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Technical Communication: Working Towards Defining the Field and Ourselves

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TECHNICAL COMMUNICATION: WORKING TOWARDS DEFINING THE FIELD AND OURSELVES

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From the very beginning of the technical communication, definitions of technical writing have varied amongst scholars and practitioners of the field. The technical writing discourse has evolved essentially into what some refer to as professional communication or professional writing; however, with these new and current distinctions, the issue of defining the field has still yet to be resolved. Moreover, the problem of defining technical communication and its practitioners is further complicated by the conceptions and misconceptions of who technical communicators are and what it is they do. The following study, a personal ethnography of a technical writing intern's experience, explores this same situation, studying how images of writer are formed during collaboration, how they differ from the technical writer's own perception of self, how those perceptions then affect the writer throughout the writing process and then when assigning authorship. The author then also discusses how perception, collaboration, image and notions of authorship all contribute to the problem of defining the technical communication field and how certain misconceptions of the technical writer need to change in order to create a greater understanding of the field and what it is technical communicators do.

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INTRODUCTION

> The technical writer will serve in conjunction with our Web development staff and software development teams to create detailed descriptions of our various internal and external technology systems… *Translating information received from our software engineers, other technical teams and current documentation into a more user-friendly format.* (CareerBuilder.com, emphasis mine)

The above quote is the description of the position and responsibilities for an open technical writer position at a banking-financial services firm. The job description outlines the basics of what most professional writers do in the broadest sense—they collaborate with others to create texts for a specific user audience.[1] While it is clear that collaboration is an essential part of the job, the term "translating" suggests that the primary skill for a technical writer is not *writing* but the transformation of information from a technical context to a common or universal language. In other words, the technical writer is seen as a careful word chooser to preserve the original meaning of the object, process, or technical jargon rather than a creator of knowledge, understanding, or meaning. Essentially, this job description (and others like them) presents a reduced understanding of writing as a perfunctory

[1] In many cases there is still a distinction between "technical" and "professional" writers, however, more frequently in recent years the terms have been used interchangeably, as in this study. Technical writers, however, may still be defined by their subject matter; whereas, professional writers may be more defined by the genre in business settings.

and limited activity. Technical writers *write*, not translate. But because technical writing is a job often performed "behind the scenes," it remains shrouded in mystery and misunderstanding.

If mainstream jobs were described based only on their surface activities, such descriptions would be easily recognized as oversimplifications of complex and sophisticated occupations. For instance, the work of a pharmacist could be described as "pill counting"—carefully dispensing the correct medication, counting the number of pills prescribed by the physician, placing them in a well-marked bottle, handing the vial to the customer while telling her to "have a nice day." They understand the substance they are working with but only in reference to what the drug companies and physicians have previously told them. Although this view of a pharmacist may be somewhat extreme, it parallels what technical writers have experienced in the past–being compared to a scribe, someone who just copies materials, or a translator, someone who "decodes" an idea from one language to another. Such viewpoints imply that technical writing is simply a technical skill, one that does not require years of schooling and practice to learn how to communicate and write well for a variety of audiences, purposes, and contexts. However, over the past thirty years, employers and academics have gradually altered their views regarding the role of technical writers from scribe or translator to articulator.

In their article, "The Technical Communicator as Author: Meaning Power, Authority," Slack, Miller and Doak resist the more traditional views of the professional writer by demonstrating that writers create meaning through the articulation of ideas.

> The articulation view allows us to move beyond a conception of an ongoing process of articulation constituted in (and constituting) the relations of meaning and power operating in the entire context within which messages move. That context includes not just the context of the sender and receiver (the frameworks of knowledge, relations of production, and technical infrastructure) but of the mediator(s) as well. (90)

That said, it may not be enough for the technical writer to understand the context in which they are working; the experts they associate with may also need to understand how the technical writer perceives his or her role as a "writer." Without understanding both sides of the process and roles, more than likely misconceptions regarding the technical writer and his or her role will continue. In order to change the image of the "technical writer," professional writers in the industry and academy are working to define themselves and their relationship to the technical, business, scientific, financial fields that they work in. To do so, practitioners and scholars have returned to their rhetorical backgrounds, focusing on what it is that makes them valuable in the first place: their knowledge of writing.

Contemporary rhetoricians and professional communicators continue to draw on classical notions of rhetoric among other periods and fields of study, focusing on the very elements that Aristotle saw as essential to the practice: invention, organization, elocution and delivery.[2, 3] Invention consists of the discovery of new

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[2] Foss, Foss and Trapp discuss how contemporary rhetoricians draw on classical views of rhetoric as well as other periods and views (Protagoras, Isocrates, Cicero, Quintillian, Ramus, Bacon, Campbell and Whatley, Blair, Austin and Sheridan) as well as fields, such as philosophy, literary studies, English, sociology and psychology, to revive and broaden the field. This allows the study of rhetoric to become more than "the expression of ideas or considerations of style apart from substance or action" (19).

[3] Traditionally, "memory" would be included in the canons of rhetoric; however, contemporary scholars often leave memory out because the focus on text rather than speech. Memory has been left out of this study for the same reason.

ideas and thoughts; organization, of course, is the arrangement of those same ideas through inventive processes; elocution, or style, is how those ideas are presented to the listener and/or reader linguistically; and delivery then refers to the final presentation of those ideas (Foss, Foss, and Trapp 14). Professional writers draw on these processes and elements, paying attention to language and using rhetorical strategies to organize their thoughts, gain reader compliance and, finally, to attain credibility outside their field by reader acceptance; however, while technical writers may view rhetorical strategies as a way to articulate meaning and, in turn, ethos, those outside the discourse may not necessarily understand that rhetoric's "function is not to persuade but to see the available means of persuasion in each case" (26). Rhetoric is not necessarily a skill, in its ideal form, as Plato put it, but a form of knowledge that allows a writer to understand one aspect of human nature: how we communicate and interact with one another (14). Moreover, technical and professional writers try to define their field and their selves from their knowledge of rhetoric.

From the very beginning of the discourse definitions of technical writing have varied amongst scholars and practitioners of the field. Traditionally, the discourse was defined from a number of perspectives including subject matter, linguistics, thought processes and purpose. In terms of subject matter, "technical writing is that writing which deals with subject matter in science, engineering and business" (Blickle and Passe; Mills and Walter); linguistics, technical writing is defined by its specialized vocabulary (Hays); thought processes, more sequential thought processes occurred when writing scientifically (Kirkman); purpose, technical documents are functional and functional texts served society or a particularly audience (Brooks and Warren;

Kapp); and finally by clarity (Britton) (Britton 113-114). As one can see, there are a number of approaches to the discourse; however, even though these definitions have definitions have changed throughout the years, even to the point where it views technical communication as a type of social action (Lannon; Woolever; Clark). The technical writing discourse has evolved essentially into what some refer to as professional communication or professional writing; however, with these new and current distinctions, the issue of defining the field has still yet to be resolved.

On a current listserv between technical communication instructors Thomas Orr posed the following questions: "Could someone point me to some generally-agreed-upon definitions of 'professional communication' and 'technical communication' that clarify the differences between the two?"[4] What Orr's question resulted in was a number of responses from fellow English instructors and scholars, each relaying their own definition of "professional communication" and "technical communication." What was surprising is that even though some definitions were similar or overlapped in some respect, each response was, in essence, was different from the next. For example, Daniel Tripp, an online English instructor from Kaplan University, complicates Orr's question when he noted the difficulty of interpreting the phrase "professional writing," acknowledging that for some it referred to technical and business writing; whereas, for others it means creative nonfiction, freelance writing or

[4] Arguably, some of the individuals referenced may not necessarily have the authority to define the field as they do, particularly those distinctions that may be heavily influenced by literary backgrounds and could be considerably less knowledgeable of the field; however, in the case of the instructors, it shows how the field is being understood and taught to students and then being understood by those same students. What this suggests though is how the field may be progressing through that dissemination of knowledge.

even journalism. Some such as Ken Baake, from Texas Tech, look at the classification based on content, creating the distinction between "Technical Reports" and "Professional Reports." Creating a professional report includes conducting research on information and then preparing reports that are useful to those in the workplace. In addition, these reports deal with matters specifically in the workplace. Technical reports, on the other hand, can be professional but most also must focus on technical or technologic matters (Baake). Another definition, issued by Peter England, a doctoral student at Texas Tech, suggested that technical communication was something that "is distinguished by the level of detailed knowledge." Conversely, "professional communication could be something shared by human resources, engineers, lawyers, nurses, etc." Professional communication is shared among disciplines; whereas, technical communication is more specific to an individual field (England). The definitions described above are only three out of a number of responses on the listserv, and it is easily seen that scholars are still having difficulty defining the field; however, what these responses or distinctions suggest is that scholars and, most likely, practitioners as well are recognizing professional and/or technical communication as a social activity (Peeples 3-4).

Technical communication is described as a social activity due to its collaborative nature. Generally, collaboration in the field has been studied in the field for a number of years by numerous scholars, including but not limited to Ede and Lunsford, Harrison and Debs, Killingsworth and Jones, van der Geest and van Gemert, Lowry, Curtis and Lowry, and Forman. In professional communication, collaborative practices often take place between the communicator and another or group of

individuals who are well versed in the subject area. Professional communicators collaborate in a number of ways, including contextual (using genre and templates), group (joint, reactive, group single-authored and horizontal division) and hierarchical forms (content, stakeholder, strategic, and mentoring) of collaboration. These interactions often result in texts, whether they are on print, online writing and story boards for multimedia purposes. As a result, the ability to collaborate and communicate well with these experts is essential. In fact, "Reiney, Turner, and Dayton… found that technical communication managers reported the ability to collaborate with subject matter experts and the ability to collaborate with coworkers as the top 2 of 63 core competencies for technical communicators" (283).

