential for xxxxxxxxxxxxxxxxxxxxxxx. This, in turn, introduces the risk of resource constraints as second level activity increasingly, in reality, becomes third level. That is, the work requires more resources, higher or different skill sets, third level supervisory and management experience, xxxx support, third level shop and manufacturing support, third level equipment (jigs and fixtures), or third level paint and process support. There is potential schedule risk due to the time it could take to arrange for and provide engineering xxxx support, to arrange for and provide third level xxxx support, to arrange for and provide xxxxxxx support, to arrange for and provide manufacturing support, and to coordinate xxxxxx or logistics support. This additional risk also adds risk that the Location J facility and technician resources could be over committed on xxxxx and not available to provide support for other planned or reactive second level maintenance. There is worst case risk that xxxxxxx repair requirements could not be resolved by third level or xxxxxx requiring either interim repair and restricted xxxxxxxxx to another facility or xxxxx transport of a xxxxxxxxxxxxxx. Availability is potentially

> impacted in the near term by any increase inxxxxxxxx
> turnaround time in Location J, by any impact on the
> remaining xxxxxx if Location J becomes over committed in
> support of xxxxxxxxx, by any overall extension of the
> current xxxxxxxx repair activity (due to additional or
> lengthier repairs on xxxxxxxxx forward), and by
> downstream impact of undiscovered xxxxxx that becomes
> worse over time. [attesting to the company's knowledge]

4.2.4.4 Annex 5 & 6: Pricing Summaries

The pricing summaries are deceptively simple looking. Stephanie's two-page, three-column contribution belies the volume of communication and analyses required to cost up the two options. The pricing summaries present the ROM estimates of the cost of Product repair and include breakdowns of hours and costs for Engineering, Production, and Program Production.

The client's readers of the two pricing summaries would normally be the finance/procurement people from the client and PWGSC; these federal employees would understand the presentation of costing information contained in the summaries. Only these representatives of the Crown, Stephanie, James, and the VP level of AC Engineering would see the summaries. The genre is notable in its brevity: it does not break down the costs, nor does it disclose the mark up allowed under federal government rules. Financial information was safeguarded even within the company because of competitive pressures. Most team members would have read the entire proposal with monetary values marked out with Xs. The distributed members, as noted above, did not see the proposal at all.

Before the pricing summaries were fit into the proposal, Stephanie spent months gathering the necessary information. Even in the case of ROM pricing and proposals that are extensions of existing contracts, accuracy is important. The company must be shown as presenting a realistic picture, so that it is not held liable, later, for low estimates for services. At times, Stephanie relied on discussions at meeting, phone requests or e-mail to acquire information that she then rolled into Excel files for analysis. Other times, she explained that she created Excel files in which other units could fill in the blank spaces so that she received the specific information and not excess detail. Writing of the process of

creating the various documents and the differences between completing the forms for commercial and military clients, Stephanie noted:

> We negotiate rates with PWGSC on an annual basis; therefore they are already aware of a lot of the inner workings of the company. However, a commercial customer does not know anything about our rates or mark-ups and we like to keep it that way. Mainly because we are a commercial company…and we would not want any of this information leaked to our competitors or made public. (Stephanie -E-Mail #2-Feb 2009)

In many instances, a Basis of Estimates (BOE) would have been created within the proposal. It would have explained the process by which financial information was developed; however, in the case of the study's proposal, the BOE served an additional purpose. It continued to be an intermediary genre that reduced technical and logistical information (e.g., requirements for technical work) into the dollar amounts required for the work's completion. Through development of the BOE, Contracts was able to write the short summaries and also create documents that the executives could use as discussion points. The genre (as part of the system of genres that made up the completed proposal) informed the decision makers of the thinking behind the financial costing of the project, and thus the executives could assess merit.

4.3 Complementary Nature of the Analyses

In this chapter, I discussed the study's data analysis, which was conducted to answer the research questions. Rather than employ only coding as an analysis technique, I decided to use Rhetorical Genre analysis methods as seen in the work of Yates and Orlikowski (2007) and Devitt, Reiff and Bawarshi (2004), as a complement to the coding analysis.

In the first major analysis, codes and then concepts or themes were identified, which contributed to an understanding of the participants' perspective on the proposal team and its work. As the analysis continued, my initial codes slowly built into thematic codes that began to explain the proposal team's work on the proposal. As Charmaz (2006) notes, however, "Methods *are* [original author's emphasis] mere tools" (p. 15), and while the coding provided understanding of major undercurrents in the data, I

decided to use two approaches to genres drawn from Rhetorical Genre Studies to understand the role of genres within the team's proposal development process. I identified emerging roles on the proposal team through the e-mail genres (i.e., coordination practices) and a preference for particular genres (e.g., CONOPS) in the proposal's development that privileged specific individuals and sub-groups.

A deeper understanding of the proposal team's work was achieved through data analysis. For example, the conceptual theme of "Control of Information" that emerged from the coding was seen to be enacted by the team members through the genres that they chose to use. Information was controlled in a number of cases: Engineering reduced the level of technical detail through the Basis of Estimates so that Contracts could cost out the work; the company controlled the flow of financial information both to the client and to employees outside the executive circle; and so on. Directional e-mails, engineering memoranda that subsume the work of the technicians (Winsor, 2003), marking documents with intellectual property symbols, and having the authority to sign off proposals exhibit generic features that control the flow of information.

In the discussion chapter, which follows, I interpret the analysis and tie the interpretations to the literature from the fields in an effort to understand the research situation more fully. In the conclusion, I discuss the study's contribution to the fields and communication practice. Limitations of the study are also discussed in the final chapter.

Chapter 5 Discussion – Shifting the Angle of Vision

> The historical sense "involves a perception, not only of the pastness of the past, but of its presence" (Jamieson, 1975, p. 406 discussing T.S. Eliot's (1920) essay 'Tradition and The Individual Talent," p. 49).

Eliot's (1920) insistence on the salience of the past in the present is at the heart of the current study. At this point, having presented the study findings, readers will have seen the participants' (i.e., the team members') picture of the proposal team's work. Although detailed, to a large extent, the findings show what the team members experienced. From their angle of vision[34], the writing of the proposal may have appeared linear. They had been given a task, and they successfully completed the task. Choices in genres, in leaders, and levels of information access may have seemed uncomplicated, rooted in the decisions made in the present.

"Shifting the angle of vision" (Thorne, 2008, p. 50) from the initial findings means reaching beyond what participants would easily identify – whether an uneventful or a challenging journey – in their present work lives. It means viewing the situation through the conceptual lenses, offering a new perspective on the research situation that may give participants (and other practitioners) a sense of the both the past and present entwined. It may, in the end, enrich their practice – and extend theory to some degree. Now is the time in this study to shift the angle of vision. In this chapter, I offer an interpretation of the findings that extends theories on teams (integrating insights from the fields of WS, MS, and a number of other fields, as much as is possible), and that will be useful to practice, specifically inter-professional team practice.

5.1 Development of the Proposal

The development of the proposal was shaped by the company's need to extend the existing contract and the long-term nature of that contract. The proposal was written through numerous contacts with the client. E-mails were sent and copied to client

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[34] Using the idea of the participants' angle of vision does not imply a consensus or a unified viewpoint. It is used to distinguish their viewpoints from those of the researcher and other authors.

representatives; phone calls were made; and visits to Ottawa occurred. Team members knew that the proposal's success depended on (1) persuading the Client that the work was necessary, (2) persuading the client that HQ was the most logical location for the work, (3) persuading the client that the work was outside the existing contract and should be paid for through additional funding, and (4) having the client secure the funds. That was the rhetorical situation that prompted the proposal group to form, employ a particular system of genres (Bazerman, 1994), and complete the proposal.

Not all groups within the company shared the same rationale for writing the proposal. As in the case of Palmeri's (2004) lawyers and nurses, the current study's sub-groups differed in their reading of the rhetorical situation. The company's motive in writing proposals, generally, is to have an opportunity to make additional money. Contracts and some VPs concentrated on the financial benefit additional work would have on the company; other sub-groups took a different approach. Engineers, such as Angus, appeared to view the proposal as an opportunity to problem solve. They appeared to enjoy the process of figuring out what it would take to do the repairs. Securing data on repair advisability was, thus, seen as a persuasive move on the Engineering sub-group's part. It was as if technical data alone should be enough to have the client agree to the proposed work, as has been noted in the literature on engineering teams (Leydens, 2008; Winsor, 1996, 2000). The Program people, on the other hand, emphasized product safety as motive, often remarking on the impact Product failure would have on human life. For them, the proposal was a means of securing necessary maintenance.

While each sub-group had its own motive for the work, the proposal team combined efforts and worked to coordinate activity and information, thus reflecting Pinto et al.'s (1993) finding that coordination is a significant predictor of task accomplishment. The combination of writing within sub-groups, drawing on subject matter expertise, and employing lead writers to take responsibility for the main document achieved its purpose: the proposal secured the extension to the contract. Through the efforts of executives, lead writers, and representatives of the sub-groups (Kevin, Angus, and Stephanie, in particular), as well as employees in the units, the work was accomplished in the necessary time frame.

Gooch (2005), studying an engineering proposal team, suggested that "collaborators must know, understand, and appreciate each other's contributions to work together successful" (p.180), thereby indicating that a requirement for success in collaborations is close, joint work. That did not occur, to any great extent, on the proposal team. Accounting for the proposal team's success requires a deeper look. An additional comment by Gooch that strong leadership was necessary to manage the group processes on an interdisciplinary group proposal writing team may reflect, more closely, the inter-professional team's successful performance outcome.

5.1.1 Sub-Groups Seen as Communities of Practice

A first step in interpreting the findings is to deepen the understanding of the proposal team's organization. Through the lens provided by Lave and Wenger's (1991) and Wenger's (1998) work, the proposal team's sub-groups are seen as professional communities of practice (CoPs). In the study's context, CoPs are groups in which employees interact regularly so that their work gets done and they have an acceptable level of satisfaction with their work; in the community, explicit and tacit understanding of what is expected of members is learned over time (Wenger's definition, 1998, p. 47). In Bowker and Star's (1999) use of the concept of CoP, the social groups are knitted "together to form the texture of a social place" (p. 286) through classification of everything from abstract ideas and practices to material parts of their lives. The result is a taken-for-grantedness of practices, conventions, language, and so on (Bowker & Star, 1999).

In the current study, the Engineering unit's members were professional or military-trained engineers. Their view of themselves was shaped by their training and their work. Contracts unit members worked together as business professionals. New members, such as Stephanie, took years to adapt to the company's accounting practices. The Program members, in turn, saw themselves as a distinct professional group providing the maintenance on the Product. Over time, Program members learned established practices that made their work distinct from the way other units operated. All these individuals established pictures of themselves (i.e., social, or professional, identities) that

are based, to a large extent, on their involvement in their distinct CoP. They identified with their work groups.

People often belong to more than one CoP (Wenger, 1998). While multiple memberships may be common, they put individuals in a situation where they can experience tension between the way one CoP practices and reifies and the way another CoP does (Bowker & Star, 1999). An added complication, identified in the current study, was that for many of the team members' professional social identification (i.e., membership in a particular CoP) was tied to membership in a CoP that was not the proposal team, nor the company. The team could be seen as cross-cut in structure with members belonged to groups outside of the proposal team, a situation that has been seen to result in weaker bonds (i.e., group cohesiveness) with the team (Hornsey & Hogg, 2000). Keller (2001) found that lower levels of group cohesiveness were common in cross-functional teams. In this case, a majority of the members identified strongly with their former CoP. In other words, these team members still defined themselves by their membership in a former CoP, thereby limiting their social identification with the present team. That identification enabled the former CoP's values, ways of working, and communication practices to significantly influence work on the proposal team.[35]

5.1.2 Former Community of Practice

The former CoP for some team members, working behind the scenes and influencing much of the work on the proposal team, was the Canadian military (also referred to as the Canadian Forces). The military influence on the proposal team originated from a collective, over-arching, long standing CoP. The term "former CoP" (later the term antecedent group affiliation will also be used to explain the former CoP's influence) distinguished this group of employees from the present-day military (i.e., the client's actual organization). The company employees, at least the ones on the proposal team with a military background, did not see themselves as current members of the present-day military. Rather, their past is present in the present, as Eliot (1920) described.

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[35] The proposal team did not become a community of practice (Wenger, 1998). Rather through coordination practices based, to a large extent, on boundary objects the sub-groups managed to work successfully together.

The former military proposal team members had been shaped into an integrated, cohesive, fighting force where individuality was eschewed in favour of commitment to joint enterprises (King, 2006). These members would have practiced and reified (Lave & Wenger, 1991; Wenger, 1998) the ways of being military personnel, maybe to an extent that even goes beyond the common conceptualization of practice and reification. Figure 7 displays a model of the CoPs on the proposal team, in addition to the former CoP. Note how the former CoP shares members with all CoPs on the proposal team except Contracts, a fact that is perhaps reflected in Stephanie's (a member of Contracts) struggle to adapt.[36] She would have been forever separated from the experiential background of many of her proposal team members.
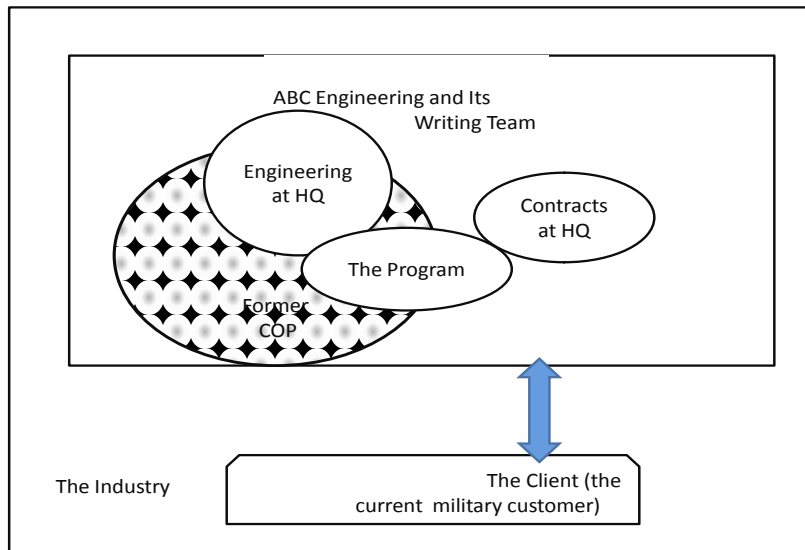
Figure 7: CoPs with the military as a former CoP

Neither was Stephanie part of the CoP of the engineers. She remarked in her interview that engineers often lack effective communication skills, which led to a discussion on her own adaptation to the company and to the Contracts unit. As noted in the studies from RGS, adaptation to professions is accomplished through learning the

[36] Group Think, a notion from psychology, might have been considered here as an explanation of the former CoP's influence. I decided not to use the term since its use is often associated with negative patterns of behaviour, often in a political sense (e.g. Janis, 1972; 1982). The former CoP did not display negative behaviours such as protecting leaders from negative information or extreme risk taking, and so on.

professional genres (Artemeva, 2005; Dias et al., 1999). While adapting to Contracts, she needed to learn about the company's genres, which entailed learning expectations about how to communicate in rhetorical situations (Miller 1984/1994). She recalled the difficulty of her learning curve:

> It's difficult – when I first came here, I started a list of acronyms. It was a couple of pages before I stopped. It helped but I found that it was a bit tricky because mainly the people were just so knowledgeable here and probably because people assume that you know [what they mean] so they think, 'Oh, you must also understand the other acronyms' and they keep using them. Then you're lost. (Stephanie-INT-10Dec09)

Stephanie could have called upon learning experiences from her business studies and professional business background in order to try and sort through the new communicative demands of the new company's CoP. Genre knowledge learned in school is often problematic in workplaces, though (Dias et al., 1999). And yet, in moving from one workplace situation to the next, employees do adapt, in part, because of similarities in the new and old situations (Artemeva, 2005, 2006). Anthropologists refer to the gradual familiarity as naturalization, a process of seeing objects, practices, and language as natural to the context and use (Bowker & Star, 1999, p. 295). The experience of adapting to professional practice is reflected in RGS studies into a wide variety of fields (e.g., Dannels, 2000; Ketter & Hunter, 2003; Palmeri, 2004). An added complication in Stephanie's case, however, was her workplace's mixture of professional influences – some current and some drawn from employees' pasts. While functioning as a central business unit, Contracts also was influenced by the former military personnel and the current military practices. The entire company had adopted many of the communication practices of the military and technical fields such as the above mentioned heavy reliance on acronyms. Stephanie's remarks indicate that even while adapting to the company-wide preferences for military and technical communication practices, she recognized differences from the practices that she had used in university and at her first, commercial job elsewhere.

Stephanie's experience adapting to the new company's culture mirrored that of the other team members: they had adapted to their own sub-groups and then saw "the

world" at the company, a term used by both Carey and Stephanie, from that vantage point. They then assessed the merit of the other sub-groups' working practices, including genre use, from their own sub-group's perspective, often finding the other ways of working as limited or unnecessarily complex (e.g., Bowker & Star, 1999; Palmeri, 2004)

Proposal team members, during their careers in the military, participated and reified within the military CoP and maintained a commitment to joint enterprises. These former military personnel continued to work within their former military CoP in a number of ways: first, the members worked on company contracts for the military, typically in programs that they worked within while military members; second, they worked in conjunction with present-day military personnel on military sites and in Ottawa, while simultaneously working within other professional CoPs and within the larger company. They used genres that had been developed in the military for military purposes. Often, use of military genres (e.g., ones developed to report to the client on repair work and financial milestones) is stipulated in legal contracts. The result appears to be a blurring of boundaries, a lack of a clear distinction between CoPs – at least for the former military members. Team members described their careers in the Canadian Forces as, "a way of life"; they stated that the relationship between former and current work lives was a case of the past (military) "living" in the present (commercial enterprise). Several times during discussions, team members and key informants mentioned that senior administrators had recently asked managers to travel more often to the off-site locations so that company personnel recognized company superiors. A company employee related that when asked to perform a new task, some off-site members in his office responded that they had to ask their commanding officer in the military, forgetting that the company affiliations now took precedence. While the individuals described in these scenarios were not members of the proposal team, I suggest that for former military team members the military still was a significant influence, and it constituted a former CoP.

As noted in the coding analysis, which was loosely based on Charmaz's (2006) modified Grounded Theory and in the RGS analysis (regarding genre preferences), the former military personnel did not feel a need to distinguish between work practices in the military and work practices in the company; that seamlessness is evidence of the power

of the former CoP to shape the current CoPs within the company.[37] Personnel continued to work on the same or similar projects and products. In fact, most employees were hired immediately as they retired after 20-30 year careers in the Forces. Work at the company was often post-retirement employment, and it paralleled their military work. As team members noted: they came in with "Equivalent rank in the company;"; they only had on "a different uniform;" and that being a military employee was, as noted above, "a way of life," not one easily eschewed or forgotten. In terms of rank or status, the military prepared these individuals for a highly structured hierarchy where members "did what needs to be done [to get the common task accomplished];" where subordinates "protected your [their] boss;" and where "knowing your audience" in discussing writing means that military members were trained to know how the organization (the military) wanted correspondence to look and what it needed to enact. The fact that the new organization (company) is a commercial enterprise is easily left unacknowledged or even dismissed.

When military members came into the company, to a large extent, they found a culture that functioned much as the military culture had. The former military members did not experience the tension experienced by employees such as Stephanie as she adapted to the new company. It was more seamless to them. As Kevin remarked: "Once a general, always a general" (Kevin-INT-5Dec09) indicating that military rank paralleled company status. Technicians from the military came in as lower-level technicians in the company. Mid-level rank military personnel became mid-level company personnel, and so on. In the case of some individuals "they came in wearing their rank," implying that these people had trouble figuratively taking off their uniform. While others adapted more quickly, adaptation never meant moving too far from their military pasts. Team members both remarked on the necessity of treating former senior officers with high levels of respect (Mr. Smith rather than General Smith and never "Jack") and unconsciously gave ground in meeting to former superior officers. The former superior officers, in turn, apparently did not see a need for consensus on decisions: most changes in direction came from above and left no room for consideration or change. In the current study, decisions seemed only to be changed if the client (the Military) demanded the change.

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[37] A secondary point is that the blurring could also be caused, in part, by the closeness of some military communication practices and engineering practices.

Reification is a means by which members of a CoP engage with others in attempts to negotiate meaning (Lave & Wenger, 1991; Wenger, 1998). Wenger's describes the process as a case where "we project our meanings on the world and then we perceive them as existing in the world, as having a reality of their own" (p. 58). Reification's strength is that once an object or concept is named and accepted (by the CoP), then it takes on a life of its own: the name or understanding appears to become a *fait accompli*, a given (Wenger, 1998). When members are confronted with new situations, they fall back on the accepted concept as if it were the only one that might function or explain what is happening. Much of the company's perspective is reflective of the military ethos. Former military members continue to classify and name (or rename) company functions, values, objects, and so on with terms used in their former lives. Head office (a conventional term for a company's main site) becomes headquarter or HQ; terms for standard operating procedures become acronyms; and terms for writing reflect military standards for conciseness and precision (e.g., details are referred to as "weeds").

While the situation of former military members, extending their view of the world (their angle of vision) into their new workplace, is understandable and certainly workable in many instances (e.g., when dealing with the military as a client), it does provide an example of the influence of the former CoP. Civilian-trained team members had to learn and adopt some of the ways of participating and reifying of the former CoP in order to work and be recognized as good company employees. Angus spoke of specific information being "above my pay grade" (INT - 9 Dec 09), while Stephanie mentioned that decision making was done within "the chain of command" (INT – 10 Dec 09), both common expressions in the military. In other words, in order to work together some level of common language had to be attained (Santa et al., 2010). The important point, though, is that the common language was often arising from the former CoP.[38]

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[38] The inter-professional team could have been studied using other lenses such as organizational memory (e.g., Ackerman & Halverson, 1999; Moorman & Miner, 1997) from the fields of Information Management and Human-Computer Interaction. That perspective would have seen the sub-groups offering diverse ways of using and maintaining memories of the work through another lens such as distributed cognition (Hutchins, 1995; Perry, 2003). As in the case of CoPs (Wenger, 1998), the sub-groups would have had to find ways to work together, attain some level of cooperation and coordination, and accomplish their joint goals. I selected to use primarily notions and frameworks used by the fields employed in this study and insights garnered by those fields rather than to venture too far afield.

A brief exploration of Canadian military culture provides more understanding of the influence of the former military CoP operating in the proposal team.

5.1.3 The Military as a CoP

Throughout history, strong defenders have usually been portrayed as protecting communities. Whether professional community assets (e.g., foot soldiers) or occasional protectors (e.g., males between the ages of 16 and 40), communities struggled against marauding tribes and invasion and organized for political and territorial acquisition. For thousands of years, nation states have employed professional military personnel to protect their lands and people. In the 20th century, the Canadian Forces played the traditional role of defender of Canadian rights especially seen in the World War I and II. Defending the rights of other nations became a focus in the Korean engagement, and since the 1960s peace keeping has been added to the Forces' mandate.

The former military employees at the company joined the Canadian Forces in the 1970s and 1980s, a time of anti-war and anti-military sentiment in Canada, following the American involvement in the Vietnam War. The members entered at age 18 through the normal enlistment process or through admittance to a post-secondary institution such as the Royal Military College or the Canadian Forces Naval Officer Training Centre. The military organization that they entered was marked by a highly structured hierarchy where personnel were trained to operate equipment and provide services for potential and/or actual military action.

Sociologists of the military study the nature of the hierarchical structure of national forces and international forces (e.g., North Atlantic Treaty Organization). To a large extent, the field mirrors organizational studies in the civilian world: sociologists aim to understand how individuals work and live within the social groups in the Forces. In the case of the military, personnel work together toward joint objectives and are rigorously trained for action (Resteign & Soeters, 2009). A notable characteristic of the military that impacts on the proposal team is the high level of social cohesiveness required in military units. Members need to trust that other members will act according to training, even in the face of imminent danger (Alberts & Hayes, 2006; King, 2006; Siebold, 2007). King discussed the requirement for cohesiveness of military members:

> Military institutions depend on a level of social cohesion that is matched in few other social groups. In combat, the armed forces are able to sustain themselves only so long as individual members commit themselves to collective goals even at the cost of personal injury or death. (p. 493)

Through structured training and highly detailed procedures, members learn to work during ordinary times and respond quickly during exceptional times.[39] Practice and reification combine to produce a group of people who strongly identify with the CoP (Wenger, 1998). King suggests that they do so not through personal connection with other members but through the constant professional or work-related interactivity (King, 2006). For example, effective communication is an imperative for successful military operations so that personnel understand and can carry out orders, and therefore very specific conventions have developed and are practiced to convey information in a precise and concise way (King, 2006). Military personnel learn to recognize and use genres developed to attain goals in recurrent rhetorical situations (Miller 1994/1984). The fact that the rhetorical situation may involve life and death decisions may tend to strengthen the adherence to use of prescribed communication practices (King, 2006). Military genre usage, therefore, will be learned and strictly followed. These genres will be regarded as the appropriate genre to use.

Another critical element in the military world is leadership.[40] Leadership is an organizational process deemed as critical to successful military operations (Ivey & Kline, 2010). Ivey and Kline (2010) found that regular force members in the Canadian military, whether at low ranks or high ranks, expect their supervisors to exhibit leadership attributes. Since much of military practice is geared to active duty situations, it is expected that strong leaders will manage subordinates so that the group moves toward accomplishing common goals. Whether through inspiration or reward and punishment, leaders must shape the activity and people under them.

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[39] The Military is made up of many units and sub-units, which would all meet the requirements for communities of practice. In this study, I focus on the whole military as an over-arching CoP, a group with shared practices, reifications, and goals.

[40] This statement does not imply that leadership is less critical in engineering or any other walk of life. The difference from a military perspective is that the culture trains its personnel that lives depend on leaders and that all members have to be ready to accept leadership roles, especially on active duty (Ivey & Kline, 2010). Most professionals, I suggest, do not feel the weight of leadership quite so keenly day to day.

Notable in the military's conceptualization of leadership is the leader's right to control activity in his/her unit. Command and control is a military term that acknowledges the superior officer's right to make decisions, give orders, and control movement of troops (Alberts & Hayes, 2006; Bryant, Webb, & McCann, 2003). I would note that superior officers have the right to control information. Military members, also, are instilled with the notion that they are training to be leaders or are leaders over small groups of people; this strategy is employed perhaps because of the real possibility that leaders will fall on the battlefield (or on the seas or in the air) and subordinates will have to assume command in order for the group to reach objectives.

I suggest that in the current study former military members, trained to follow the military's code of conduct that emphasized high levels of group cohesion and trust, practiced ways of communication, and strong leadership (Alberts & Hayes, 2006; King, 2006), brought the values and practices from their former CoP into the commercial organization and proposal team. Trust, for example, was evident in the former CoP membership. The former military members managed the team's work as if it were a military operation trusting that leaders would lead and followers would get the work done.

From investigating the way the military trains its current members, I move to discussion of the influence the military continues to have on its retired members, at least on ABC Engineering's proposal team.