While the capacity to communicate and collaborate well is obvious, it is through these interactions that images of the technical writer are formed. For example, the technical writers have been viewed through the transmission view of communication. "Based on research done buy Robert J. Connors, we could characterize this phase in technical communication as dominating the field from 1800s until the 1950s but persisting into the present" (Slack, Miller, and Doak 83). As previously mentioned, this type of view of communication perpetuated an image of the technical writer as a scribe"[b]ecause meaning resides only in the sender's intentions, and the technical writer is merely a surrogate encoder" (85). A second, which is now more common, is the translation view. In the translation perspective, the technical writer is a translator, and "[t]he most obvious marker of this shift is that the technical *writer* becomes the technical *communicator* with the recognition that communicators have something to add beyond skillful encoding and clear channel" (88). What the

translation view suggests is that "[t]here seems to be a subtle recognition in the field that the communicator has power, but coming to terms with the nature of that power gets lost in the demarcation of encoding and decoding, of sender and audience, as the principal sites of investigation" (89). One aspect of the audience's perception of the writer is influenced by noted authorship and how the author fits into that same perception.

Michael Foucault noted that "the function of an author is to characterize the existence, circulation, and operation of certain discourses within a society" (80). However, not all discourses have been fortunate enough to establish authorship; discourse such as letters, contracts and, traditionally, the texts created by technical communicators may have "writers" but not "authors" (80). To explain further, the distinction between an "author" and "writer" is contingent on the view of the communicator and writing. If the writer has no authority over the text, only copying material or translating it from another, it would be inconsequential to assign authorship to the actual "writer" because the idea is more important than how it is or was articulated. The distinction between "author" and "writer" complicates further what it is that technical "writers" or "communicators" do.

Philosophers and scholars have analyzed concepts of authorship and the author construct for a number of years, attempting to determine "what" or "who" is author. The modernists believed that "the notion of the author" was supported by the "development of modern capitalism and of intellectual property, to Westward rationalism, and to patriarchy" (Ede and Lunsford 354). In other words, authorship was a sign of privilege given only to those whose voices were deemed worthy by the

majority. The idea of privilege is also often associated with Descartes' idea of the "autonomous individual," or *cogito*, which asserts that individuals are free from both cultural and societal influences and work solely from their own motivations (354). The problem with the autonomous individual is that, more so in the past, it often ignores minorities and women as well as dismisses collaborative writing situations. Moreover, when individuality is acknowledged in collaborative situations, authorship often granted to others (e.g., scientists, doctors, computer programmers, etc.) because "authorship empowers certain individuals while at the same time renders transparent the contributions of others" (Slack, Miller, and Doak 80). To rectify modern theories of authorship favored the individual and were often seen as a sign of privilege, postmodernists restructured their own notions of authorship.

Postmodernists wanted to erase notions of privilege, and, as a result, called for the "death of the author" (355). It was thought that since the author's original and true intentions could never fully be recounted, they were inconsequential in regards to the interpretation of a text. With the "death of the author," in combination with other philosophies, such as Sherry Turkle's notion of "distributed selves," there could be no such thing as the "autonomous individual" (354). The lack of individuality is largely in part because postmodernists acknowledged how the multiple facets of our identity influence how we create a text (354). While the latter arguments may be true, erasing privilege from the author denies, in all collaborative situations and for this particular study, not only the scientist, doctor, programmer and/or developer authority but also the technical writer from ever establishing him/herself within a given discourse.

Modern and postmodern theories of authorship such as these have been discussed and debated almost to the point of exhaustion, especially in regards to single authored texts; therefore, revisiting the issue in respect to collaboratively written texts, especially in regards to technical writing where collaboration is common practice and where technical writers are not beginning to assert themselves as "authors," would only seem natural.

In his introduction to his compilation, *Professional Writing and Rhetoric*, Tim Peeples's asserts such a definition of technical/professional communication, suggesting that the professional communicator not only interacts with content experts or other colleagues but also interacts with language and reader response to that language. As a result, professional writing becomes a complex rhetorical act on both a textual and contextual level. Therefore, as Peeples suggested, it may be necessary to "formulate a definition of professional writing... that is meant both to encourage a view of professional writing as rhetorical and to capture the breadth of the professional writer's role" within a given context (5). In terms of this study, I apply a similar viewpoint, attempting to define what I do as a technical writer by rhetorical standards and understand how my perception of myself differs from those of my BCIS group and how those perceptions affect our working relationship.

To then further explore Peeple's and my own understanding of technical communication, I look at the outcomes of two projects and how assigning authorship may have problematic due to group perceptions and roles and how traditional concepts of authorship differ from organizationally situated authorship. Authorship, in its most traditional sense, implies power and ownership of a text; whereas, organizationally

situated authorship is carefully constructed, complex, is a phrase that needs "careful unpacking" through a line of specific questions (5). For example, what is the context of the writing situation? How does the writer fit within that context or organization? Is there a single concrete writing situation or are there multiple elements (concrete, imagined or virtual) that overlap or correspond with one another? What are the distinctions between "situated authorship" and "authorship?" Why is the term, "authorship," used in the first place? How are professional writers perceived by those outside their discipline, and how do those perceptions affect their treatment when they or others refer to them as "authors" instead of writers? What kind of texts are these writers authoring? These are just a few of the questions that come to mind when exploring this definition of professional writing and, in turn, defining the professional communicator's role.

It is obvious from the previous discussion that scholars and practitioners in the field are having troubles identifying who they are and their relationship to the various fields in which they work; however, the same difficulty does not necessarily seem to exist outside of the professional communication field. It was then with this in mind that brought about the following ethnography.

In the early spring of 2007, I began been working as a technical writing/editing intern for a professor (referred to as M1 in this study) in the Business Computer Information Science [BCIS] department at St. Cloud State University. When I first began my internship, my work was primarily concerned with formatting and editing texts for publication; however, as time went on, my activities extended to researching and writing parts of academic papers for publication. Shortly thereafter, I was named

the second teaching assistant for a lower level BCIS course (BCIS 255), in which I edit and format the course's syllabus and assignments on D2L, as well as named the primary editor, and one of the writers, for texts created in a research-based BCIS group.

There were seven members in my BCIS group; this includes M1 who headed all of the projects. I was invited to work alongside M1, as well as the other members of his BCIS group, after working with him for nearly six months. The purpose of the group for those in BCIS department was to discuss and formulate ideas, on a bi-monthly basis, for experiments and create publications regarding computer programming, particularly in the area of computer security. Although the majority of the group is based in the BCIS department, each member of the group comes from a different background, has a different focus within the department and is at a different educational level. For a brief description of the group members please see the table below.

Table 1

BCIS Group Background Information

BCIS Group Background	
M1 *(Iowa, USA)*	Professor in the BCIS Dept.; B.S. 1973, M.S. 1974 Bemidji State Univ., Ed.D. 1981 Univ. of Missouri – St. Louis
M2 *(Minnesota, USA)*	Undergraduate in the BCIS Dept. with emphasis in Systems & Network Administration
M3 *(Nepal)*	Graduate student in the BCIS Dept. & Assistant Programmer; B.S. 2001 Nepal Engineering Institution, Nepal
M4 *(Poland)*	Undergraduate in the BCIS Dept. with emphasis in Global Authentication
M5 *(Minnesota, USA)*	Graduate student in the English Dept.; B.A. 2004 Univ. of Wisconsin - Milwaukee
VM1 *(Sri Lanka)*	Professor in the BCIS Dept; B.S. Sri Jayawardhanapura University, Sri Lanka, 1987 M.Eng. Electro-Communications University, Japan, Ph.D. 1990 Keio University, Japan

As a result, M1 distributes various projects amongst the other members, allowing them to situate their own particular experiment within their academic focus and level of education. In other terms of background, the group is ethnically and culturally diverse as well as multidisciplinary. We have individuals from Nepal and Poland and a visiting contribution author from Sri Lanka, in addition to three individuals from the United States, and each member of the group has a different focus either within the BCIS department or is associated with a different department altogether. The combination of all these different backgrounds and disciplines presents an interesting situation, one that is atypical from most collaborative technical writing teams; however, our group differs primarily from other professional communication

situations in industry because the majority of our writing projects are intended for conference or journal publications.

Two such writing projects are the focus of my investigation; one referred to as "A Firewall Configuration Strategy" and the second called "A Comparison of LDAP and NIS Systems." The first project, written by M1, M2, M3 and M5, began in the Spring 2007 semester, ran through the course the summer and then ended approximately in September of the Fall 2007 semester. The second project, written by M1, M2, M4, M5, and VM1, started in the Fall 2007 semester and ended in the Spring 2008 semester. Both projects were "successful"—the first was published in a journal in the BCIS field and the second was accepted at an international conference about technical warfare and published in the conference's proceeding. However, despite the success of the group in the BCIS discourse, the actual degree of "success" varied for each group member, particularly the technical writer.

To explain further, the type of success each group member achieved is explicitly linked to their motivations. For M1 and M2, who were both employees of the university and established members of the discourse community, noted scholarship may have provided more funds for future research as well as maintained their reputation within the discipline. In the cases of students M3 and M4, noted scholarship may have allotted them greater opportunities once they graduate and helped create a reputable image within their chosen discourse. As for me, my "success" was and is much different from her fellow group members because I was

writing outside of my own discourse.[5] Achieving scholarship in one field does not necessarily transfer into another. There are different expectations and methods of conduct.[6] This is not to negate the success that the members within the group did achieve, it is simply to call attention to its *difference*. Like every member of the group, the image of the technical writer is also shaped by the group's success and by noted scholarship because it calls attention to the need for that writer as well as the power that that writer holds over the text. But even if this image of the technical writer is viewed as needed and beneficial, it may still be inaccurate because the need is based solely on results and negates the process that the technical writer goes through to achieve those ends through articulation. Without articulation, the idea or subject matter would still remain inaccessible to the general public; communication would, in many cases, fail. It was with this conflict in mind, that I conducted an exploratory study of my experience.

In order to look further into this conflict, I used the following questions, much like the ones Peeples's posed earlier, to guide the study of my research site of the two writing projects mentioned above and throughout the following chapters:

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[5] It could be argued that the my conducting a study of my own experience would be skewed on a number of levels; however, studies such as Dave Clark's dissertation, "A Rhetoric of Boundaries: Living and Working Along a Technical/Non-Technical Split," which too was a personal ethnography, received Honorable Mention in 2002 for the CCCC Outstanding Dissertation Award in Technical Communication.

[6] This refers to the difference in discipline, how discourse is created and then how that discourse is measured amongst one's discourse community and is explained and explored further in the following chapters.

- What was the context of the writing situations and how did I fit within that context; what was my role?
- How did my fellow group members' perceptions of me and my role differ from my own, and how did those perceptions affect my treatment throughout the writing process?
- In this instance, what was the difference between "authorship" and "situated authorship"?
- What was my group's perception of me and how did that perception affect my treatment when I was referred to as an "author" instead of "writer"?

More specifically, these questions were used to direct the analysis of the two projects, A Firewall Configuration and A Comparison of LDAP and NIS. The artifacts that resulted from both of these projects were analyzed rhetorically in order to examine the technical writer's role and identity as well as authorship. I thought rhetorical analysis would best suit the project in order to see what perceptions there were of the technical writer, how those perceptions changed and how they influenced the writing process and the final product. My assumption was based on my view of technical communication, and all communication, as a rhetorical act.

Chapter 2 presents a literature review of contextual, collaborative and authorial discourse. The literature on the contextual elements looks at the background of the writing and collaborative situations, focusing how that context shapes and affects perceptions of the technical writer and how then how it affected the rhetorical situation. The collaborative discourse was looked at in order to determine what types

of collaboration are taking place throughout the duration of the study and how that collaboration may have influenced perceptions of the technical communicator and the determining of authorship. Finally, concepts of authorship are discussed and how those notions are affected by context, perception and collaboration.

In Chapter 3 the methods and methodology are discussed in further detail, and in Chapter 4, the article analysis begins. The methods, including the two projects, emails and an interview, are discussed in relation to concepts regarding working within contextual and rhetorical situations, images and views of the technical writer, various types of collaboration and the process of socialization and individuation. Chapter 4 begins the article analysis, focusing on the relationship between the artifacts and these concepts, discussing and describing the context of the writing project, how I fit within that context and how determining authorship affected my role within the group.

Chapter 5 provides an application of the analysis in both the industry and in the academy. I argue that understanding the contextual elements of a given writing situation can help the technical communicator situate themselves within the given context and then assert themselves as a writer. I also argue that it is not enough for the technical communicator to be aware of contextual factors. Content experts must also work towards a greater understanding of who the technical writer is and what it is that he or she does.

Chapter 2

LITERATURE REVIEW

The following chapter begins to explore the literature surrounding the areas of image, collaboration and authorship in technical writing. The chapter begins by discussing various definitions of the technical writing and how the number of definitions fails to encapsulate who technical writers are and what they do. The discussion then moves on to how technical communicators view themselves in practice before moving on to how technical writers are typically perceived or even misperceived in the workplace by their content expert counterparts. Finally, the chapter concludes by examining how these perceptions or misperceptions affect the technical writer's ability to attain ethos outside of his or her discourse through authorship.

As suggested in Chapter 1, definitions of technical writing and professional communication have long since been debated amongst both scholars and practitioners. The attempts at defining the field have been numerous, whether by subject, linguistics, genre or purpose, and, as evidence by the listserv mentioned in the introduction, the debate as to what constitutes as "technical" or "professional" writing continues. Much like Britton tried to do by defining the field, Dobrin explores earlier definitions of

technical writing before attempting to define the field in his own terms, asserting why such definitions are necessary:

> People come into technical writing from two directions; either they are technicians asked to write or writer's asked to gain technical skills. As technical writers, they are likely to ask themselves what they are and what they do… The answers function as a definition of technical writing and that definition helps the definer find an internal equilibrium and some direction for the future. (122)

In short, the definition of the field allows both scholars and practitioners to define themselves and to understand what it is they study and practice; however, this very situation is complicated by the fact that even if technical writers and communicators came to a generally agreed upon definition, those outside the field may not be willing to accept it. In fact, The Society of Technical Communication's [STC] magazine, *Intercom*, just came out with an article in the spring of 2008 about the government not accepting STC's definition of technical communicator as an official job title. Situations where the technical writer's perception of self differs from his or her peer's perception of them make it more difficult for the technical writer/communicator to assert him or herself within the context they are working and to attain ethos outside their field in the midst of this "identity crisis."

This chapter begins with the discussion of how technical writers and professional communicators understand their role while working outside their own field and how that understanding is based in their knowledge of language and rhetoric. This understanding is then complicated by how the writer is perceived when in collaborative situations, how these situations complicate technical communicators' understanding of themselves and how they might work within those contextual

boundaries to assert themselves as writers. Finally, concepts of authorship are discussed in relation to perceptions of the technical writer within a discourse community outside their own. These three areas all address two primary questions: What challenges does a professional writer face in establishing her credibility and authority within the group setting that content experts do not? And how specifically does the professional writer present herself as a "co-manufacturer of meaning" rather than a "writing expert" or "scribe"? I, and the scholars cited in the following sections, argue that successful professional writers establish both a positive "identity" and "image" to produce effective communication materials for their organizations.

Perceptions of Ourselves: The Technical Writer in Practice

Dobrin defines technical writing as "writing that accommodates technology to the user," using the terms "writing," "accommodates," "technology" and "user" abstractly (118). He, much like Steiner, Vico, Humboldt, Sapir and Whorf, refers to "writing" in a monadist sense, meaning that language cannot be separate from knowledge and is primarily used in the construction thereof (115). The term "accommodates" refers to the subject matter and its "invasive quality" as well as the role the technical writer plays when working with that subject matter (118). "Technology," in this case, refers to more than the technical procedures described within texts and is not limited to technologic discourses; the term in this instance also encompasses the concepts, ideas and meaning derived from the science, business, engineering and other "technical" fields (118). Finally, the term "user" refers to the reader or audience in question. This type of the distinction may be appealing to those

in the field for two reasons: one, being concept of "writing" and its relationship to the construction of knowledge, and two, how this knowledge is then constructed through "accommodation." For the technical writer this definition of their practice and approach to writing allows them power over the text because knowledge is constructed through words, language. This too, although particular definitions would vary, would most likely be how many technical communicators view their practice and how they understand what it is they do. This view or approach is not necessarily how others outside their field see them though.

In regards to the concept of "writing," professional communicators have not always been seen as actual "writers"; instead, they, like Slack, Miller, and Doak discussed, have been seen as scribes, transmitters (Shannon and Weaver) and/or translators (Morley; Hall; Grossberg), never creating meaning, only reporting or mediating it. However, the majority of technical writers would argue against these views, suggesting that "language does not convey a pre-established or separately extant content, as a cable conveys telegraph messages. The content is created in and through the dynamics of statement" (Steiner 16; Dobrin 115).

Throughout the literature it seems agreed that technical writers believe their work is underestimated and that the reason they are underestimated is due to the lack of knowledge of what it is they do, creating meaning through articulation and not just translation or transmission. Slack, Miller, and Doak would most likely agree with this statement because they argue that the technical writer does more than record, transmit or translate meaning; they help create it through articulation (Fiske; Carey). This view, known as the articulation view of communication, situates the writer

between the message's sender and the receiver, allowing the writer to add, delete, change and select the sender's original meaning before it reaches the intended receiver (93-94). Thus the professional writer is accommodating the reader through articulation and it is herein that situates the communicator's role and power over a text.

Regli's viewpoint of where the technical writer's power lies differs from Dobrin and Slack, Miller and Doak in that it emphasizes the technical writer's expertise lies in the invention process. She argues that the technical writer's power and expertise lies in the beginning of the writing process rather than the end. Instead of the writer reacting to a text, like when a technical writer is given information from the content expert and then adapts it to a specific genre, "a technical writer's expertise… lies in an ability to adapt rhetorical heuristics to situations of interdisciplinary collaboration" during the inventive process (71). Therefore, instead of content, the technical writer organizes particular ideas. This approach is similar to the accommodation/articulation in that it grants the writer rhetorical authority over the text because the process of invention requires the writer to meld the content of *what* is written with *how* it is written. During the communicative, articulation and/or the inventive process, "the writer or speaker does have the creative power to transform the sources of meaning and to develop original solutions to organizational problems and novel writing strategies" (Driskill 109). This includes being aware of the rhetorical situation of a project, acknowledging such elements as purpose, audience, genre, deadlines, etc. and how those elements affect both the reader and writer within the given context (109). What this does is creates a situation where the writers involved

must acknowledge both contextual and rhetorical elements in order to gain reader compliance and/or acceptance. This may include a close inspection of how "content experts" think and construct their arguments in order to accomplish their own goals.

For example, Reeves discusses how content experts employ certain rhetorical strategies and scientific styles to achieve their ends, including "field specific styles or social 'indexes'... bold or cautious rhetorical styles; the relations between syntax and argument; and the rhetoric of scientific [or, in this specific instance, computer science] terminology" (267). However, with these strategies there often comes misunderstanding in attempts to create exigency. In this instance, the professional writer must use his or her knowledge of these scientific strategies as well as classical rhetoric to absolve these misunderstandings while simultaneously creating agency for him or herself to attain socialization or individuation and without ruining the content expert's original intentions.

For the technical writer to assert his or herself while maintaining the content expert's original message, technical writers would most likely pay close attention to the text's organization. This would require looking at how Aristotle's topoi, classical rhetorical strategies, were used, alone or in combination with one another. Such strategies include description, including details of a person, place, or object; narration, relating an even to the reader; illustration, providing specific instances or examples; division-classification, categorizing certain entities; process analysis, explaining how an event occurred; compare-contrast, pointing out similarities and differences; cause-effect, showing the reasons and consequences; and definition, explaining the meaning of a concept (Nadell 30-32, 46; Warren 91). Paying close attention to these patterns of

organizations as well as the context and rhetorical nature of the writing situation may make the task of gaining reader acceptance easier as these patterns may distinguish which kind of compliance gaining strategies to use. According to Marwell and Schmitt, there are approximately sixteen strategies, within five clusters, that a writer can employ. The five clusters include rewarding, punishing, expertise and impersonal and personal commitments.