5.1.4 Former CoP

The findings from the current study present a picture of the proposal team that in one significant way differs from inter-professional teams studied in MS and WS. The proposal team reflected groups of professions working together – as in the case of studies in WS (e.g., Gooch, 2005; Palmeri, 2004; Spafford et al., 2010) and MS (e.g., Jassawalla & Sachittal, 2006; Proehl, 1997) – but the current study focused on an additional element. The members' professional socialization was not limited to only the members' current professional backgrounds. Something, beyond the current professions, influenced the interactions on the team. For example, the team members were not only engineers

working on the team; they were engineers and former military members. Their interactions were influenced by an additional professional background. That finding led to analysis of how the proposal team was different from the teams depicted in the MS and WS literature.[41]

The strict training former military members underwent continued to impact on their idea of how members function in organization. Their past was always with them. A military culture that empowers leaders to lead and trains subordinates to follow orders, I suggest, is one where people submit to leadership. In other words, followers follow superior officers not without question, but without many questions. Members trust that leaders will do their best to make good decisions; leaders, in turn, trust that subordinates will carry out their commands to the best of their abilities (King, 2006).[42] In a discussion on leadership in the Canadian military, Bradley and Charbonneau (2004) claim that subordinates often need leadership in order to perform their duties: one to inspire them to accomplish difficult tasks and two to move them through days of routine activity. Hence, proposal team members' preference for structure, control, and little requirement for consensus in decision making situations is explained by their military training. Meetings of the proposal team were opportunities to share information, get direction, and report on activities. Some reporting of problems certainly occurred. Once a decision was handed down, though, members did not try to question, impede or over-turn decisions.

As far as I understand, researchers have not studied the influence of a former professional CoP on an inter-professional team. Several studies, though, add to greater understanding of antecedent influences on current teams. Chance, Vlosky and Krishnan's

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[41] I am not suggesting that the proposal team was different or an exception from other teams studied in MS and WS. Rather, the focus of the research in the fields has not been on the consequences of multiple memberships of the team members. Problems caused by functional diversity or professional identity formation have been well studied. In terms of studying groups/influences that are distinct from the functional or professional groups on the teams, little research has been done. Studies have shown that members experience a tension between allegiances to current teams and external units (Hornsey & Hogg, 2000). It has been found that when team members communicate with their substantive units (external communication), the inter-professional team benefits (Proehl, 1997). Palmeri (2004) found that one group in his study retained their sense of professional identity (and thus their sense of power) by maintaining the link to an external professional association.

[42] Trust is a team attribute that the military keenly realizes is important. Alberts and Hayes (2006) link trust to the concept of command and control stating that "inspiring, motivating, and engendering trust" (p. 35) is critical to successful command and control through leadership.

(1995) working paper[43] written for the Rural Development field is one example study. They used the term *antecedent group affiliation* to explain influences on firms. Chance et al. posit that when firms attempt to establish interfirm (a combination of firms) collaborative initiatives (ways to help firms work together), the firms sometimes struggle with differences between individuals. The researchers suggest that tension often stems from the life experiences of owners who wish to shape new interfirms according to their prior, personal experiences. In a more recent study, Gordon (2010) studied dispersed leadership in a British police organization. The study revealed that "embedded in what officers say and do is evidence of taken-for-granted realities, historical forms of decision legitimacy, and an ordering of statements" (p. 282), a situation that Gordon referred to as *antecedent forms of power*. Gordon's work concentrates on power relationships and determination of imbalances that result in domination and mismanagement by present-day officers. While findings in Gordon's study and the current study both reveal that present-day groups are influenced by past groups, the studies diverge in terms of what is influenced. Gordon's work does not deal with writing practices, team work, relationships with present-day external groups (i.e., the client), and so on.[44]

Chance et al.'s (1995) conceptualization of antecedent groups did not suggest that the antecedent groups were CoPs, nor that these groups brought group or social influences. Gordon's work shares more in common with the current study. The context of a para-military organization (i.e., the police force) for Gordon's study and the military in the current study are perhaps more similar. In both studies, the influence of the former groups is felt in the present.

At this point, I discuss the proposal team's interventions that helped mediate the work on the inter-professional team.

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[43] Apparently, the working paper was not published as a peer-reviewed document. I have not been able to find a published copy.

[44] Gordon's (2010) work was found after the research for this study was completed, analyzed, and written. His work might form a good jumping-off point for future work on writing teams influenced by multiple groups with strong influences from past associations.

5.2 The Proposal Team's Interventions

The RGS view of genre, as explained above, provides a means to analyze the work on the proposal team. Rather than viewing the team members' choices of written documents as individual choices, through RGS, I interpret genre usage as reflective of social group preferences within the proposal team. Professional sub-group members have learned to use particular genres in recognizable, recurrent, rhetorical situations. Bringing together professional groups complicates an already complex rhetorical situation, and group responses to that situation are not always aligned with each other (e.g., Palmeri, 2004; Schryer, 1994). Coe and Freedman (1998) noted that "particular discourses are socially motivated, generated, and constrained" (p. 137), thus studying the sub-groups' use of genres provides me with an avenue to study the power of genres to shape action (e.g., what they do) on the proposal team. How did the team structure the writing process? Why did they choose a particular kind of proposal and particular kinds of sub-sections? What did that choice imply about the social dynamics on the proposal team?

In order to overcome challenges inherent in boundary work, Wenger (1998) describes a number of ways that individuals in a CoP are able to maintain "connections with the rest of the world" (p. 103), or bridge between CoPs. Boundary objects and knowledge brokers are presented as boundary crossing aids. In this study, an additional aid was noted. The proposal team used boundary objects, knowledge brokers, and what I term *practice coordinators* as ways to increase the chance of successful completion of the proposal.

5.2.1 Boundary Objects

The first way that the proposal team's boundary-work challenges were reduced is through the creation of boundary objects. Wenger (1998) and Bowker and Star (1999) explained reasons for boundary object use. On a practical level, members need to procure information from other CoPs in order to do their own work. Members of inter-professional teams, often, also need ways to understand what needs to be done across

boundaries. Boundary objects are then a way to find common meaning so that members understand each other better (Carlile, 2002).

In general, whether a boundary object is a tangible object (e.g., a business form) or an intangible one (e.g., a common set of terms for activities), groups are able to use the object both within their group and across groups in order to get their work done. They do not, necessarily, use the object in the same way. Star and Griesemer (1989) explain that boundary objects have "different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable as a means of translation" (p. 393). In other words, although groups may not see the object as having the same appearance or expressing exactly the same meaning, there is enough in common for the object to function in multiple settings. Carlile's (2002) study found that a suitable boundary object, exhibiting enough of a shared language, was able to represent knowledge in a way that CoPs could use. Through the lens provided by RGS, we can see that a company genre might function as a boundary object: a personnel profile form completed by all employees would be recognized as a "personnel profile" genre by all groups. All would have completed the form recognizing the rhetorical situation that prompted it (i.e., starting employment at the company and being asked to give the information). However, each group at the company would use the profile for a different purpose. For example, Human Resources would use these forms to maintain a record of pensionable years of service so that a retirement date could be established, while Engineering would draw on the files in order to assess experiential backgrounds of employees when pulling together a new proposal team. Both groups would recognize the utility of the genre but for different reasons.

The professional CoPs on the proposal team were able to use a number of boundary objects (in the study the objects were often genres) to bridge differences in understanding and differences in communication practices. As Bowker and Star (1999) noted, boundary objects are "one way that the tension between divergent viewpoints may be managed" (p. 292), and, as noted above, they are a way to develop and maintain "coherence across intersecting communities" (p. 297).[45] Cooperation was achieved in the

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[45] The former military CoP could be seen as both a boundary object (successfully negotiating its way through the proposal) and as a boundary obstacle (sometimes confounding civilian trained team members

work flow (Bowker & Star, 1999), and cooperation predicts team success (Pinto et al., 1993). That achievement of cooperation among CoPs was certainly the case a number of times in the writing of the proposal. The boundary objects (here, genres) are an important part of the system of genres (Bazerman, 1994) that was required to pull together the information for the proposal. For example, meeting summary e-mails (similar to meeting minutes), hardcopies of maps and plans, and diagrams written on whiteboards all were genres that contributed to cross-boundary understanding.[46] The Basis of Estimates and Pricing Summaries serve as examples of boundary objects used by the team.

5.2.1.1 Basis of Estimates and Pricing Summaries

One genre that played a mediating or intermediary role (a boundary object role) in the work of the proposal team was the Basis of Estimates (BOE), a document developed to capture the information required for the proposal's Annex 5 and Annex 6, Pricing Summaries. Although the BOE never appears in the proposal, its power to bring together knowledge from the technical side of the work and Contracts in a meaningful way for both groups is evident from CoPs members' comments. Stephanie explained the rationale for the genre: employees from Engineering, unwittingly, overwhelm Contracts' employees with the high level of technical detail in typical technical documents. If Stephanie had sorted through the copious material on the Product and other technical support documents, her work would have taken months. Discussing the situation did not always help either, as both groups experienced by-pass, a communication term for not understanding other people in a conversation (Locker, Kaczmarek & Braun, 2002). One solution to the situation was the development of Excel spreadsheets developed by Stephanie specifying the information that was required. Technicians and engineers, then, found the necessary level of detail and wrote the BOEs, listing the required equipment, materials, person-years, and so on for the proposal. Contracts, then, developed the one-page Pricing Summaries for each location option. The Pricing Summaries contained the

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by choices of genres or communication style). More generally, the former CoP may pose an obstacle for insiders wanting to look outside their own group for information or ways of working that might run counter or be perceived as being counter to their superiors' decisions.

[46] The military's code of conduct could be viewed as both a boundary object connecting disparate groups within the military and as an obstacle to collaboration within the current proposal team.

costs of the project including engineering, normal production costs, and those costs associated with the Program.

The BOEs in the current study, thus, translated and reduced knowledge from both CoPs so that it was understandable and usable to the members. Boundary objects, by their nature, emphasize some information and suppress other information; some aspects of the work are made visible and others are made invisible (Bowker & Star, 1999). The process of developing the boundary object, therefore, demanded "a juggling of meanings" (Bowker & Star, 1999, p. 310), so that members could see the genre as being typical enough (i.e., they could recognize it as appropriate) to respond to a recurrent rhetorical situation (e.g., Miller, 1984/1994, Schryer, 1994).

The BOEs were developed by the technical staff members, not as engineering or technical documents but as means by which the business people could understand the requirements for proposed work. Stephanie noted that these BOEs change form and content depending on the needs of the project. The Program employees, in the case of the proposal, wrote the BOEs as the Government of Canada would like even though the documents were not included in the formal proposal. Notably, the company normally used a different format. The use of the proposal's BOEs reflects Popham's (2005) assertion that boundary objects mediate tension and yet cause tension: the BOEs were developed for Contracts (mediation act), but in a form that was acceptable to the military and not typical for the company (produce tension as people work with an unfamiliar genre). The genre reflected the power position of the client and the former CoP. Another challenge in using this boundary genre was the level of detail; this time paucity of detail. When the technical personnel produced bottom-line technical information in a form that business people could understand, Stephanie was left at times with insufficient information to explain rationales for financial decisions to senior administrators. She could not see from where the numbers had come, and what they included or excluded. She was forced to return to other team members for clarification. The BOE, thus, aided the CoPs in understanding each other's needs but still remained only a partially successful mediation tool for the proposal team.

The Pricing Summaries would not have been developed without the boundary-crossing BOEs. In turn, the Pricing Summaries acted as boundary objects between the

company and the client. Through the Pricing Summaries, the company controlled the amount of information disclosed. The summaries did not break down the costs, nor did they disclose the mark up allowed under federal government procedures. Anybody viewing the documents, except the company's financial employees and the client, would not fully understand the information. The client, however, was able to take that information and understand in within its own pricing structures allowed by the Government of Canada. Both parties were able to use the boundary object for their own purposes, as well as a joint purpose. The Pricing Summaries were a successful mediation tool for the company.

5.2.2 The Genres Used in the Collaboration

To further understand both the boundary objects used in the proposal's development and explore more fully the influence of the military on the work done on the proposal team, the next section explores the genres used in terms of their boundary-crossing usage and their parts in the system of genres (Bazerman, 1994) required to coordinate activity and complete the work. As discussed in the previous chapter, a large number of genres were used in the development of the proposal behind the scenes in the planning and information coordination of joint writing and in the proposal itself. Figure 8 highlights the written genres used to develop the proposal. Material that went undetected by exploration of e-mails and questioning during interviews included telephone conversations, CoPs meetings, whiteboard discussions, photographs, schematics, graphs, manuals, Microsoft Project Manager files, and so on.

The depiction of the genres used in the development of the proposal (Fig. 8) is noteworthy by its inclusion of genres used by individual CoPs, boundary genres, as well as the indications of communicative flow. At the top of the diagram, the VPs and Head of Contracts made major decisions for the proposal. Their written (and oral) initiatives and responses to the client moved the proposal forward. The two major writers of the body of the proposal came from this senior level. They structured the proposal body in line with military and technical genres reflecting their own backgrounds and the preferences of the client. Below this group of executives, the three major CoPs on the proposal team worked

along on their own contributions to the proposal: the annexes. All three CoP's members depended on the other units (as well as additional units external to the proposal team) to gather the required information. They used boundary objects as mediation tools to secure the information in ways that they could understand and later use. This depiction of the genres used in the proposal offers a useful picture of the collaborative nature of the proposal's development.