- *Rewarding:* Promising the reader they will be successful if they comply.
- *Punishing:* Threatening the reader with failure if they choose not to comply
- *Expertise:* Stressing the expertise of the writer versus the reader's inexperience.
- *Impersonal commitments:* The writer appeals to the reader on a moral level to gain compliance.
- *Personal commitments:* Making the reader feel as if they are personally indebted to the writer. (Warren 89)

The use of these strategies essentially is what gives the technical communicator power over a text because these strategies allow the writer to present content outside of the rhetor's field so that it is easier for the reader to understand. It is how those who have been trained as professional communicator most likely understand their role as a "writer." In reference to the study and on a personal note, it is how I understood my position as a "writer" within the group. I knew the importance of the inventive process and understood how rhetorical elements such as context, organization and certain writing strategies and appeals would affect my reader as well as gain their acceptance of our text, and these same strategies and appeals are what help me and professional writers understand our role and field as being "rhetorical above all else" (28). However, while this may be obvious to me as well as others in

the discipline, this same view of the professional discourse may not exist in the science and technologic fields where these professionals work. My personal experience as a technical writing/editing intern serves to look deeper into this problem, to identify *how* I was possibly being perceived throughout the duration of the two projects described herein and *how* this perception affected the writing process, collaboration, and affected my perception of self. From my own educational background as well as from the literature, technical writers tend to view "writing" as a strictly rhetorical act, one that creates meaning rather than transmits or translates it. As a result, there is a need to include a broader perspective of the technical communication discourse, to include "the textual, the individual, and the social" so that our perceptions of ourselves correspond with those we frequently communicate and collaborate with (30).

Ourselves Perceived: Collaboration and the Construction of Identity

Collaboration has a longstanding tradition in industry and has been studied diligently in the academy by a number of scholars, including (but not limited to) Amabile et al., Ede and Lunsford, Killingsworth and Jones. And the benefits of that tradition have been speculated and discussed for years. Noel and Robert's discuss in their article, "An Empirical Study on Collaborative Writing: What Do Co-Authors Do, Use and Like?" and Endersby's discusses in his article, "Collaborative Research in the Social Sciences: Multiple Authorship and Publication Credit," this same collaborative tradition and some of these benefits in the broadest sense as well as specifically in the science industry. Noel and Robert's article lists the benefits of collaborative writing,

stressing that collaborative teams benefit from having a variety of perspectives, including different areas of expertise, to create a more sound text (65). Endersby's article looks specifically at collaborative writing in the sciences, attributing several benefits to the practice. One of these benefits is similar to that noted in Noel and Robert's in that "as scientific research becomes more complex, the expertise and talents of others may provide useful assistance" (Endersby 377). Other benefits include allowing students or junior colleagues to gain experience from established faculty members and, in turn, giving these faculty members a new outlook on the field; collaborative writing allows for researchers, professors, etc. the opportunity for greater output; the quality of research and writing improves; and creates a greater dissemination of knowledge between researchers and colleagues (377).

I can personally attest to these benefits being a part of a collaborative writing group myself. Not only do our writing projects seem more accurate because we are able to have a number of people review the text, but we are able to produce more documents than we would if we were working alone. Since my BCIS group is based in computer science, a field that rapidly changes by the day, it is essential that we remain up to date on with our research and our writings regarding the field. Moreover, with the variety of perspectives and areas of expertise available in our group, it helps ensure that each experiment that is documented is current and correct. This is not to say, however, that we don't experience issues when working with one another much like other collaborative writing groups.

Like most collaborative writing teams, there are issues such as meeting deadlines and differing working and writing styles, and these are just a few of the

noted disadvantages of collaborative writing. Other disadvantages include the distribution of responsibility, clashing personalities, taking longer to produce a single document and having to share credit with each member of the writing group, therefore, reducing the value of the individual (Noel and Roberts 65; Endersby 377). Despite these potential problems, my BCIS group still employs collaborative writing as do many other fields and occupations. This creates a need for more effective collaborative practices, which leads scholars and practitioners alike to examine how we *already* communicate and collaborate with one another to improve these practices.

The number of studies, such as Noel and Roberts, Endersby and Jones, done on collaborative writing indicate that different aspects of the practice fall into a certain taxonomy, including participant roles, document control and writing strategies. For instance, there seems to be four different roles that participants fall into. These roles include writer, consultant, editor and reviewer. The writer obviously writes the document; the consultant makes suggestions for the document prior to it being written; the editor modifies the document directly by fixing grammatical errors, organizing the text, etc. but does not contribute to the paper's content; and the reviewer suggests changes regarding content to the document without modifying it directly (Noel and Robert's 66). In regards to the study, participant roles seemed to vary based on experience or even change, from writer to editor or from writer to consultant, according to how the document was controlled.

Document control varies much like participant roles and is heavily influence by those same roles. The different categories of document control include centralized control, relay, shared and independent. The centralized method occurs when a

document is controlled by one person; the relay method occurs when one person writes a section of the text and then passes it to another group member; the independent method occurs when group members write asynchronously and then create a unified document; and finally, the shared method occurs when groups members write synchronously and all have equal access to the document (Tammaro et al. 20). Our group typically used the relay method of document control, employing an independent writing strategy that allowed for minimal contact with one another, which may or may not have been beneficial to understanding each other's roles.

The different writing strategies dictate how a collaborative group will control the document and what roles each participant will play. These strategies include a single writer strategy, a scribe strategy, a separate writing strategy and then joint writing strategy and influence how perceptions of each group member based on their role as a writer. A single writer strategy is obvious aside from the fact that this writer also takes suggestions from other group members; the scribe strategy refers to when a single person documents group discussions; a separate writing strategy refers to when a document is broken into parts and each member writes own section; and finally, joint writing refers to when a document is produced by the group at a particular time (20).

These factors, of course, are all essential to collaborative practices as they prove a basis for understanding how we form groups and fulfill the roles within those groups as well as tell us how we control and write texts; however, these elements are more decisive in regards to more general collaborative writing situations. Although these factors are still relevant and applicable to the collaborative situations that technical writers engage in, a current study done by Jones explores more specifically

what types of collaborative activities technical communicators participate in the industry.

Jones surveyed members of The Society for Technical Communication to see how and how frequently technical and professional communicators collaborated in the industry. The results indicated that professional communicators collaborated in a number of ways, including contextual, group and hierarchical forms of collaboration. Contextual collaboration includes "using genre, templates and existing documents to aid in writing a new document," and what Jones referred to as "group collaboration" is split up into four subcategories: joint, reactive, group single-authored and horizontal division (Jones 284). Joint writing referred to a group process of planning the writing process as well as executing that process together; reactive writing occurred when individual group members would write the same sections of a paper and then compare the two; group single-authored writing refers to the process of collaborating in groups of two or more and having a single person write the document; and finally, horizontal division writing is essentially dividing the document into sections and having each member write their own section before combining them all in a final draft (286).

Jones's hierarchical collaboration category can also be broken down into four subcategories which are known as "content, stakeholder, strategic, and mentoring" (285). Content collaboration refers to the process of the writer communicating with an "expert" in order to develop content. For example, the professional communicator working for an engineering firm will continually be in contact with an expert in order to stay up to date on specific information. Stakeholder collaboration is the practice of "document cycling or document review" (285). This involves passing the document

among other group members for their comments and suggestions. Mentoring collaboration involves the writer or professional communicator instructing others on how to write or create a document. Finally, strategic collaboration regards "larger issues than those [of] the immediate text" (Jones 454). This type of collaboration may include noting the document's release how to construct and organize the document and other strategic issues.

Although Jones's study indicated that professional communicators most frequently engaged in contextual collaboration, that does not negate the need for clearer communicative practices. Texts can be are limited in that they may fail to provide adequate information and cannot provide such information as subject matter. Therefore, technical writers must be aware of how they interact with others, particularly in situations since there are a number of factors that affect any collaborative research and writing group.

In 2001, the Harvard Business Division of Research supported an academic – practitioner collaboration study, which outlined three characteristics that seemed important to any successful collaborative project: "(1) project-relevant skills and knowledge, (2) collaboration skills [such as ability to communicate and work well with others] and (3) attitudes and motivation" (Amabile et al. 419). Each one of these characteristics is applicable to my BCIS group. For example, much like Jones's content collaboration, each member of my BCIS group has a different educational focus, indicating that each member is in some respect an "expert" in that particular area. This variety of disciplines allows responsibility for certain projects, or parts of projects, to be delegated within the group. It also creates the possibility for a greater

expansion of ideas. However, it can also create communication boundaries between members working together on the same project as well as issues with power within the group due to clashing educational backgrounds and perceptions of individual group members. For example, for the purpose of this study, the perception of the professional communicator within the group is being studied. Does the image of the technical writer as a scribe, transmitter or translator still persist or has it been replaced with that of an articulator? The answer most likely depends on how I, the technical writer, have used my knowledge and background to attain social authority, even if it is limited, in the BCIS discourse.

Katz discusses the assimilation process that newcomers go through when entering a new organization and/or discourse. He argues that assimilation occurs through two processes, socialization and individuation. Socialization refers to newcomers learning about and adapting to certain practices within the new field whereas individuation is individual resistance to those practices in order to meet personal needs (122-123). These processes ultimately determine how a newcomer may be perceived when entering a discourse; however, it is through individuation that the individual establishes him or herself as an "expert" by asserting personal, social and situational authority (123).

Personal authority refers to the newcomer's authority in their own "disciplinary community" (124). An individual must first be established within their own discipline before that expertise can be transferred into an organizational situation outside of it; however, this sense of "expertise" must also be accepted by the community in which the individual is working. Once this occurs, the professional

writer can gain "certain benefits including greater respect, access to resources, and power and influence" (125). This social authority, however, is also dependent of how the individual acts within a given situation. Situational authority addresses the organization's immediate needs and how the organization has to value that individual's personal expertise in order for him or her to gain authority (125).