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┌─────────────────────────────────────────────────┐  ┌──────────────┐
│        VPs and Head of Contracts                │  │     The      │
│      Major genres Directional Messages          │  │   Client     │
└─────────────────────────────────────────────────┘  │              │
                                                      │ Major genre –│
                                                      │  Directional │
                                                      │   Message    │
                                                      └──────────────┘

┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│              │   │ Engineering  │   │ The Program  │
│  Contracts   │   │Major genres  │   │ Major genres │
│Major genre RFI│  │RFI, POI,     │   │ RFI, POI,    │
│   e-mails    │   │and so on     │   │ later        │
│              │   │              │   │ Directional  │
│              │   │              │   │ Messages     │
└──────────────┘   └──────────────┘   └──────────────┘

        ( Engineering annexes )    [ Engineering plans ]

        [ Basis of Estimates ]     ( Concepts of Operations (2) )

   ( Costing Annexes, Review of Whole Document )

        ( Proposal (Letter, Body, and Annexes )
```
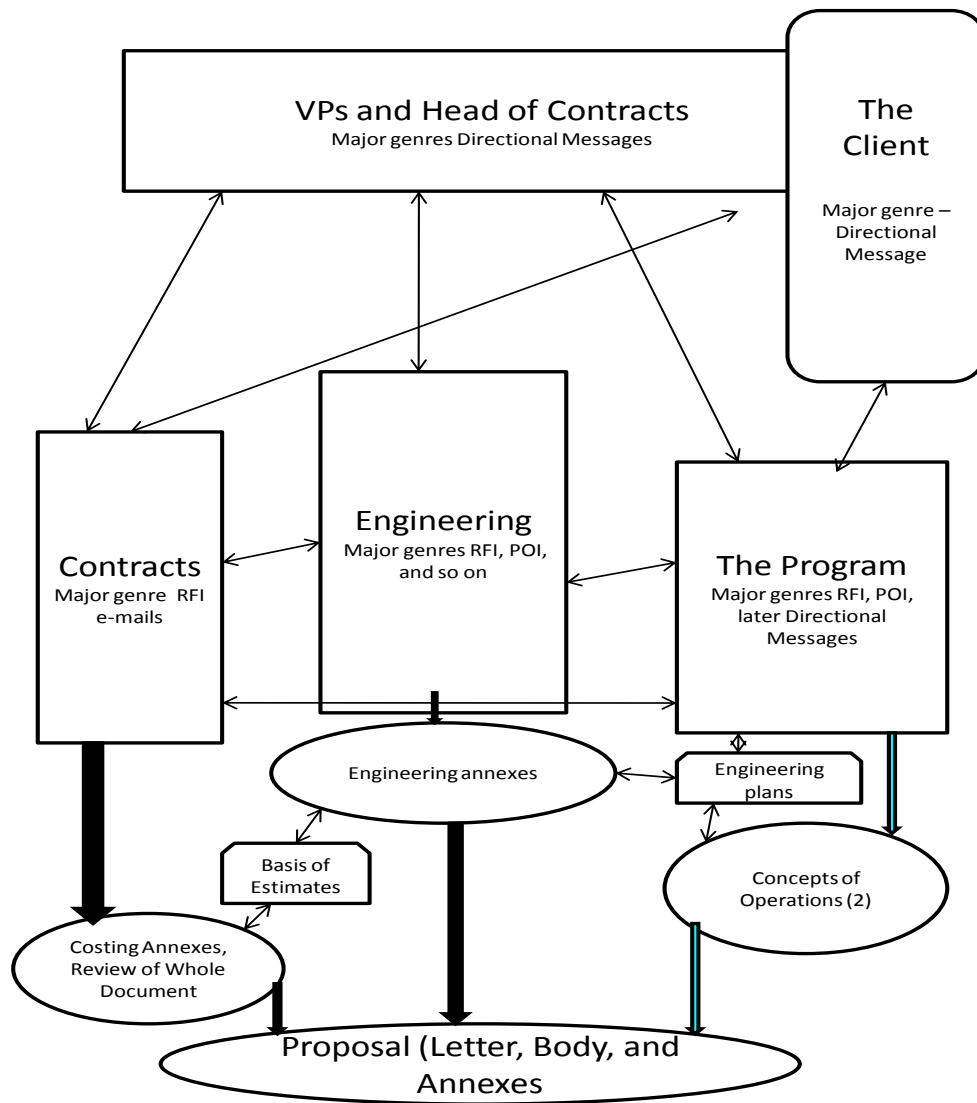
Figure 8: The major genres used by the communities of practice in the proposal's
    Development

5.2.3 Antecedent Genres

As noted in this chapter, the proposal team's inter-professional structure was not as straightforward as portrayed in the literature. The former military members were not members of the current military. Rather, the members continued to identify with military despite having left its ranks. This quasi-military association's power to influence other team members, former military and civilian members, was considerable as already discussed. The proposal itself proved to be the best evidence of the antecedent group affiliation's influence on the proposal team.

The proposal team, faced with a new rhetorical situation (creating an unsolicited proposal), used an antecedent genre (Jamieson, 1975) from their military past, rather than a more standard, commercial or even (non-military) federal departmental Statement of Work.[47] When faced with a new rhetorical situation, people draw on their past genre experience (Devitt, 2004; Jamieson, 1975). While the first lead writer, Thomas, was an experienced proposal writer, the other members of the team were not. Thomas was able to draw on his past experiences writing in military and commercial worlds and select a proposal style that reflected the military's preferences (i.e., the client's preferences). The resulting document achieved its objective of securing an expansion of the scope of an existing contract.[48]

The main antecedent genre used in the development of the proposal was the CONOPs. The two writers of the CONOPs, Kevin and Lawrence, were not experienced writers. Nor was their direct report, Henry. Drawing on their military background, they looked at the rhetorical situation (a need to produce a document that outlined the logistics of the repair work at both locations) and decided to use the CONOPs genre. Normally, a CONOPs is a genre developed by senior officers in the military to justify their plans for a military operation. *The Canadian Forces Joint Publication (CFJP) 3.0 Operations* (2010) explains the function of the CONOPs from an operational standpoint:

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[47] The company's preference was a SOW as outlined in their company manual on proposal writing.

[48] The RGS approach views a successful genre as just that – a success. The genre accomplished its goal because it was viewed by the client as appropriate. I was interested in the CoPs that did not share the military's (or the former military members') view of the *typicalness* of the CONOPs in this particular rhetorical situation. Inter-professional team dynamics, I suggest, were affected by the genre decisions despite their appropriateness for the situation.

A concept of operations (CONOPs) describes how *the commander* [emphasis added] visualizes the campaign, major operation, or phase of an operation, unfolding based on the selected course of action. The concept expresses the what, where, who, and how to deliver the desired effects upon the enemy. The commander provides sufficient detail for the staff and subordinate commanders to understand their responsibilities. (CFJP 0131, 2010)

The Program members, Kevin and Lawrence, knew that they needed to convince the client that ABC Engineering knew how to go about the complicated process, while still fulfilling all the work on the existing contract. Rather than documents outlining plans for a military operation, the CONOPs in the proposal specified service delivery procedures. In many ways, using the CONOPs put Kevin and Lawrence in the position where they asserted control; they assumed the status of a military commander. SOWs are written by a variety of employees. CONOPs are not. Schryer (1994) had written that genres enable writers to assume positions of power within groups. In Kevin's and Lawrence's experience (and the experience of the client), only commanders used the CONOPs genre. Their use of it would have been interpreted as leadership behaviour, a mark of power and influence.

The power of the CONOPs extended beyond Kevin's and Lawrence's strategic positioning of their role in the work. The antecedent genre's use, also, privileged the former military members on the proposal team. The client's military representatives would have felt comfortable and comforted by the look of the annexes and their detailed content. When the logistics of the proposed work were presented like a battle plan, the military client would have known how to assess merit in terms of both justification for the "battle" and the plans to "win" it. PWGSC employees working with the military might have preferred SOWs (personal communication with a PWGSC employee), but they would have been familiar with CONOPs. Everybody except civilian-trained, business-directed company employees (e.g., Stephanie) would have, therefore, been ready to accept the use of the genre.

5.3 Boundary Crossing by Team Members

A second boundary-crossing method is the use of knowledge brokers (Wenger, 1998). Knowledge brokers are team members experienced with multiple professional groups and able to negotiate the boundary work. Wenger's (1998) conceptualization of knowledge brokering is tied to multi-membership, a situation that allows the broker to transfer "some element of the practice into another" (p. 109). Transfer implies some level of membership in each CoP. In Santa et al.'s (2010) vocabulary, the knowledge brokers are termed boundary spanning agents, and these agents allow information to be meaningful to all the members of the team. Again, brokering or spanning indicates membership or deep knowledge of the CoPs. In Wenger's conceptualization, the brokers sit on the boundaries of the CoPs (the nexus of perspectives), and because they understand the practices and reifications in one CoP, they can see where and when some elements can be introduced into a new CoP (Wenger, 1998). Wenger further explains that "brokers are able to make new connections across communities of practice, enable coordination, and – if they are good brokers – open new possibilities for meaning" (p. 109). And even further along in his discussion he writes: "The job of brokering is complex. It involves processes of translation, coordination, and alignment between perspectives. It requires enough legitimacy to influence the development of a practice, mobilize attention, and address conflicting interests" (p. 109).

Brokering across diverse groups is a concept used in the MS and WS literature. Santa et al. (2010) studied boundary-spanning agents who can translate, manage conflict, and develop a common language. These boundary-spanning agents may be an example of knowledge brokers, as perhaps are Wilson and Herndl's (2007) proposed mediators or translators (the writer as the Rossetta Stone), Jones' (2005) writers who become information coordinators, and Palmeri's (2004) professional writers who are coordinators of inter-professional teams.

5.3.1 Assigned Leaders: Knowledge Brokers

Knowledge brokers, team members who sit on the boundaries between CoP and to some extent have membership in the CoP (Wenger, 1998), play an important role at ABC Engineering and on its proposal team. The vice-presidents at ABC Engineering are

135

examples of Wenger's (1998) knowledge brokers. During the first meeting with the VP who has acted as a key informant, I asked him about his engineering background. He explained that while he had a degree in engineering, he saw himself as senior management. He wore the hat of both engineer and project manager; he sat between CoPs and very much in Wenger's (1998) nexus of membership position. The VP's career in the military had indeed made him a member of multiple communities. Other VPs who had served in the military echoed the key informant's description of professional identity. As noted previously, Henry, the VP of the Program, identified himself as a generalist, a person who sat in a number or professional groups and could, therefore, understand and work with all the groups. The VP of International Marketing was another person who saw the generalist in the same light. With his engineering education and experience combined with his Master's of Business Administration and business experience, he was ready to work across diverse groups.

Wenger's (1998) notion of knowledge brokers sitting on the boundary of various CoPs does not state that knowledge brokers are in leadership positions or even that leadership is a consideration in his understanding of CoPs. Rather, the notion of knowledge broker describes a role that is notable by its multiple membership nature. I suggest that, by virtue of their cross-CoPs position, knowledge brokers have potential to exhibit leadership behaviours. Wenger writes of the job of brokering in terms that reads like a list of leadership behaviours (Northouse, 1997):

> It [brokering] involves processes of translation, coordination, and alignment between perspectives. It requires enough legitimacy to influence the development of a practice, mobilize attention, and address conflicting interests. It also requires the ability to link practices by facilitating transactions between them. (p. 109)

The definition of leadership advocated by Northouse (1997) reflects a similar emphasis –the importance of influence: "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). Interdisciplinary research attempts to find common or complementary elements to integrate or connect so that a more comprehensive understanding of the research questions can be achieved (Repko, 2008). In this study, using Wenger's (1998) notions and leadership behaviours as complementary notions allow me to see the nature of roles in CoPs. Influence, in

Wenger's view, derives from knowledge brokers having multiple memberships. In the social identity approach (e.g., Hogg & Terry, 2000; Tajfel, 1978; Turner, 1982), leader influence is based on other members assessing the leader as a representative of idealized versions (prototypes) of their own group's notions on leadership (Hogg & Terry, 2000). To members, people are leaders, at least in part, because they look and behave like leaders. In order to be a leader, the person must in some way appear as part of the group. Hogg and Terry (2000) suggest that the more cohesive the group, the more the group will judge their own group leaders to be effective, even across groups. In both notions, membership is key to having influence over others. In other words, sub-group members will often select their own members to be leaders of the larger group or inter-professional team. These leaders will influence the group (here seen as CoPs).

At ABC Engineering and in the proposal team being knowledge brokers put the VPs (the assigned leaders) in a good position to lead.

5.3.2 Emerging Leaders

Other people on the proposal team displayed leadership behaviours, and thus emerged as leaders, without fulfilling the criterion of multi-membership in all the team's CoPs. While the executives or assigned leaders are members of multiple CoPs, the emerging leaders are not or at least not at first glance. Wenger's conceptualization of a knowledge broker is not fully applicable in their cases. Another explanation is at work that allowed the emerging leaders to emerge without the aid of multi-membership in the proposal team's professional groups. An extension to Wenger's conceptualization of nexus of membership is perhaps warranted.

Apart from organizational or assigned leaders, the proposal team consisted of a number of people who day-to-day went about the work that was necessary to pull together the information and analyses for the proposal from divergent CoPs. Three individuals, in particular, were designated by their units' VPs as representatives of those units. The assigned leaders gave these individuals an initial platform from which to move the work forward, but I suggest that their ability to emerge even more fully as leaders can offer an understanding the proposal team's dynamics and practices. I have identified

Stephanie (Contracts), Angus (Engineering) and Kevin (the Program) as emerging leaders. Through analyses documented in the previous chapter, it is apparent that Stephanie failed to emerge as a full-blown leader, while Angus and Kevin did. Kevin emerged as the day-to-day leader of the proposal team.

It is important to note that Carte, Chidambaram and Becker (2006) found that virtual teams rely on emerging leaders even when there are external leaders who are responsible ultimately for team performance but not day-to-day decisions. Although their study focused on self managed, virtual teams, the reality of the study situation is not dissimilar to the Carte et al. team's situation. Day-to-day work was carried out without heavy supervision, and much of the work transpired in a distributed fashion through e-mail and phone calls. Carte et al. note that "Within self-managed teams, there is a reliance on a member or members to step forward and informally carry out leadership functions within the team" (p. 324). This informal emergence took place in the proposal team, although the degree to which the three members were able to establish themselves as leaders varied. The reason for variation is at the crux of the interpretation of the current study.

5.3.3 The Boundary Role of a Practice Coordinator

The proposal team benefited from the emergence of the three members as leaders.[49] They coordinated activities across several groups without becoming members of all the groups. Often that cross-boundary work was done through the use of boundary objects (e.g., genres such as the Basis of Estimates (BOEs) and the Request for Information (RFI) genre in the e-mail system). Wenger's (1998) notion does not account for the emerging leaders. Knowledge brokers are positioned to accomplish cross-boundary activities (such as translating, mediating, influencing, and so on) *because* they are members (to some degree) of participating CoPs. The study's emerging leaders never became competent writers of the genres used in other CoPs. They had little sense of genre

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[49] Again, whether Wenger (1998) saw knowledge brokers as leaders, they were presented as being able to "introduce elements of one practice into another" (p. 105). "Enabling coordination" (Wenger, 1998, p. 109) across CoPs is one description of knowledge broker's work: that behaviour is viewed as a leadership behaviour (Northouse, 1997).

knowledge of other CoPs. Stephanie could not have written the technical annexes; Angus would not have thought of developing BOEs; and Kevin did not know the accounting nor the engineering genres. And yet they managed to coordinate activity on the proposal team. Trying to answer the question of how the emerging leaders managed to coordinate activity is difficult. One idea that draws from studies into the five major categories of personality factors (e.g., Costa & McCrae, 1992; Russell & Karol, 1994) may be found in Kickul and Neuman's (2000) study of emergent leaders. Kickul and Neuman's (2000) findings may shed light on the proposal team. They found that two factors, extroversion and to openness to experience, were personality traits that contribute to emergent leadership potential. In turn, they found that emergent leadership correlates to teamwork effectiveness. One of their descriptors of openness to experience is broad-mindedness. I suggest that it is a possibility that being broad-minded (Kickul & Neuman, 2000) may have allowed the proposal team members to emerge as leaders.

It is evident that the three emerging leaders valued the work of others, and they came to understand, to some extent, what the other groups needed to work. Looking at their volume of e-mails, also, gives an indication of their extroversion. They enabled other professionals to carry out the work in the way that made sense to the professionals or was required by contractual obligation. Kevin, Angus, and Stephanie became emerging leaders because they stood both inside a CoP on the proposal team and also *near* the boundaries of other CoPs; they were able to negotiate some degree (enough) of common meaning and understandings, encourage cooperation (Bowker & Star, 1999), and coordinate the work from that position. They emerged as team members who understood the work of the others – at least to some extent – including the genre knowledge of other professional groups. While never attaining generic flexibility to use the profession-specific genres of other professionals, the emerging leaders did grow to understand the rationale for using specific genres. They came to understand the specific rhetorical situation that required specific genres, at least some of the time. They also learned to accept the time and effort it takes to produce CoP-specific documents. Finally, they, very importantly, learned to recognize and use mediating genres (e.g., the Basis of Estimates that takes detailed technical information and translates it into a list of requirements that Contracts then takes and costs) that subsume and reduce the work of others (Jamieson,

1975; Winsor, 2000). In my study, these emerging leaders – especially Kevin – became what I term *practice coordinators* rather than knowledge brokers.

The emergence of the proposal team's practice coordinators is now further explained by using the social identity approach (e.g., Hogg & Terry, 2000; Tajfel, 1978; Turner, 1982) and Kickul and Neuman's (2000) notion of leader extroversion and openness to experience. Conceptualizing the emergent leader's role as a practice coordinator leads to an additional question. As noted in Chapter 4, Kevin's involvement in the production of the proposal increased, as time passed, to the point that in Phase II he coordinated all the activity. Kevin's increasingly high profile involvement is indicated in the discussion of e-mail genre usage by team members and external contributors. The question remains as to why he continued to emerge as a leader.

A number of factors explain Kevin's position as the principle practice coordinator, and they are all tied to the over-arching influence of the military world in the company and the proposal team. First, the influence of antecedent group affiliation produced high levels of similarity, trust, external communication, and cohesiveness on the proposal team. The former CoP stood in the shadows of the other CoPs on the proposal team, influencing conceptualizations of proposal development, member relations, genre usage, and so on. Kevin's experiences in the military meant that he shared the background of a majority of team members. As the second in command of the Program, he was recognized as capable and as a former military member. Using the social identity approach's terminology, Kevin would have exhibited the expected behaviours of a prototypical leader (Hogg & Terry, 2000): he would have thought, acted, and written like one from the former CoP. Other former military members would have recognized Kevin's personal attributes and shared social and communicative practices and reifications. They would have determined through the social identification process (e.g., Hogg & Terry, 2000; Tajfel, 1978; Turner, 1982) that he was an acceptable leader.

In addition, I suggest that sharing the shaping power of the military culture (including the enabling and shaping power of military genres such as the CONOPs) with the client and other members of the proposal team – from inside his own CoP (the Program) and from outside the others CoPs (e.g., Engineering) – gave him a higher level of common experience and common practice. Perhaps, in his case, there was less of a

need for openness to experience (Kickul & Neuman, 2000). His deep understanding of team members' lived experiences allowed him to be open more quickly than other emerging leaders. The professional practices of other former military personnel, while often not his professional practices, drew also from shared military practices.

Ultimately, the dominance of the former CoP (the influence of the antecedent group affiliation) explains the difference in the degree of leadership emergence. As to why Stephanie did not emerge fully as a leader, I would suggest that she lacked several crucial characteristics. The first is that she was a fairly recent hire with just over one year in the company's employment. Learning the culture of the complex company was an on-going challenge. Other team members were aware of her neophyte position at the company. While they appeared supportive and helpful, they probably were not going to look to her for leadership. Second, Stephanie's lack of experience at the company left her with another serious deficit: she had not had much experience working with Engineering and no experience working with the Program people. Although bright and interested, she had not had the time required to gain enough insight to make her more open to the different ways that others worked. A third deficit was her lack of experience with the military. Stephanie's fourth challenge might have been the possibility of gender bias. No women played key roles in the company.

The question of why Angus emerged in a slightly more dramatic way than Stephanie but still not as dramatically as Kevin strengthens my notion of the power of the former CoP (the antecedent group affiliation). I suggest that Angus was respected as a SME, an idea that reflects French and Raven's (1959) conceptualization of the sources of power including expert or knowledge derived from expertise (Hinkin & Schriesheim, 1989; Tauber, 1985). Angus's engineering background and decade at the company had given him a broader perspective on the inter-professional work of the proposal team. The expertise and workplace experience enabled him to gain a leadership role, but not the most prominent position on the proposal team. He did not share a military background with many of the employees on whom he relied. Kevin, with his expertise on the Program and his military background, fell into the leadership role quite naturally. Fellow former military members and the client's representatives shared with Kevin a lifetime of a common culture. Kevin understood the expectations of the military and was familiar with

the communication practices that allowed the work to be completed. Kevin was in the best position to have the highest degree of connection with the former military personnel.

5.4 Combination of Wenger's (CoP) and McDonough's Model

Figure 9 depicts a combination of Wenger's (1998) multiple CoP figure and McDonough's (2000) model of team success factors with a notable addition. Wenger's standard model of multiple CoPs working in close proximity is augmented by the proposal team's former CoP.
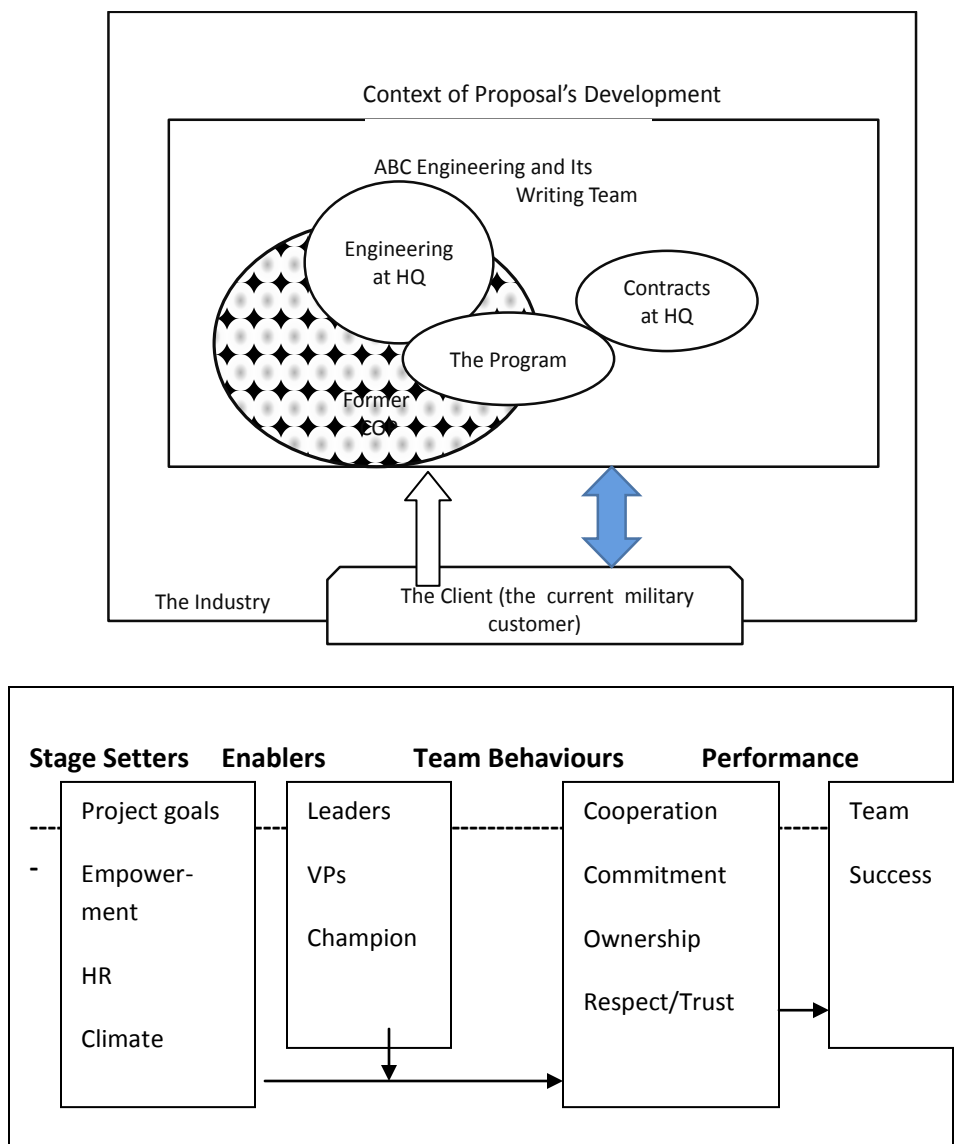
Figure 9: The combination of factors and context of the proposal team

The antecedent group affiliation's (former CoP) influence on the proposal team is apparent. It not only influences former military team members but by dint of power in the company (and with the reality of the communication preferences of the military client) influences the civilian members, as well. It sits over McDonough's model as the proposal team's context.

McDonough's (2000) model displays the interactions among four team success elements. First, stage setters are presented. In the study, project goals, VP level empowerment, company endorsements, and so on are included; these elements set the activity in motion. The enablers, such as senior managers, emerging team leaders, and even the client provide resources and influence the activity through their genre usage. It is in this element of the model that the pastness of the present (Eliot, 1920) is apparent. The proposal team is influenced greatly by the former military members' background. The past (the military) is always with them in the present. Their past colours their perceptions; it shapes the way they recognize rhetorical situations; it gives them the genre knowledge that they use in the present career; and it predisposes them to choices in leaders. Team behaviours (e.g., cooperation between CoPs, commitment to the proposal's success for various reasons, ownership of the task, cohesiveness, trust, and so on) are seen as another crucial component to team success. Once again, these behaviours are highly influenced by former military members' values and attitudes. Finally, cross-functional or inter-professional team success (acceptance of the proposal in Phase II) is achieved because of the inter-working of the other team elements in this specific social context. Together the two views (with the extension to Wenger's conceptualization) present a picture of the completion of the proposal.

In Chapters 5 I presented interpretations of the qualitative analysis of the findings of the interdisciplinary study of an inter-professional team. Chapter 6 concludes the dissertation with a three main foci: contribution to theory, implications for practice, and future research. Limitations are also discussed.

Chapter 6 Conclusion

> Without a shared sense of genre others would not know what kind of thing we
> were doing. And life is mysterious enough already. (Bazerman, 1994, p. 100)

The objective of the interdisciplinary study presented in this dissertation was to achieve
greater understanding of why the inter-professional team was able to write successfully,
despite the presence of multiple professional groups. Of particular interest was the idea
that written discourses function very differently in individual professions. In Bazerman's
(1994) comment, quoted above, it is apparent that a shared view of genres within
professional groups contributes to lessening some of the confusion surrounding group
work.

The interdisciplinary approach to the study of an inter-professional team drew
from a number of perspectives including the WS literature on inter-professional teams,
the RGS approach to genre usage, notion of communities of practice (e.g., Bowker &
Star, 1999; Lave & Wenger, 1991; Wenger, 1998) from a number of fields (used in both
WS and MS), empirical findings from MS (e.g., the value of external communication and
other success factors, and so on), and social identity theory (Hogg & Terry, 2000; Tajfel,
1978; Turner, 1982) from Social Psychology. Interdisciplinarity does not imply an
integration of the fields, nor equal usage of the insights; rather, it attempts to find
common or complementary understandings (Repko, 2008). The study benefitted from
using theoretical explanations and empirical findings that offered an alternative picture or
angle of vision of the research situation.[50]

The fields have provided valuable insights into these teams. In terms of the
problem of inter-professional work, the fields can be seen as forming "an intersection of
concerns" (Bazerman, 2011, p. 19). While the fields come to the study of these teams
with very different interests, the literatures in both fields have shown that inter-
professional collaborations often suffer due to misunderstandings, tension, and conflict

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[50] Other fields have, also, shown an interest in this particular team structure. The Health Sciences
literature contains studies on inter-professional health care teams. Except for studies that appear in the
WS, as well as the Health Sciences literature, I have not drawn from the Health Sciences literature on
these teams.

due to differences in professional socialization (e.g., Cross, 1994, 2001; Journet, 1997; Lingard et al., 2007; Wenger, 1998; Wilson & Herndl, 2007; Winsor, 2000; Zucchermaglio & Talamo, 2003). I entered the research wanting to understand the situation better so as to contribute to theory and practice. In the proposal team under study, there was less evidence of misunderstanding, tension, or conflict than might have been anticipated based on the literature noted above. Accounting for the situation observed in the study became a focus of the work.

6.1 Summary of Findings

The following features of the proposal team are evident. The proposal team consisted of a number of professional/work based CoPs and was influenced by a former CoP. The dominance of the former CoP led to the following team attributes:

(1) Most proposal team members appeared to have high trust levels (Contracts CoP may have been an exception);
(2) Strong group cohesiveness was exhibited;
(3) Emergence of a leader from the former CoP to coordinate the work during the proposal's development occurred;
 (4) The members used or relied on boundary genres and antecedent genres in their work on the proposal; and
(5) The genres formed a system of genres that coordinated activity on the proposal team.

The team attributes allowed the proposal team to coordinate the activities required to complete the proposal. In addition, two other factors contributed to the success of the proposal team. Use of boundary genres, such as the Basis of Estimates, allowed work to flow between CoPs, so that members could complete their work. The boundary objects were part of a set within a larger system of genres (Bazerman, 1994) that allowed the work to proceed. Coordination of information was accomplished. The final product, the unsolicited proposal, successfully convinced the client that the company could and should perform the repair work on the Product in the location preferred by the company. The

proposal accomplished this goal based on the dominant and former CoP's generic preferences, which aligned with the client's background and preferences.

6.2 Contributions to Theory

Normally, research informs one field about a phenomenon, behaviour or event. In interdisciplinary research, studies may contribute to a number of fields and often to the general public's knowledge. In the case of interdisciplinary work, as noted above, there is no onus on the researcher to contribute equally to fields (Repko, 2008). The current study remains rooted in WS in that the focus is always on research that helps "people to use written language more effectively, for both production and reception" (Bazerman, 2011, p. 15). The current study offers an alternative understanding of inter-professional teams: the proposal team is glimpsed as a complex unit with members working in challenging circumstances and shaped by present-day pressures and past influences including antecedent generic knowledge. This study presents a picture of a proposal writing team managing to pull together and produce a proposal for the benefit of the company, the client, and the Canadian public.

The study may broaden the understanding of Wenger's (1998) conceptualization of multi-membership in communities of practice. While Wenger does acknowledge multi-memberships, he does not account for influences of former CoP membership. Rather than a view of participants bringing only their current professional background into the proposal team, the research study presents a more complex picture of teams where members bring multiple memberships from their present and past careers into the team. In the study, a majority of the team members belonged to the same (former) CoP, thus increasing its power and influence. The antecedent group affiliation (former CoP) acted as a dominant force on the proposal team, an important factor not anticipated by Wenger's conceptualization of CoPs.

The extension to Wenger's conceptualization of communities of practice allows for explanation of a number of team dynamics: Kevin emerged most successfully because he was a member of the former CoP; the proposal's technical annexes were written as an antecedent genre (Jamieson, 1975); and those two facts allowed a practice coordinator (from the former CoP) to lead the proposal team when Wenger would have suggested

146

only a knowledge broker (or boundary object) could have managed to bridge between CoPs on a team. I will explain more about the leadership attribute tied to CoPs membership at this point.