In regards to the study, I gain authority when asked to organize a text, work with language or fit certain rhetorical elements to meet certain standards. My expertise and how the organization values me and my role is contingent on how I perform within a given task and seems, for the most part, fleeting. On the other hand, without me recognizing my own expertise within my own discourse, what Katz refers to as personal authority, I would most likely be unable to gain authority over a text. But what type of authority, social or personal comes first? Does my own sense of expertise depend on how the group accepts me or is their acceptance contingent on how I assert myself as an expert outside of their field? It seems that when entering *a second* discourse, personal authority would be essential because without training, education and experience in one field it would be more difficult to attain authority in another. But at the same time, the social authority that the technical writer may experience in his or her own field may not instantly be transferable onto the other because the technical writer's profession may not be acknowledged and the writer may be considered an expert but only in that expertise exists to support or assist in technical/scientific work. As a result, even though "a connection between expertise and authority seems to be generally accepted in many fields, the connection between expertise and authority differs depending on the disciplinary perspective of the scholar

investigating the connection" between expertise, authority and the meaning of a text (124).

As mentioned in the section above, the professional writer would view their expertise as derived from their knowledge of language. This, of course, is not to suggest that their content expert counterparts do not view their expertise as originating from the same knowledge source; however, the content expert may, in many cases, still view the technical writer as a "transmitters of messages or a translator of meanings" due to the transmission and translation model of communication (Slack, Miller, and Doak 80). In both of these views, the sender of the message would most likely be considered to have the most authority over a text; however, this authority rarely extends to the technical communicator (93). This is largely in part due to the assumption that the transmitter or translator is only an expert in regards to mediating meaning and not creating it (93). Both the transmission and translation view are still common-held beliefs regarding technical communication as evident by the CareerBuilder advertisement that described the technical writer's job as *translating"* information into a more user friendly format.

This persisting view of the technical writer is somewhat discouraging; however, as evident by recent movements in the field to assert the position as the communicator as one that articulates meaning instead of just reporting or translating it, professional writers are continually working to define the field and their role in such a way that recognizes their expertise and grants them authority over a text. This continual movement then brings up the question of what counts as *recognized* authority. If the government, industry and the academy don't recognize or understand

the technical communication field, then how do we assert ourselves as professionals? Moreover, how do we even begin to assert ourselves as professionals if we do not recognize our own expertise, behave independently rather than as a support staff or even acknowledge that we belong to a profession? In most disciplines, authorship is a way of asserting oneself and gaining extrinsic ethos within a given discourse. In the professional world, the majority of the time it is not enough to attain intrinsic ethos (although it cannot hurt one to do so); arguably individuals need to attain extrinsic ethos in order to be viewed as a professional, as having authority in some way. It is this way of thinking that complicates what it means to be an "author" versus a "writer," what counts as authority and how that authority is measured.

Traditional Concepts of Authorship and Perceptions of the Writer

Multiple authorship, although still predominant in the sciences, is becoming more common in both the industry and the academy and, as a result, complicating the traditional ideas of what it means to be a writer and, more importantly, what it means to be an "author." In fact, Domenico Bertoloni Meli notes that "[t]he rise of multiple authorship... is a more complex phenomenon extending in different forms across a wide disciplinary spectrum in the sciences as well as in the humanities" (65). What this suggests is a movement (even if ever so slightly) towards acknowledging collaboratively written texts in the humanities as legitimate scholarship. This "complex phenomenon" that Meli speaks of only merely hints at the intricacies and complexities that accompany collectively written texts and the determining of authorship in a given field. Determining authorship in collaborative groups and in the

sciences has generally been problematic, even in the beginning (67). And in the technical writing discourse, where collaboration is common practice, concepts of authorship have traditionally been questioned.

The problem regarding co-authorship is simply stated: How does one "assess the relative contribution of each author when it comes to assigning publication credit [?]" (Hartley, Pennebaker, and Fox 244). There are several options, when answering this question. Writers may order authors by their contributions, list them alphabetically, ascribe credit in footnotes, list authors randomly or rotate lead authorship (Endersby 386-387). However, even these ordering methods may not apply. For example, some teams or the project manager may list a more established writer as primary author before an unknown one because it may increase reader acceptance. Conversely, in another instance, the well-known writer may grant lead authorship to "talented students or junior colleagues" in order to help them establish themselves in the field (385). Also, some grant authorship based on contributions similar to those mentioned above made during "research design, manuscript preparation, data collection… data analysis," administrative tasks and/or the research process (385).

All of the elements listed can be taken into account when determining authorship, and, unless mandated by the publication or organizational style used, more often than not, it is often the project manager's job to assign authorship. However, it should be noted that while all of these elements are problematic, and when viewed, the process of assigning authorship through modernist or postmodernist lenses becomes

all the more complicated because of the underlying implications of what it means to be an author.

As previously mentioned, modern and postmodern concepts of authorship have been analyzed and discussed for years, arguing over whether authorship indicates privilege and whether or not that privilege should be extended to the writer, and as we move into the age of technology and science, certain distinctions need to be made amongst the two in regards to the technologic and scientific fields themselves. Some theorists, such as Galison, Hevly, and Kinsella, view this scientific/technologic age as based in "modernist goals of knowledge production," where both large and small-scale scientists, who appear to be working autonomously, are actually a part of a "larger disciplinary network" (Kinsella 304). Despite these modernist goals, the same fields exhibit a number of "postmodern features, including decentered subjectivity, disseminated meaning, and a diffusion of individual agency into larger networks or power/knowledge" (306). Since these features may dominate over the field's goals, a poststructuralist approach would seem appropriate when looking at how participant roles and agency affect notions of authorship.

From a postmodern point of view determining authorship may require further investigation into the group's dynamics, looking specifically at power and authority distributed among group members and each member's roles. Since technical communicators are dependent on "content experts" in order to create texts, how can one author a text when there is little or no knowledge of content? Questions such as this lead one to inquire about the technical communicator's position within the practice regarding their role and how much influence they have over the text.

Since professional writers understand their role largely as a rhetorical one, seeing themselves as creating meaning through their knowledge of language and use of rhetorical strategies, it would seem that their role would exemplify those same approaches. This view may not necessarily be shared with those that they are working with; however, if one were to acknowledge the rhetorical nature of technical communication, then this would relate to Slack, Miller, and Doak's articulation view of communication and to the understanding that "no contribution [to any text] is really transparent; it is only rendered transparent in relations of power" (94).

The idea that "no contribution is really transparent" and is only considered "transparent in relations to power" relates to modernist theories regarding authorship (Slack, Miller, and Doak 94). Some scholars, such as feminist scholar Barbra Christian, argues that postmodernism only came full circle when women and other minorities were beginning to become recognized as authorities of texts, and this recognition is primarily in the humanities (Ede and Lunsford 355). However, it is also noted, as in Ede and Lunsford's "Collaboration and Concepts of Authorship," that "the sciences [also] have a poor record of including women and members of minorities, or their perspectives, in research" (363). If both Christian, Ede and Lunsford's observations are accurate, what techniques can these writers employ to gain agency and achieve authorship, particularly in a technical discourse?

It is commonly understood, that agency "implies power" but concepts of authorship are not always considered to be synonymous with notions of agency (Giddens 9). In Winsor's article, "Using Writing to Structure Agency: An Examination of Engineers' Practice," she explores how both traditional definitions of

agency and constrained agency overlap with social structures and then give writers the opportunity to create change within those same structures. Katz's discussion of individuation and situational authority is similar to Winsor's discussion of agency as individuation occurs when the individual, or in this instance the technical writer, asserts his or her own ideas, theories, arguments in order to create change within a given discourse through the use of language and rhetorical strategies. Situational authority allows the technical writer achieves authority through individuation and agency and, in turn, "situated authorship" if they are able to communicate and articulate the needs and concepts of the technical data effectively within that given situation. In regards to this study, this type of authorship is much different from how my fellow BCIS group members would traditionally understand established authority over a text as "authorship" appears to be derived from the ownership of intellectual property. This may result in conflicts between the professional writer and the rest of the group due to their label as "author" opposed to the commonly labeled "writer." However, paying attention to the context of the discourse produced by *both* the professional writer and the content expert(s) may clear up these types of misunderstandings and/or conflicts regarding authorship and the technical writer's role.

The study of discourse communities and the discourse produced in those said communities relates largely to the social perspective of communication. This perspective maintains the idea that knowledge is socially constructed and that, as Kenneth Bruffee believes, "to think well as individuals we must learn to think well collectively–that is we must learn to converse well" (421). Charlotte Thralls and

Nancy Roundy Blyler also discuss this approach within the workplace and contend, like Bruffee, that in order for knowledge to be socially constructed community members must first come to a general consensus, deciding on "what [they] will call true, rather than from a universal that will ensure truth" (128). This deviation from universal truth allows current "beliefs [to be] incorporated into a community's knowledge store" and shows how knowledge may "be maintained, and to some extent, how it might grow" through discourse (128-129). Also, as a result, communities are formed and depend on the communicative discourse to "maintain [their] social identity" (Faigley 51). The same is true of the BCIS community and my BCIS group. In fact, the main reason for the group was to publish discourse for the larger discourse community in order to preserve knowledge as well as add to its store. All the while, the same group members reinforce or gain a sense of personal expertise because they have assisted in maintaining the social identity of the group through discourse.

The social identity of the group, of course, is made up of individuals who have been initiated into communities through language. Much like Faigley discusses in his article, "Nonacademic Writing: The Social Perspective," all who are literate may belong to a language community, however, texts are not written for just those who are literate. Texts are written for specific groups, audiences. As a result, these groups acquire a specialized language that is understood by all members. This is most likely because "[t]his constructionist view of discourse conventions places the utmost importance on language as means by which communities are constituted" (Thralls and Blyler 130). They understand what topics are worthy of discussion, how to relay information about those topics, are aware of what other group members already know

and expect to learn and understand what it means to be writer within that community (Faigley 52). For a professional communicator the task of may be difficult, particularly at first, because he or she become immersed in discourse that is much different from their own. The technical communicator becomes acculturated into the science, business and technologic discourses versus the enculturation that their content expert counterparts go through. Although this process is not necessarily easy or the final result even wanted in some respects (in cases where the writer may be undervalued), the professional writer is able to use their knowledge of language to situate themselves within the new discourse. Those who they are working with are not necessarily able to do the same thing given the circumstances. This is their discourse community and, therefore, they may not relish the idea of going outside their discourse to learn more about another that may seem minor or inconsequential in many respects; however, as previously suggested, doing so may improve communication and relations between the professional writer and the rest of the group.

Communication would improve based on primarily one thing: the image of the technical writer may no longer be seen as subordinate based on the fact that his or her position and role is fully understood. It is much like Kuhn suggests, to:

> [Call] attention to the existence of scientific discourse communities [and] urg[e] that scientists transcend excessive preoccupation with data and methodologies and recognize that separate discourse communities speak different idioms and hold to separate versions of science. Scientists… must study "the differences between their own intra- and inter-group discourse" in order to discover what someone from another group would see and say. (Kuhn 202)

It is not enough for the technical communicator to understand the context of the discourse in which they are working and how they are *situated* within it; scientists must also go beyond the knowledge of their discipline to comprehend how knowledge of their discourse is viewed from the outside perspective. Doing so will hopefully result in a greater understanding of the overall discourse community as well as a greater understanding of how the professional writer attains "situated authorship" through their knowledge of language and ethos versus the type of "authorship" or ethos that the scientists attain with the same text.

Chapter 3

METHODS AND METHODOLOGY

To examine how context, individuation, authority, collaboration, identity, situated authorship and authorship, an exploratory study was conceptualized. Using my experience and position as a technical writing/editing intern, I decided to focus, as mentioned earlier, on two writing projects previously done in my BCIS group to answer the following questions:

- What was the context of the writing situations and how did I fit within that context; what was my role?
- How did my fellow group members' perceptions of me and my role differ from my own, and how did those perceptions affect my treatment throughout the writing process?
- In this instance, what was the difference between "authorship" and "situated authorship"?
- What was my group's perception of me and how did that perception affect my treatment when I was referred to as an "author" instead of "writer"?

These questions were chosen because of how they fit within the literature. Ede and Lunsford called for more research to be done on multiple authorship in the academy. Jones called for more research regarding how technical communicators collaborate.

Katz spoke of looking at how newcomers become socialized and assert themselves when entering a new discipline. Slack, Miller, and Doak asserted a view of the technical communicator as an articulator rather than a common translator, and finally, Peeples, amongst others, are still attempting to define who technical communicators are and what they do. These questions, when applied to the two projects, sought to reveal how, in this instance, a technical writer was perceived, how those perceptions differed from her own, and then how those perceptions affected the process and the outcome of either project. The artifacts themselves, being the two papers and the email correspondence that occurred throughout the duration of either project, were also chosen for a specific reason. It was not that one project failed and the other did not, both projects were successful to a degree. It was rather that both papers were created in two different collaborative environments, one strictly virtual and the other a combination of virtual and face-to-face communication.

During the first project, "A Firewall Configuration Strategy," I was not considered a BCIS group member, but I was allowed to contribute to the paper as a writer. At this point though, I had limited exposure to my co-authors, strictly communicating with the project manager and primarily through email. The second text, on the other hand, "A Comparison of LDAP and NIS," began shortly after the first project was completed and I was then acknowledged as a member of a research group. I had access to my other group member that I had not experienced before and was able to communicate with both them and the project manager if needed. Moreover, since I was listed as an author for the first paper without ever having discussed the paper or met any of the other group members besides M1, I wondered

how I would be received by the same and some additional group members once I was in a face-to-face situation. I wanted to study how my own assumptions at that point in time either skewed or supported my role as well as how they differed from my other group members before and after I joined the group. In addition, the separation from the group versus membership also would appear to have bearing how perceptions were formed through collaboration, whether virtual or actual, throughout the writing process and then how those perceptions influenced the final versions of the text and how authorship was assigned. To understand how the connection or disconnect between group members affected perception, collaboration and then authorship rhetorical analysis was thought to provide the most insight into the experience for one reason: if technical communication, or any form of communication for that matter, is rhetorical by nature it would seem necessary to understand those rhetorical elements through its most common form of analysis.

In addition to being basic, rhetorical analysis allows for a text to be approached and studied both contextually and textually. Contextually, rhetorical analysis allowed me to examine certain elements, such as group goals, group dynamics, deadlines, etc., that occurred prior to and during the writing process and how those elements may have influenced the final product. Textually, rhetorical analysis served as a vehicle to study the text's rhetorical elements, such as organization, word choice and levels of formality. To be more specific, the organization and word choice, particularly the style, whether it was bold or cautious, of both papers were studied in greater detail to

understand how the authors would gain reader acceptance.[7] In regards to the emails, the language and level of formality between members was thought to reveal how relationships were established and/or maintained and how those relationships either constructed or deconstructed certain perceptions of group members.[8] It is then that these same relationships between group members indicate how the BCIS discourse community is formed, particularly if one is studying the discourse from a social constructivist perspective.

From a social constructivist perspective, discourse and, in turn, discourse communities are formed through language (emails and conversations) and the consensus of knowledge (published discourse). In this instance, the BCIS discourse community is no different. The two papers in combination with emails were thought to reveal how members communicate with one another on an individual level as well as a larger communal level to attain assimilation and then ethos within the same discipline without the complications of cultural and/or gender issues and other limitations on the community itself.[9] Understanding how technical writers are assimilated into a

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[7] Studies regarding reader compliance/acceptance have been done in the technical communication field for a number of years in order to understand what rhetorical strategies are more effective than others. See Warren, Marvell and Schmidt and Nadell for more information.

[8] Katz discusses how relationships are formed within discourse communities, how individuals assimilate and individuate themselves through language. It is through language that both the assimilation and individuation processes occur.

[9] The cultural and gender issues as well as discourse community limitations refer to both the ideologic and paralogic perspectives. Although these are important issues, they are not included within the scope of this study. The ideologic perspective focuses more specifically on gender, culture and power issues in discourse communities whereas the ideologic approach asserts that all discourse communities are limited to the specific instances and then the community disperses once the conversation has ended. For a more complete overview of both perspectives see Thralls and Blyler's article, "The Social Perspective and Professional Communication: Diversity and Directions in Research."

discourse outside their own will led to their own understanding how to then assert themselves as not only as translators or writers but also as individuals who create and articulate meaning through rhetoric. In addition to revealing how discourse communities are formed and individuals gain membership, the social constructivist view was thought to be appropriate simply because it is commonly used and referred to in both the academy and the industry.[10] And, in this study, the texts themselves, although created in an academic environment, were geared towards both academics and industry practitioners to create more secure and reliable computer systems and programs.

Also, an interview with M1 was conducted in order to fill in gaps between the correspondence between group members and the various versions of texts. More specifically, the interview was conducted to see which project was deemed more successful in terms of collaboration and communication, who performed what specific duties, what setbacks occurred and how authorship was determined. These questions were thought to reveal how our group was managed as well as provide more concrete answers as to how membership within the BCIS discourse is obtained.

These methods and methodologies serve as the basis for exploring perceptions of the technical writer and how those perceptions are constructed through collaboration and then manifested throughout the writing process, in the final text and

[10] Kenneth Bruffee was responsible for making social perspective one of the most popular teaching approaches in the academy, drawing from theorists such as Kuhn, Rorty and Geertz. Since then "many researchers (e.g., Farkas, 1991; Selzer, 1989; Van Pelt & Gillam, 1991) have studied collaboration in nonacademic settings to determine the types of collaborative arrangements and strategies employed in the workplace, with an eye toward the classroom" (Thralls and Blyler 130-131).

then revealed in authorship. The following chapter applies these methods and methodologies, analyzing the context of both writing situations and breaking down the email correspondence and the various drafts of each paper textually.

Chapter 4

ARTIFACT ANALYSIS

The following chapter analyzes the various drafts of both "A Firewall Configuration Strategy" and "A Comparison of LDAP and NIS" as well as the email correspondence that occurred in between the drafts and between the projects themselves. Also, the interview with M1 is incorporated throughout the analysis to emphasize and expand on certain points.

The chapter begins with a summary of my position prior to beginning both projects and examines the process and progress of both texts through a line of questions, each creating its own section. Section one establishes the context of both writing situations and my role within that context. The second section explores my perception of my role and how that may or may not have differed from my fellow BCIS group members. Section three discusses the difference between "authorship" and "situated authorship" and how that difference applies to my experience. Finally, section four discusses how I was treated when referred to as an "author" rather than a "writer," examining what perceptions may have led to this treatment.

Establishing and Exploring Context

When I began my internship, I was under the assumption that I would primarily be working with M1, editing and formatting pieces for publication. This assumption was based on the fact that I worked solely with M1, primarily through email correspondence with the occasional face-to-face meeting or conference call prior to being asked to do any actual "writing" for a text. I also assumed that the knowledge of my discipline gave me an edge, something that the other writers did not possess and was, essentially, the reason I was needed as an intern in the first place. I knew the mechanics of the English language and rhetorical strategies that would help texts achieve their purpose towards their specific audience, and it was with this in mind I embraced my role, to work on the projects given to me, organizing and editing information primarily on a sentence level as well formatting the overall papers to publication standards. Initially, my role was largely a reactive one, much like a scribe or the transmitter of messages, only working with the text after it had been completed, but I acknowledged it as a position with room to grow, knowing that if I excelled that I would be permitted to do some actual writing. The two projects described herein were the first projects that I was allowed to write for; however, the roles I played for either project were, in a sense, vastly different.

In the beginning of the Firewall project I was named the "Project Manager" and instructed to take the original term paper and conference paper and try to fuse them together to build a new text. This also included my having to add new research and information to the literature review. This role as project manager, at first, was decidedly more proactive rather than my previous role and allowed me to do some

writing outside of my field. It also permitted me to be a part of the inventive process and allowed me to use my expertise as a writer to make rhetorical decisions on what information was suitable to keep, what needed to be discarded and what information needed to be reorganized or revised in order to kept up to date. However, after revisiting the situation, this "proactive" role has been called into question as I was required to fuse the previous two texts into a new one.

Although I was allowed and expected to do writing for the new Firewall paper, I was also supposed to use the previous paper as a frame of reference and to update the information that was already there rather than generate new content. In a sense, the format, organization and emphasis of key elements within the text had already been determined because I was adding to the original structure of the previous two texts. This writing situation could possibly have been seen as limiting to me, particularly as a writer for the reasons listed above. However, when I first met M1, it was implied that there had been some issues with the students that had held my position prior to me. As a result, I would have to use my intrinsic ethos, highlight my sense of personal authority in order to gain acceptance from M1.