The study focused on two leadership roles on the proposal team: assigned leaders and emergent leaders. Assigned leaders, self-described generalists, played the role of knowledge brokers from Wenger's conceptualization of CoPs. They were empowered by the company to make decisions. A large part of their ability to make decisions derived from their knowledge of profession-specific (CoP specific) genres. They knew how sub-groups or CoPs want and need to work. Studies from WS have shown that representatives from different CoPs on teams often experience tension and conflict attributable to differences in the way the professionals see their work and their world (Paré, 2002; Winsor, 2000). Learning to use genres competently in a particular context and rhetorical situation has been seen as a way to establish membership in the CoP (Wenger, 1998), and leads to an understanding of why people from different CoPs find joint work challenging. Assigned leadership, however, is only one leadership role on the proposal team.

In the study, three team members emerged as leaders; they demonstrate extroversion and an openness to experience (Kickul & Neuman, 2000) that is tied to competence in their own professional group, growing experience with other professional groups, and ability to gradually coordinate successfully the work of the whole team. The emerging leaders from ABC Engineering's proposal team display some of Wenger's knowledge broker attributes in their boundary-crossing roles; however, they differ from Wenger's conceptualization of broker in that these leaders do not participate or reify within all the CoPs to any extent. The emerging leaders who sit outside all but their own CoP still manage the coordination activities on the proposal team. I term their role practice coordinators. They emerge as team members who, to some extent, understand the work of the other members, including the genre specific work of other professional groups. While never attaining generic flexibility to use the genres of the others, they do learn to understand the time and effort it takes to produce them. They also, importantly, learn to recognize and use the mediating genres (e.g., the Basis of Estimates that takes detailed engineering information and translates it into a list of requirements that Contracts then takes and costs) that subsume and reduce the work of others (Winsor, 2000). The

reason one emerging leader emerges more fully than the others, again appears to be rooted in social identity theory's (e.g., Hogg & Terry, 2000; Tajfel, 1978; Turner, 1982) notion that groups will favour their own members. Kevin, a former military member, emerged more fully because of his membership in the former CoP.

The study allows us to extend the notion of multi-membership in inter-professional teams, as well as attributes of members who play cross-boundary roles. One last (small) contribution to theory is discussed. I suggest that the extension of Wenger's (1998) conceptualization of CoPs may be combined with McDonough's (2000) model of successful team interactions. McDonough anticipated the importance of context when he wrote: "the model recognizes the impact of contextual effects on stage setters, enablers, and team behaviors" (p. 233). The study presents one example of a context impacting and changing the other elements.

The current study's persistent acknowledgement of the importance of context in inter-professional team studies is another important contribution to the literature. In a study of English police officers' views of leadership, Bryman, Stephens and à Campo (1996) concluded that the context in which the police worked significantly influences their beliefs about what constituted leadership behaviours. Rather than seeing police units, medical teams, or inter-professional teams as governed by universal prescriptions (Bryman et al., 1996), research on social groups benefits from accounting for the context in which people work. The current study's complex context may be unusual or infrequently seen; however, it is the context in which the members worked and will continue to work. The proposal team operated with a former CoP that played an enormous role in the proposal team's interactions and success.

6.3 Contributions to Practice

Thorne (2008) suggests that "locating your findings within a larger context does create the platform upon which you can justify the particular extensions, elaborations, and enrichments that your study findings contribute" (p 205). Following that suggestion, I have taken my conclusions, drawn from one specific context, and by situating them in the

literature of MS and WS, I have produced an interdisciplinary work that may offer some guidance for managers and communication specialists.

Since many organizations depend on inter-professional teams to meet increasingly complex issues and problems, it is important to study how this kind of team completes joint documents considering the increased complexity of the situation. Bridging the boundaries between CoPs is seen as a necessary task in order for employees to work together. The study of the inter-professional proposal writing team, accordingly, may offer suggestions for practice including the following:

- Managers or executives selecting members for inter-professional teams may want to keep in mind the idea that former CoP may dominate the team – if the former CoP's members form a majority.
  - One caveat to that idea must be mentioned: when the former CoP is aligned with the client for whom the proposal is written or the project is conducted, there is every reason to suppose that the team will be successful. Team members will understand the client and use antecedent genre knowledge that many team members and the client will prefer.
  - When the former CoP and client do not align, there may be need for managerial intervention including employment of a professional writer as mediator and coach and use of boundary objects such as boundary genres.
- Team members – at least team members in this case who were drawn from the former CoP – may function as practice coordinators. These members, because of their openness to the work practices of other groups, are able to coordinate activity, while not being members of all the CoPs involved on the team.

6.4 Limitations of the Study

This study, as any other, has certain limitations. Research decisions have had impacts on the research. Each method of data collection and analysis brings strengths and

weaknesses to the work (Bowen, 2005), and my study is no different. First, the study employs a qualitative methodology, a decision that reflected my interest in the lived experience of participants on the proposal team; therefore, findings cannot be generalized to a wider population. In other words, I cannot claim that the findings in this study have a high probability of being found in other inter-professional teams. As in the case of any team, inter-professional teams *always* reflect the uniqueness of the individuals involved and are established because a particular objective requires input from different functional or professional units. A qualitative study, such as the one employed here, captures the uniqueness of individual human experiences. Well-thought-out and well-executed qualitative studies, however, have value in the academy and the workplace. While no attempt to generalize findings was made from this study, readers may see ways to transfer similar or parallel findings into their own studies and practices (Lincoln & Guba, 1985).

Concentration on my angle of vision (Thorne, 2008) in the dissertation might be seen as a limitation. The study was conducted by an individual researcher, and so in the end the interpretations presented in the dissertation reflect my biases. As I stated in Chapter 2, I did not aim to be an impartial observer recording events; rather, I saw myself as interpreter of situations (Srivastava & Hopwood, 2009) in which the team found itself. For example, it would have been possible to see the proposal team functioning only with several, current CoPs, as the participants reported. Bringing analytical methods to bear on the data, as well as my own life experiences, I interpreted the situation revealing that a former CoP exerted profound influence on the writing of the proposal. My subjective perspective is modified or balanced by a number of features of the study.

As noted, participants' views through the data collection and analysis phases balanced my views of their situation. Their lives had unfolded in very different ways from mine: most participants were male and technically trained. They worked in a commercial enterprise and a majority had spent most of their careers in the military. Their perceptions of working on the proposal team often differed from mine. Comparing and contrasting those perceptions lead to a number of important findings in the study. The prior literature from MS and WS, also, broadened the basis of the study's findings and modified my subjectivity. Discussing findings with the PhD committee members, as well as key informants, broadened the perspective on the research.

The use of a number of data collection and analysis methods, often referred to as triangulation, was another way to fight against what Maxwell (2005) called "systematic biases or limitations of a specific source or method" (pp. 93-94). In other words, if one source of data, such as an interview, revealed one side of a story, then several interviews often offered another version or a document presented a third perspective. For example, participants in the first few interviews recounted how they had learned to write. All had received writing training in the military. They, clearly, felt that their writing was effective, especially in terms of conciseness and preciseness. After interviewing a participant who had not been trained to write in the military, I began to hear another side of the story. Military writing, though concise and precise, sometimes excluded non-military readers with unfamiliar details, acronyms, and formats. Although the former military members judged that their work was accessible to everybody, it was not. Later, the e-mails and other documents indicated the struggle some participants had with military-style writing (often technical writing as well). In a similar fashion, using multiple methods of data analysis enriched the study and triangulated findings. Coding the data to reveal conceptual themes and the RGS approach to analyzing the data complemented each other, revealing a clearer picture of the proposal team's work.

Reflexivity, also, countered the individual researcher limitation (Alvesson & Skoldberg, 2000). During the five-year PhD process, professors encouraged students to write about the process of research. By questioning what I was reading, collecting, or analyzing, I positioned myself in the work. Sometimes, I reflected on personal experiences that lead to deeper understanding of the data; at other times, I questioned links and parallels in different theories and studies; and always, I tried to find a path on the research journey. In the end, the diary entries and memos (even the marginalia and mind maps in my office) become part of the audit trail of my progress through the study. Reflexivity, thereby, added a dimension to the study that strengthened the trustworthiness of the work, an important element in assessing qualitative research (Thorne, 2008).

Lincoln and Guba (1985) maintain that qualitative work should present a reasonable, logical, trustworthy explanation of the research situation. Reflexivity was one of the ways to ensure that explanation reflected those evaluative criteria. Another way was the presentation of the research situation through a clearly articulated, written

document. If readers found explanations incomplete, they would see the writing as a limitation. I tried to offer a picture of the participants that readers could understand and appreciate. Writing, though, is discipline specific (Paré, 2010), and that fact leads to the next limitation.

The interdisciplinary nature of the study produces limitations for readers, the PhD committee, the external, and the student. The challenge for all PhD stakeholders is that research, traditionally, takes place within disciplines. Lattuca (2001) notes: "Today most disciplines are comprised of smaller communities of scholars who coalesce around shared interests and/or methods of inquiry" (p. 2). She sees disciplines as both "powerful but constraining ways of knowing" (p. 2). Disciplinary practices and perspectives vary: scholars from different disciplines look at distinct questions; they research using different data collection and analysis methods; they employ different conceptual frameworks and terminology; they value different ways of seeing the world; and they use different writing conventions to distribute their research findings (Bazerman, 2011; Lattuca, 2001; Repko, 2008). In an interdisciplinary dissertation, such as this one, readers are challenged to critically move through a document that does not, wholly, reflect their disciplinary backgrounds. Interdisciplinary documents, then, are sources of tension as readers attempt to understand research decisions, referenced material, methods, and so on.

In order to design and complete an interdisciplinary study and produce the required dissertation, I required the assistance of a number of academics from the disciplines that contributed to an understanding of the research site. Reading broadly allowed me, an interdisciplinary student, to come to terms, at least to some extent, with disciplinary differences and commonalities. Interdisciplinary scholarship forces the student to read across disciplines, and students do not, generally, attain in-depth knowledge of individual disciplines. Bazerman (2011) acknowledges the difficulty of working in unfamiliar disciplines, and he notes that an interdisciplinary researcher must "work as an amateur" (p. 14) in fields outside his/her primary discipline. Interdisciplinary scholarship, thus, may appear limited in its grasp of disciplinary knowledge. In my case, I remained focused on the WS interest in writers and looked for other disciplinary perspectives that helped me understand and explain the participants' experiences. In the end, looking outside WS for further explanation of the research problem enabled me to

add to the WS disciplinary questions on inter-professional teams, something that Bazerman (2011) suggests is valuable.

6.5 Future Research and Conclusion

While the current study contributes to theory and practice, more research into inter-professional team activity is required. Whether a former community of practice (CoP) impedes or helps teams attain positive team outcomes should be investigated through additional qualitative research. The presence of a strong or dominant former CoP may mean that group will prevail over other CoPs because of the strength of numbers. Maslow's (1966) quotation used at the first of the dissertation can be offered again: "It is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail" (p. 15). Maybe, former CoPs will see a hammer as their only tool. Maybe, they will not. Since the military was the proposal team's antecedent group influence (former CoP), the influence on members was deeply rooted and profound, but military training is known for its power to shape young people (King, 2006). Other former CoP may or may not be as influential on inter-professional teams. Another factor influencing team success in the proposal team was the majority member status of the former CoP. Studying whether a former CoP would have the same affect if the group did not have a majority status might give additional insight into these complex organizational units.

Finally, embracing the complexity of inter-professional teams is important for research to provide deeper understanding into this organizational unit. Life and teams cannot be fit into neat binary categories. Organizational units are not always newly formed or established, big or small, and so on. They are often hybrid in nature. If researchers only envision inter-professional teams that neatly fit descriptions of membership composition, size, group development, degree of management, and presence then the work will fall short of the researchers' objective of contributing to theory and practice of real life inter-professional teams.

In *Genre and the New Rhetoric*, Bazerman (1994) wrote of the human necessity to work in conjunction with others. By using socially agreed upon generic knowledge, people move through their social worlds, as the professionals in the study's proposal team did. The majority of these professionals came "in wearing their rank;" they had been

trained to see the world unfolding in a particular way and experienced little need to deviate from that vantage point. These members relied, in part, on antecedent genres, as well as boundary genres, and the rest of the proposal team acquiesced to their use. In time, team members on the proposal team will use generic knowledge to slowly change the way that they and their other teams work together because their response to new situations will force them to do so. Bazerman remarked:

> Only by uncovering the pathways that guide our lives in certain directions can we begin to identify the possibilities for new turns and the consequences of taking those turns. When we are put on the spot, we must act, and in acting we must act generically if others are to understand our act and accept it as valid. Without a shared sense of genre others would not know what kind of thing we were doing. And life is mysterious enough already. (p. 100)

The current study contributes to research into inter-professional teams. It is important to find ways for inter-professional teams to succeed at writing tasks through awareness of genre knowledge differences. In the study, one way was found: a leader emerged who could coordinate writing activities despite not being a member of all the communities of practice. But all team members and groups are different from one another, and more research is required. That desire to improve the inter-professional situation reflects a shared human preoccupation with getting along. Growing in understanding does take a little of the mystery out of life, but then again, as Bazerman (1994) notes, there is a great deal more to learn.

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Appendix A: Consent Form for Participation

Working Collaboratively on an Inter-professional Team

Margie Clow Bohan, Investigator

Phone Number

E-mail

Introduction

You are invited to take part in a research study being conducted by Margie Clow Bohan who is a PhD candidate at Dalhousie University. Your participation in this study is voluntary and you may withdraw at any time. Your status as an employee will not be affected in any way by a decision to participate, not participate or to withdraw from this study. The study is described below. This description tells you about the risks, inconvenience, or discomfort which you might experience. Participating in the study might not benefit you individually, but we might learn things that will benefit others. You should discuss any questions you have about this study with me.

Purpose of the Study

The principal objective of this interdisciplinary study is to explore the processes of an inter-professional, mixed-presence team of engineers and business staff working at the boundary of professional group work by examining more fully how the team constructs project documents. In particular, I am interested in how the collaborative processes of members of this team operate with respect to differences in professional identities, genre knowledge, and presence. Therefore, the major question is framed accordingly: How do inter-professional teams develop common ground that recognizes and responds to the distinctive ways in which written discourses function in individual professions?

Study Design

The initial proposal process took place last spring and summer. I will collect and analyze the team members' e-mail correspondence and drafts of the proposal. In interviews, I will be interested in the way you write: what kind of documents do you use, how do you view these documents, how do you think information should be written down and disseminated, how do other professional groups view writing and information, and so on. I will be looking specifically at the way the professional groups decide on the content and visual design of the joint document (the proposal) so understanding the thinking behind the written document is most important. I will want to talk to you individually about writing twice during the research phase, once in person and once by e-mail. Later, when you revisit the proposal process (revision of original document), I will come into the office and observe how a document is written. Observation will usually mean watching everyday work practices such as developing a section of the proposal. When I do not understand something and you have the time to explain, I will ask

you about the work. Informal chats often give good direction to any final interviews and my analysis.

When the research study is completed, I will produce a dissertation. PhD dissertations are also available upon completion of the degree through academic library databases.

Who Can Participate in the Study

Members of the team/group of individuals who are working on a document are invited to participate including engineers and business/finance personnel and those who work face-to-face as well as externally.

Who Will Be Conducting the Research

Margie Clow Bohan will conduct all the research as part of the PhD program.

What You Will Be Asked To Do

I am seeking participants who are willing to be observed in their everyday writing activities, have their written materials (e.g., e-mails, drafts of sections of the proposal) analyzed, and be interviewed at least twice during the research phase (a 60 minute face-to-face interview and an e-mail interview).

Possible Risks

I am not interested in individual performances for their own sake. Research, however, does have associated risks.

     For the company*:* Disclosure of company information could damage its reputation or place it at a competitive disadvantage. A mutual non-disclosure agreement and disguising identifying descriptions will help to ameliorate this risk. Another risk is that team dynamics might be changed negatively (e.g., groups might not get along because of something reported by one individual). The research study focuses on groups and not individuals; however, effort will be made to have the groups understand that writing together is an on-going challenge and that writing reflects group practices and those practices are not right or wrong.

     For the individual*:* There is a risk that a quotation or a comment in the dissertation might be rightfully or wrongfully attributed to an individual participant, thereby causing negative consequences for that individual or his/her group. To reduce risks to individuals, I will use pseudonyms in my notes and write-ups that will disguise your identity for external audiences. The pseudonyms may disguise individuals, but may not. If I decide that a particular quotation (e.g., from an interview) is a good description of an idea in the data, I will include it anonymously in the dissertation and subsequent write-ups. In signing consent below, you are given a choice as to whether you want quotations used in these publications. If you don't want quotations used, you may opt to participate generally but not be quoted directly. Even if you

agree at this point to allow usage of direct quotations, I will contact you when I decide to use one, and I will have you review the passage and agree to its use.

For the researcher: There is a risk to the researcher as well, if the participants or the company owners withdrew their consent or permission. In order to mitigate that risk, I will uphold confidentiality agreements and the Ethics Committee proposal, as well as professional standards of conduct.

Possible Benefits

The company may benefit from greater understanding of a complex, increasingly common business unit: the inter-professional working with members at a geographical distance. You may benefit from gaining greater insight into the team's interactions.

Confidentiality & Anonymity

You confidentiality and anonymity cannot be guaranteed. All information, however, which you provide will be treated confidentially and your identity will not be revealed in reporting the study results neither to the company, to Dalhousie or to the public. Your name will appear only on this sheet, and this sheet will be stored separately from any data collected for this study. No names will be attached to audiotape, computer and/or paper files. The audiotapes will be used for the purposes of data analysis only and will be secured in a locked cabinet. Data analysis involves using both hardcopy and computer software (NVivo 8). Short, anonymous quotations will be selected to include in the final dissertation and subsequent publications with your permission. That permission for use of direct quotations will be given only after you have been able to review the quotation during the draft stage of the dissertation. The quotations will reflect the study's interests and not the identity of the participants to external audiences.

Data Retention

All digital files will be retained in a locked cabinet in my office for five years as per Dalhousie University's policy, after which the files will be deleted or destroyed.

Questions

Do you have any questions regarding this study? If you do have questions, you can raise them immediately or call me at 483-7045 for further information. In the event that you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration: (902) 494-1462.

Working Collaboratively on an Inter-professional Team

Note: Please return this form to the chief librarian in a sealed envelope. Only Mrs. Bohan will have access to its contents. This procedure will allow you to agree to participate or not agree to participate without your colleagues or superiors knowing. Thanks.

I have read the explanation about the study.

- I have been given the opportunity to discuss it and my questions have been answered to my satisfaction.
- I hereby consent to take part in this study.
- However, I realize that my participation is voluntary and that I am free to withdraw at any time without consequence.

_____   _____

Participant's signature   Date

I consent / do not consent to the audio recording of the interview.

_____   _____

Participant's signature   Date

I will have a chance to review during the drafting of the dissertation any direct quotations that are included in the dissertation, presentations, and subsequent academic publications. At this time, I consent / do not consent in principle to the use of my words as text in reporting of results. (Please see the attached example of a quotation used in an academic work.)

_____

Printed Name of the Participant Signing Above

_____   _____

Researcher's Name   Date

In the event that you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration: (902) 494-1462.

Appendix B: Consent Form for Use of Direct Quotations

I have had the opportunity to read the passage that the researcher would like to use in her academic work. It was a comment that I made and I give permission for its use. My name, naturally, will not appear.

_____   _____

Participant's Signature   Date

_____   _____

Researcher's Signature   Date

Note: This form will be either taken to the participant or sent by e-mail. The form will be inserted into the e-mail if appropriate. The participant can either confirm permission for use of the direct quotation or he/she can select to not give permission by returning the e-mail with a note indicating his/her response.

Attachment to Consent Form: Example of a Quotation Used in a Qualitative Study

In qualitative research studies, the write-ups often contain quotations from the participants. Most often the quotations serve as examples of themes that have been seen in the literature. By their very nature, they are most often representative of what many of the participants have expressed. Here is an example from a paper of Natasha Artemeva, a former engineer and professor of technical communication at Carleton University. She is one of the supervisors on my PhD committee.

Natasha wanted a comment from one of the former students whom she was following. She was interested in these students adaptation to the professional practices of engineering. Artemeva (2008) writes: "Working in an engineering company and spending time with his father allowed Bill to grow up in an atmosphere in which he heard oldtimers' stories about engineering practices, which Lave and Wenger (1991) aptly referred to as 'war stories.' In an early interview, Bill reported the following: 'When I started working in industry, I was very young. . . . I had a lot of positive role models from people, which was like that, "you don't know what's here, let me explain it to you." I guess the first couple of years that I worked were really beneficial because people took a lot of time and effort to guide me.' (personal communication, January 28, 1999)

In other words, the young engineer had ample access to oldtimers who, by working with him on real engineering tasks, helped him to enter engineering CoP and push his level of potential development within his ZPD" (p. 175).

You can see that the quotation served to describe what she had been discussing, which was how students who have past experiences with the profession adapt more quickly to its conventions and expectations.

Artemeva, N. (2008). Toward a unified social theory of genre learning. *Journal of Business and Technical Communication*, *22* (2), 160-185. doi: 10.1177/1050651907311925

Appendix C: E-mail Interview Questions

Note: You may not understand why I am asking some of the following questions. They are not an attempt to get you to "unload" or complain. Your answers will allow me to ascertain team characteristics or team processes and communication practices. Feel free to write as much as you would like. "Yes" and "No" answers will not tell me much about the writing process.

1.   Demographic Information

Name:
Profession:
Years in the profession:
Level of professional qualification (e.g., CGA, PEng, CA, CGA, and so on):

Years at this company:
Years at this level:

2.   Questions on Work Situation

a)   How often do you work with the team members who wrote the proposal?

b)   The company is a geographically dispersed company (located in a number of provinces) and employees are often physically separated from each other (work in a number of buildings). How often do you see (face-to-face) other members of the team normally? Why do you see them normally?

c)   During the development of the proposal (May-August 2009), how often did you *see* the other members? (You can include informal or social meetings. You can also include meetings with members of your own unit who contributed to the proposal.) Explain your time estimates briefly.

d)   Rather than see people, do you often use the phone, e-mail, text, or use other technologies to make connections? Explain how that affects communication.

e)   Do you feel that you were able to communicate adequately about the proposal with your own unit and the whole team in order to complete the document?

3.   Professional Group

a)   How would you describe your professional grouping (e.g., professional engineer, certified accountant, etc.)?

b)   How were you trained **as a writer** in your professional group? (For example, how were you trained to write as an engineer? You can include courses at university, workshops and on-the-job experiences.) Was it an effective approach to learning to write for work purposes?

c)   Are there differences in terms of communication practices (e.g., preferences for communication mediums, frequency of contact, audience awareness, writing styles, kinds of documents, etc.) between professionals who have worked in businesses compared to those who have worked in the military (or other federal systems)? Explain. Provide examples if you are able.

d)   What do you consider "good writing" in your field? You can include examples if you find it difficult to conceptualize "good writing" or you can think about objectives of the writing.

e)   What makes writing or communicating generally difficult at work?

f)   What would make writing in a team where some members are at a distance easier?

4.   Inter-professional Writing

a)   Is it more difficult to write with people who don't share your professional background? Why is that?

b)   Is it difficult to write with people from other experiential backgrounds even when they are trained in the same field? Why is that?

c)   Do you ever write sections of contracts? How do you come to a decision about how to actually write or construct the document (or sections) given that you all don't see the writing in the same way? Can you comment on some of the **decisions**[51] about the writing that had to be made? Who makes them? Why? Are the decisions usually the most appropriate ones? Effective?

5.   Inter-professional Team Work

a)   Why is it advantageous in terms of writing to work in an inter-professional team at this company?

b)   Why is it a disadvantage in terms of writing to work on an inter-professional team at this company?

---

[51] When we write we make all kinds of decisions: from word choices to timing of submissions; from organization of material to selection of material; from tone of the document (e.g., level of formality) to level of detail of supporting material such as appendices. Decision making comes with all sorts of inter-personal and group dynamics. Not all decisions result in an effective document and not all effective documents leave team members feeling good about the work.

c)   What could be done to improve this kind of teamwork in terms of writing practices?

6.   Writing the Proposal