Essentially, M1 allowing me to exert my own expertise made way for me, as Katz would argue, to individuate myself within the discourse community and to gain social authority (125). If the latter is or was true, then it would seem that M1 and the other joining group members' assumptions about me and my role, based on their prior experiences, would change if my contributions to the text were accepted by the larger BCIS discourse community. This would imply that M1 and the other group members would no longer see me as just as a needed copy editor; instead, I would become a

needed researcher, contributing writer and valuable group member even though my connection with the larger group had been limited, if not nonexistent, up until that point in time.

As previously mentioned, when I began my internship, M1 and I primarily corresponded through email. The same was true when I actually began the research and writing process for the Firewall paper. Therefore, during this time, I fit primarily into an imagined community or organization. I say "imagined" only because the other group member whose names were on the Firewall paper eluded me; they were names on a paper, surrounding mine, suggesting successful communication between all members but in reality were almost completely separate from me. I say separate because, as previously mentioned, throughout the majority of the Firewall project, I had practically no contact with those group members. My lack of connection with these other members prohibited me from establishing a working relationship and influenced how other group members eventually, if not already, perceived me.

Since I had little contact with my other group members and even M1 at times, I was left to situate myself within this imagined group. I was working within framework of my situation, using my confidence in my abilities to speak outside of my own comfort zone, my discipline (124). As a result, I depended on my knowledge and abilities as a writer to situate myself as a "writing expert" within the group. This was what Katz's refers to as an act of individuation, "efforts that a newcomer makes to resist that shaping and change particular aspects of his or her role or the organization to meet personal needs"; however, in order for me to express myself as an individual, I first had to prove myself to M1 and the rest of the group as well as the discourse

community (122-123). My initiation into the group and discourse was contingent on my ability to converse well. As it were, it seemed that I would have to conform to community standards to an extent in order to gain agency within the group before asserting myself as an individual.

Since the paper was successful (it was accepted for publication) and I, too, had successfully contributed to the text, I assumed had shown, at least in the mind of M1, with whom I almost solely collaborated, that I was an asset to his writing and research team and not just a copyeditor. This assumption was based on two things: one, I was asked to attend bimonthly meetings in M1's formal BCIS research group, and two, I was again asked to help with the writing for the next paper.

This second project, the LDAP project, allowed me even greater freedom as a writer. Although I was given a paper to use as a frame of reference, similar to the Firewall paper, it was later found out that I was not to use any of the original paper in the new text. Instead, I was to research and write a formal literature review based off of the brief outline I was given. At that point in time, I felt as if I were moving forward in my position, given more freedom as a writer as well as making a substantial impact and contribution to the group. My authority as a writer, as I saw it, spoke for itself, since I had been listed as a co-author on the previous paper and had been asked to join the BCIS group, and I was convinced my fellow group members and co-authors now openly saw me as valuable member and asset to their research team.

One reason my group may have embraced my role rather than shied away was of because how the group was structured. Each group member fulfilled a specific role

and was an expert in his or her area. Structuring the group like such, by outlining each member's role and objectives, may have allowed for more successful collaboration and communication (Amabile et al. 419). In relation to the group, although the team members for the Firewall and the LDAP project differed slightly, both groups were structured similarly. M1 oversaw both projects, working closely with M2 to learn the technical aspects of both projects as well as doing some writing. Of course, I too, M5, worked on both papers, concerning myself with rhetorical aspects of each, such as the organization, word choice, style, etc.. After me, the group members begin to differ. M3, a graduate student in the BCIS department, worked primarily on the updating of the technical data for the Firewall paper. As for the LDAP project, VM1, a professor from the BCIS department, who is labeled as a visiting because he was not an original member of the group, and M4, an undergraduate student from the BCIS department, were also contributing authors. They, like M3, worked primarily with the technical data and had little to do with the actual writing. For each project, each group member had a specific role and task to accomplish, and outlining these same objectives and tasks also allowed me to understand or begin to understand how I was to situate myself within the group as an individual.

In order to situate myself within the group confidence in my own abilities with language was essential. Without the general knowledge I had acquired concerning writing, I would have never been able to fine tune that knowledge to apply it at a more localized level. Once I had used my knowledge and abilities in the BCIS discourse community, shown my group members that I was capable of successfully working in their community, I was then offered a more open and influential role within the group

and given more personal freedom with the text and resources. However, while I attained both personal and social authority, my overall influence was still limited because it was based on a situational basis.

My "authority," at that point in time, seemed purely situational. My influence was temporary and based primarily on the group's immediate needs, needs concerning writing, documentation and editing. While it is true that that is why I was there in the first place, the role had the *potential* to include authority over subject matter. Instead, my role remained largely reactive, the majority of the time working with the text after it had been completed; whereas, my fellow group member's was arguably more proactive, contributing to the formation and organization of ideas within the text. This difference then most likely accounted for my acculturation, socialization and individuation into the BCIS discourse versus the other group members' enculturation.

It was and is through the primary communication between M1 and me as well as through my limited encounters with my other group members that I have begun to become acculturated into the BCIS discourse. I have begun to understand the basic conventions and the contextual factors that underlie and influence their discourse and the production of scholarship. This, of course, is dissimilar from how my other group members understand their discourse, all who all had extensive experience working with computer systems throughout their higher education. As a result, my connection and relationship to the BCIS discourse is much different from my fellow group members. For example, my fellow group members understand the discourse in terms of subject; they understand the technical jargon and use it frequently when communicating with one another. In short though, I have finally begun to fully

understand the context in which I am working and how the conventions of this discourse affect my interactions with other group members as well as how it affects the production of text. The difference in relationship with the discourse ultimately affects our relationship with one another.

In this instance, in regards to a writer working outside his or her own discipline and with content experts, or in any instance for that matter, identity or the roles one may fulfill may be how we commonly understand one another and how we determine our actions. While understanding one's identity and/or role may be helpful, it may also be problematic if group members do not acknowledge difference, or if they acknowledge difference but then use that difference as a way to create a disconnect between the technical writer and other members. It is herein that lays the problem: What if the way that we see ourselves is not the same as how others perceive us? How do those perceptions then affect how we assert ourselves within a given situation to attain ethos?

The Technical Writer versus the Content Expert: A Battle of Perception

In retrospect, my identity as a professional communicator may have transcended the copy editor or scribe role in some respects but it did not surpass the notion of the technical writer as a translator. That said it would seem that these views may persist with my own group members and for a number of reasons based on the email correspondence between various group members and myself. More specifically, during the first few projects, I worked primarily with M1 through email correspondence and was sent parts of the draft after other members had worked on it.

This type of collaboration, what Jones would classify as sequential collaboration or relay collaboration by others, continued throughout the Firewall project and used throughout the duration of the LDAP project as well, although there was more face to face interaction between members. This type of collaboration, with its emphasis on independent writing, ultimately may have affected how the group perceived each other and each other's roles.

The lack of face to face interaction between me, M1 and the other group members may have also accounted for their view of my role in the group as well as affected their interactions with and perceptions of me. For example, after sifting through numerous emails between myself and M1, the project manager, I also came across conversations that had been between the project manager and another group member. In these emails there was a definite difference between how the project manager interacted with me, the technical writer/editor, and his colleague. Oftentimes the correspondence between the project manager and I was informal, very concise, succinct and focused primarily on mechanical aspects of the text rather than content. This, of course, was much different from the correspondence between M1 and M2, which was more formal, contained more details and discussed the content and key concepts to the text rather than mechanical aspects. These differences say a lot about the relationship between these three individuals. One could argue that because M1 and M2 are from the same the department, discourse that they are more likely to act on a professional, formal level; whereas, the interactions between M1 and I may be more informal because of our disconnect on a professional level.

At first this distinction would seem counterintuitive because most people would act more formal with those outside their discipline rather than the other way around. But even though M1 and M2's correspondence was more formally written, some of their emails contained personal information whereas the majority of M1 and my correspondence was informal but contained formal information. As a result, M1 and M2 had an established professional and personal relationship whereas my relationship was purely situational and was based on assisting with the project rather than substantially contributing to it. This too may have been attributed to the length of our working relationships with one another.

Levels of formality are determined by the relationships between individuals, and professionalism is often determined by the identity of the individual and how he or she presents him or herself within their given profession, which in turn creates a specific image of that person. In this instance, M1, the project manager is also a professor, and M2, is a BCIS employee who has worked with M1 since he was a student at SCSU. The two appear to have a long-standing relationship, collaborating frequently. This is much different the working relationship M1 and I have together. For example, we have only been working with one another for just over a year, are both from different educational backgrounds, and communicate primarily through email. Arguably, the disconnect that occurs because of the little face to face interaction and the brevity of our correspondence with one another. Rarely do the emails go beyond my posing questions regarding deadlines, content or documentation issues or his delegating responsibility (in emails to the whole group), establishing deadlines and briefly addressing minor questions. Moreover, it must be mentioned that

levels of formality rise when we meet face to face or even when we discuss topics over the phone. Whenever discussing any aspect of the writing, whether it is documentation, organization, formatting, etc. though, I feel as though my opinion is acknowledged and taken as a professional one; however, at the same time, these various types of collaboration, whether solely with M1 or with the rest of the group, acknowledges my difference in expertise and may also remind those in the group that I am as someone who holds limited, situational authority over the text, particularly in respect to content. This separation between myself and M1 and the other group members may not only say something about how my role is perceived within the group, it may also say something about the properties of the BCIS discourse and what it means to be a "writer," "author" or even "situated author" within that discourse.

Collaboration and Constructing "Writer," the "Author" and the "Situated Author"

Collaboration has a longstanding tradition in the scientific and technologic fields, and scholarship is primarily constructed through collaborative efforts of ones peers and colleagues. In fact, it's been noted that "[t]he majority of scientific papers have multiple authorship, and the number of credited authors is increasing in most disciplines" (Endersby 376). What is not noted is that through our interactions that we form opinions and perceptions of each other. The members of my group may have been more accustomed to the collaborative practices with other scholars than me because of the prevalence of collaboration in scientific fields as well as more familiar with what constitutes as authorship in collaborative situations. This, of course, is not to suggest that I have not had experience with collaboration or know what constitutes

as authorship. The concept of authorship and the perception of the author are simply different.