a)   Do you know who came up with the idea of proposing this service initiative? When? Why?

b)   Did you come together with other team members and talk about how to proceed or did somebody take charge, ask you to participate, and just assign duties or activities?

c)   Once you knew what was expected of you or your unit, how did you go about contributing? (For instance, did you plan out what was needed and then find people to fill in the gaps or did the sub-group (unit) plan together or did you find a previously written proposal (or other document) and up-date it?)

d)   How often did you meet with your own unit (if you did) and with the larger group to discuss the proposal? In person? By phone? By e-mail?

e)   Were there employees involved in the construction of this proposal and its annexes who never came together to discuss the work?[52] How were they connected? How often did they connect with team members? (That member might have been you. You can comment on what you think of working at a distance from others.)

f)   What was done in the meetings if indeed they were scheduled? Did somebody take the lead? Did that person change as time went on?

g)   How did you decide[53] on how the sections should be written and organized or what went into an annex?

h)   Did you always agree on how the document (or a section) was being written (style, conventions, organization, content, etc.)? Give examples if possible.

i)   How did you know what needed to be included in the proposal or section/annex?

j)   How did you know how to organize the material?

---

[52] Here I am thinking about employees who may have worked at Site X or elsewhere who contributed expertise and/or information (they may have written sections). Were they connected electronically (e.g., phone, e-mail, collaborative technologies such as Word's track changes, etc.) to other members either in their own unit (to Henry for instance) or to the members of the larger team?
[53] Yes, we are back to making decisions about what was written.

k)   If you were corresponding through e-mail, did that add complexity to the communication? (Was it or would it have been easier to meet face-to-face and discuss situations and come to decisions?)

l)   Were you content with the writing, organizing and presentation of the material? Why or why not?

m)   Did decisions made by others sometimes seem like the wrong decisions?

n)   Did you feel as if you could express your opinion on how the document or section (annex) was written?

o)   Did your opinion hold weight in the group's decision making process (in terms of the writing)?

p)   Given that different professional groups use different communication practices (ways of communicating), which scenario describes what happened?
- The dominant[54] group dominated? (which one)

- The most experienced group (in terms of either writing or in terms of experience in the proposed work) dominated?

- The team developed a document that reflected the way this inter-professional team at a particular company communicates and not the way individual professions communicate.

---

[54] In a business, dominance is usually a hierarchal characteristic. Often people in positions of power exert control. Sometimes, though, expertise in writing or in a particular knowledge base allows individuals or sub-groups to take charge. Other times, people just have the kind of personality that either people follow or people don't challenge.

Appendix D: Questions for Individual Interviews

1.   Tell me about what you write at work? How did you learn to write these documents?

2.   Can you comment on why you compile and transfer information in this way?

3.   Do other people at work write aspects of these documents in a different way? (e.g., Is there a great deal of uniformity in how one group likes to see the proposal and see what should and should not be included? How would you attribute that uniformity, if it indeed is seen?)
Do people comment on differences in communication practices? Do these comments come out in little teasing comments or in ones laced with frustration?

4.   Do you see the other professionals as a group with identifiable ways of working and viewing the writing process and written product? Do you get comments on what to include or what not to include from people outside your professional group? What do they want done differently if anything? Does that make sense to you? How do your colleagues in your own group feel about these differences? Can you account for them?

5.   Are there any practices or technologies that help you write documents or sections of documents for other people? Can you talk about them?

6.   Overtime, has this situation of seeing information differently and seeing the "correctness" of ways of writing changed? Have they changed for you? For your whole group? For the whole company or industry? Why or why not?

7.   You wrote before there were technologies to help people work in a distributed fashion. What has changed for you and your group?

Additional Questions on the Proposal

The Proposal/Bid Process

Bid/No bid Strategy Meeting – WIN Strategy Statement

Proposal Team Coordination Meeting – Review of RFP and WIN Statement - Establishment of the proposal outline, production schedule using the schedule of the writing of Proposal Topical Outlines/Themes (provided) and Schedule for Proposal Preparation

Team Meeting / Work Scope Assignment –

Response Outline Review – all team members / review topical outlines and requirements. Note: "In the case of an unsolicited proposal the outline is left to the discretion of the Proposal Manager. For unsolicited proposals a SOW and WXX will be generated" (p. 27).

First draft produced

Preliminary Pricing Strategy Meeting –

Blue Team – draft review done by the team members

Second draft is written.

Red Team – draft review done by a specifically appointed team to make sure that it is consistent with the WIN Strategy Statement. See page 41-42.

Third draft is written.

Final pricing review – Gold Team Review Senior management

Final draft is written.

Submission – final document signed off by senior management

*Note that reviews are governed by lists of questions concerning technical, financial, contracts, and writing questions to ensure a well-written, competitive package. See end of the document.

Results: What was the reaction to the results? What did people attribute this result? What can be done?

Appendix E: Sample Additional Questions from Document Analysis

Remember that my questions and your comments are not evaluative. We are not determining the merit of any decision, section, style, or change. I am just trying to figure out how the final document was written. Seeing who contributed what is one way of seeing the project as a collaborative effort.

1. Did you write the business case analysis in the body or introductory part of the proposal or did you furnish the data/costs and then Thomas wrote it up? (Did you write any section of the proposal?)

2. Did you complete the annexes (5&6) dealing with costs? Are these annexes laid out in a fairly standard accounting method of presentation (e.g., the new SAP accounting system), a company standard format, or does it reflect an accounting format more in line with the client's expectations (military – PWGSC)?

3. If the way you are formatting the accounting/business information is different in this document than one that you would use for a civilian client, what is different?

4. Does the presentation of material (data) indicate anything beyond a different format? (For example, changing a form can indicate that some aspect is more important than another aspect. A form which asks for a SIN number before the person's name indicates that the information will be tracked by that number and not alphabetically, for instance.)

5. The final proposal (July 10[th]) indicates that James from Contracts reviewed the proposal. I haven't been able to see any notations or comments on any version (or in any e-mails) that show me that he did. (I am looking for comments on the proposal that come from a non-engineering/non-technical employee.) I was wondering if any notations exist. For example, a version of the proposal with track changes or insert/comment notes would be very helpful. Even rough notes would reveal the direction Contracts takes on proposal.

Appendix F: Code "Military Influence"

Screen shot showing the code "Military influence" with its corresponding references (selections from the data that tell something about the code).

Appendix G: Four Themes

Screen shot of the four main themes (highest level of conceptual ideas) including professional background, military influence, leadership, and control (of information).

Appendix H: E-mail Genres

The e-mail genres are displayed on a month-by-month basis.

May 2009

MSG	10	33.3%
RFI	4	13.3%
RTW	3	10%
POI	10	33.3%
RPOI	1	3.3%
WTR	2	6.6%

Total = 30 e-mails

June 2009

MSG	8	4%
RFI	27	13%.5
RTW	16	8%
POI	88	44%
RPOI	6	3%
WTR	36	18%
TC	9	4.5%
ITM	4	2%
O	1	.5%
DG	5	2.5%

Total = 200 e-mails

July 2009

MSG	0	0%
RFI	4	6%
RTW	6	9.2%

POI	27	41.5%
RPOI	3	4.3%
WTR	16	24%
TC	5	7.7%
ITM	0	0%
O	1	1.5%
DG	3	4.3%
Response from Client	0	0%
Response to Client	0	0%

Total = 65 e-mails

August 2009

MSG	1	9%
RFI	0	0%
RTW	0	0%
POI	6	54%
RPOI	0	0%
WTR	0	0%
TC	0	0%
ITM	0	0%
O	0	0%
DG	2	18%
Response from Client	1	9%
Response to Client	1	9%

Total = 11 e-mails

APPENDIX I: RGS Analysis Questions

Adapted from

Devitt, A., Reiff, M. J., & Bawarshi, A. (2004). *Scenes of writing: Strategies for composing with genres.* (pp. 93-94). New York, NY: Pearson/Longman.

Genres are "typified rhetorical actions based in recurrent situations" (Miller, 1984, p. 159).

Guidelines

1. Collect samples of the genre
2. Identify and describe the situation in which the genre is used

Setting: Where does the genre appear? How and when is it transmitted and used? With what other genres does this genre interact?

Subject: What topics, issues, ideas, questions, etc. does the genre address? When people use this genre, what is it that they are interacting about?

Participants: Who uses the genre?

    Writers: Who writes the texts in this genre? Are multiple writers possible? What roles do they perform? What characteristics must writers of this genre possess? Under what circumstances do writers write the genre (e.g., in their leisure, on the run, in waiting rooms)?
    Readers: Who reads the texts in this genre? Is there more than one type of reader for this genre? What roles do they perform? What characteristics must readers of this genre possess? Under what circumstances do readers read the genre (e.g., at their leisure, on the run, in waiting rooms)?

Purposes: Why do writers write this genre and why do readers read it? What purposes does the genre fulfill for the people who use it?

3. Identify and describe patterns in genre features.

What content is typically included? What excluded? How is the content treated? What sorts of examples are used? What counts as evidence (personal testimony, facts, etc.)?

How are the texts in the genre structured? What are their parts, and how are they organized?

In what format are texts of this genre presented? What layout or appearance is common? How long is a typical text in this genre?

4. What kind of language is used? :
   Are sentences long or short? Do they share a certain style? If they do, describe the style.

   What types of words are used?

5. Analyze what these patterns reveal about the situation.

   Why are these patterns significant? What can you learn about the actions being performed through the genre by observing its language patterns? What arguments can you make about these patterns? As you consider these questions, focus on the following:

   - What do participants have to know or believe to understand or appreciate the genre?
   - Who is invited into the genre, and who is excluded?
   - What roles for writers and readers does it encourage or discourage?
   - What values, beliefs, goals, and assumptions are revealed through the genre's patterns?
   - How is the subject of the genre treated? What content is considered important? What content (topics or details) is ignored?
   - What actions does the genre help make possible? What actions does the genre make difficult?
   - What attitude toward the readers is implied in the genre? What attitude toward the world is implied in it?

Appendix J: Examples of the RGS Analysis

Next Genre: Technical Memoranda

Methodology and Content (Annexes 1&2)

Purpose – Angus would have written the tech memos with the help of other engineers, technical employees and the site managers. He writes the following for his purpose statement: "To present the methodology that will be followed in determining the scope of the initial Inspection to be carried out on a Product" (Annex 1).

Content – The memo contains all the logistical detail in order to carry out the inspection on the Product. That means that Angus provides the assumptions, the scope, technical issues arising out of the inspection, and the way the inspection will be carried out. It also contains tables of inspection specifics, diagrams, photographs, and so on so that the client can understand what is being proposed and the technical employees could ultimately understand what needs to be done on the shop floor. This is a critical document since it outlines what the actual work entails and will be the basis for the legal contract that will follow. It is 54 pages in length – much longer than the 18 pages of the proposal's main body.

Participants – A number of people would read the report. Probably only the government's engineering staff would read the technical memorandum. Some members of the team and the government would understand (and appreciate) very little of the material. They would however value its importance to the project. Readers would read to evaluate the accuracy and scope of the work.

Form – The memo is written in a form that is recognizable by engineers and people who need to read technical information with a great deal of technical information and language, tables, drawings, and photographs. Some of the information is certainly coming from the Products' standards and other material is coming from standards drawn up by governing bodies such as ISSO 9100. Each page is set up on a template with the company's logo, the name of the annex and reference numbers that correspond to other genres (probably government documents) – a common practice in the government / military. Sections and sub-sections are numbered for ease of reference and again reflecting military preferences. Underlining is kept to a minimum with it being used to emphasize headings and sub-headings. Topics that have graphics or tables are referenced so that the reader can easily find them – these tables and graphics allow technical and non-technical readers to understand the concepts more easily. The language is technical and formal with no first person being used. There is a preference for the passive construction.

A number of engineers signed off the technical memorandum.

Time – The technical memo could be used for any inspection on the Product – it isn't time sensitive. The proposal, however, is tied to one particular Product because of the regular maintenance schedule for these Products.

Place – The proposal is being sent to Ottawa from the head office.

Other aspects:

- The technical memo has a number of assumptions: the biggest one is that the reader can understand the detailed information and that they have already bought into the idea of an inspection. This memo should convince the reader that the company knows how to do this particular inspection so that it is complete and keeps the Product on its maintenance schedule.
- There is an assumption that these Products are essential to the Government of Canada. There is knowledge that the government now sees a need for the inspection – in the long run it will keep them working and save the taxpayers' money.
- The genre limits the general reader in that there are so many details that few people could find problems with the procedure. Even experienced people would need time to come up with alternative solutions. The tables and figures, while providing helpful ways to view the information, also limits the way the material is read. It would tend to keep the inspective following the laid-out path rather than having mechanics do something different – that might be found to be a better way. The genre is prescriptive and controlling – like most work manuals.
- It succeeds in explaining how to carry out the inspection. It does not discuss the cost of the inspection, nor the time expectations. It anticipates finding problems during the inspection and details what should be done. No discussion is included on who is responsible to pay for repairs beyond the scope of the existing contract.