In the humanities, scholarship is not commonly constructed through collaborative practices as "everyday practices in the humanities continue to ignore, or even punish, collaboration while authorizing work attributed to (autonomous) individuals" (Ede and Lusford 357). Yes, the student or professor may consult other scholars within the field for their opinion and such, but the majority of researching and "writing" is done by a single person. It is then through this process that individuals in the humanities understand what it means to be a "writer."

When I began my internship and, more importantly, when I began performing actual research and writing, I brought these assumptions with me. My awareness and knowledge of rhetorical and contextual factors allowed me to determine how a text generates content and coveys meaning; however, this understanding is not held in all disciplines. As a result, my perception of myself, my role and what I did may have actually been much different from my fellow group member's perceptions of me, what I did as a "writer," and how my contributions were being measured within the technologic discourse. Instead of seeing myself as the scribe or copy editor that I had been for the first few projects, I saw myself as a researcher and writer who made substantial contribution in terms of content for both the Firewall and LDAP projects. I presumed that because I had been included in the invention process for both papers, being given texts to base my research and writing strategies off of, that I been a part of arguably the most important aspect of the writing process. Essentially, it is during the invention process that writers generate ideas regarding subject matter as well as

determine how those same ideas will be organized. It is though this process of invention and then the process of organization and use of rhetorical strategies, such as situational, audience and textual/structural analysis, that those same ideas take shape to form actual "content" (Regli 76).

Looking back through the texts, in the end, the LDAP paper used primarily a compare/contrastive (pointing out the similarities/differences/comparing solutions) organizational pattern whereas the Firewall paper was more process (explaining how something happened or was done) driven (Warren 91; Nadell 30-32, 46). The patterns of organization employed in either paper are essentially topoi at work, and choosing to present the information in such a way qualifies as "writing" from an English standpoint because it determining organization sets the stage for how your content will come across and how the ideas will take shape and create meaning. In addition, these papers were primarily written in bold, definitive scientific styles, which too had to be manipulated in order to meet the new audience's needs, created exigency where it was due and influenced how the reader interpreted the text. Throughout the writing process though, both texts changed rhetorically and content-wise, especially the LDAP.

Rhetorically, the Firewall project did not go through a great amount of change rhetorically. The two papers that the new paper was based off were, as previously mentioned, process driven; however, it did take some time for me to determine what information would be included from the previous two texts in the new draft. This required me to fit the information in a predetermined pattern, to separate the old from the new to create an updated version that fit a more informed audience. In addition,

the various drafts maintained their original sense of urgency and bold style with speckled moments of caution, hedging against potential unforeseen circumstances or situations which could disrupt the successful implantation of the strategies described. In terms of content, although the original papers concentrated on firewall strategies, the paper's focus went from using IPCHAINS on a Linux program to implement firewall to a firewall strategy in college setting to, the final focus, of using firewall strategies in the development of networks and subnetworks. The LDAP project, on the other hand, changed dramatically rhetorically and in content.

Like the Firewall project, these texts also maintained a predominantly bold style throughout; however, this stylistic issue is second to the changes in rhetorical strategies. The original LDAP paper went from a combination of process and compare/contrast to a process to pseudo-process (as the text developed) attempted to disguise the comparative nature of the text. With these rhetorical changes also came the change in content. The original paper, which began as a student research project, was a recount of the student's attempt to learn to operate a Solaris 10 UNIX system and install and configure an LDAP server. This then changed to the process in converting NIS to an LDAP system. When the paper changed the third time, it became an analysis of the vulnerabilities of global authentication systems. This change indicates the pseudo-process, as the paper attempted to force a focus on the differences of converting the NIS to an LDAP system when actually the text explored just the differences themselves. Finally, when the paper was accepted for publication it was focused on the comparison of NIS and LDAP systems with a slight focus on the conversion process. The changes suggested by the review committee, changed

primarily by me and then reviewed by M1 is reflected in the change of organizational rhetorical strategies employed and was used hand in hand with the rhetorical, stylistic strategies to gain reader compliance and/or acceptance of the material (Warren 92).

As previously mentioned, both texts were written in a predominantly bold style. This kind of style stresses the importance of the information included in either project through its language and organization. Instead of circling around the problem, the writer calls direct attention to it, its significance before providing the reader with a viable solution. To achieve the full affect of this style, in these two projects, the authors used a combination of rewarding and punishing the reader as well as stressing the expertise of the writer to relay the importance of either writing situation and to gain compliance and/or acceptance from the reader. The rewarding and punishing techniques happily corresponded with the compare and contrastive organizational pattern of the LDAP project. For example, if companies or individuals convert NIS to LDAP, then it will make end-users more productive. On the other side of the coin, if companies or individuals refrain from converting the system, they run the greater risk of being infiltrated from outside sources, therefore, losing sensitive company information. The same is true of the firewall paper. If the reader complies or accepts the writer's suggestion for a new firewall configuration, then they will save their system from being attacked from hackers and such; however, if they do not, their system runs the greater risk of being infiltrated. Both of these strategies, combined with the sense of tone of expertise threaded throughout, convince the reader for the need of either project and thus the authors gain compliance and/or acceptance of the text.

As one can see are the many layers of either project in terms of rhetoric and rhetorical strategies. Text is more than words or ideas written on paper. There are several underlying factors that must come into play before those words or those ideas can take shape and contain meaning. Technical writers rely on their awareness of rhetorical and contextual factors, like the ones mentioned above, to determine how a text will function, and all of these elements constitute as "writing" from a humanities perspective because they are a part of the writing process. Moreover, if these strategies, if successfully employed, they give meaning to the content, they make the subject matter.

From my interview with M1, I gathered that "content,""meaning" and "intellectual property" actually derives from the scientific/technologic process that the researcher may go through and the results that come from this process. In a sense, the organization is simply just organization. It is something writers do to meet standards and then the content speaks for itself. It may help the writer convey meaning to an extent but does not carry the same weight as the actual "idea." As a result, what constitute as "writing" within this particular discourse are the production of content and data rather than the construction of that data in text. In short, content, being data, coding, etc., is "content" and all other factors are considered secondary, and if this view of writing is indeed accurate, then it is no wonder that my role as technical communicator's role may be or is perceived as inferior to the content expert's. If I hold no authority over the text in terms of content, my expertise, although acknowledged, is purely situational, and, as a result, conflicts may arise, particularly when trying to determine who has the most *author*-ity over the text.

Measuring and determining authorship in collaborative situations will always be subjective and questionable, particularly from a modernist standpoint as it often "constitutes the privileged moment of individualization in the history of ideas" and insinuates that the author's intentions can be derived from the text (Ede and Lunsford 354; Foucault 141). If the intention of the author can be verified within the text, then who is to take credit and who has the most authority over a text when there are multiple authors? From a modern perspective, the lead author has the most authority and claim over the text and then so on and so forth. It would also insinuate that the lead author contributed the most in terms of intellectual property. Determining authorship in collaborative writing, and from a modern standpoint, will most likely continue to be problematic; however, by allowing each group member to understand his or her role more effectively, outlining the expectations of that role and then making said member aware of how his or her contribution will be measured, potential conflicts regarding authorship may be averted, particularly since "collaboration is more successful when the collaborators share a clear understanding about their roles and responsibilities" (Amabile et al. 420; Bartunek and Louis; Bickel and Hattrup; Lane and Beamish). This may be because how we fit within the organization and our perceptions of our roles affect how we collaborate together as a group and how we each attain ethos and/or author-ity within the group and within the discipline.

In regards to the group's relationship with the discourse, each member, besides me, is a part of a BCIS discourse. They have had years of experience with the subject matter and are the content experts that I use as my frame of reference. They have both social authority, where a person is an expert because he/she is regarded so by the

community, and individual authority, personal confidence within the community (Katz 124-125). I, on the other hand, am disconnected from the BCIS discourse largely in terms of subject matter but am still able to assert myself as an "expert" with my knowledge of rhetoric because of the ends which the BCIS group wishes to achieve through writing. However, the disconnect that occurs between myself and the discourse no doubt also causes a separation between myself and the rest of the group, particularly when determining and issuing authorship. As evident throughout the research as well as through the course of this study, there are often struggles between writers who work outside their discipline and their content expert counterparts. This is most likely because "[t]his constructionist view of discourse conventions places the utmost importance on language as means by which communities are constituted… [D]iscourse communities are thus intimately tied to communities and community membership" (Thralls and Blyler 130). These struggles or conflicts may then actually be a result of several contextual factors, particularly those factors in relation to the difference in discourse community and its conventions regarding those factors that suggest what it means to be a "writer" within that said community.

There are obvious differences between the humanities and the scientific discourses and what it means to be a writer. In the humanities, where solitary scholarship is emphasized, the writer only consults other academics but the majority of the research and actual writing is done alone. The writer in this situation not only does the research, writing but also organizes, formats and prepares the text alone as well. This is much different from the scientific discourse where the majority of scholarship is done collaboratively and the technical or scientific data is prized over other aspects

of the text. From my own experience, scholars do not even need to do any actual "writing" to attain noted scholarship and authorship because they are in the field compiling information for the text by performing experiments. Therefore, for person within the scientific/technologic discourse to gain ethos, they must contribute to scholarship in terms of content and technical or scientific data in the form of coding and/or experimentation results. In other words, the actual writing and recording of the data is secondary to the experimentation and research processes.

To explain further, in both writing projects, some of the listed authors actually did little or no writing at all on either paper. In regards to the Firewall project, the first listed author, M3, primarily worked with updating the code for the paper opposed to doing any of the actual writing. A similar thing occurred with the LDAP project as well. The third and the fifth listed authors, VM1 and M4, worked specifically with the technical aspects of the project rather than its documentation in text. In a way, this does make sense because in most discourses, it is these key ideas and concepts that drive the text and determine whether or not the text is accepted by the discourse community. However, what is and was particular about either situation was where the idea for the paper originated from. Would not the original research paper done by M2 for the Firewall project and M4's term paper on LDAP have bearing on the framework for and the development of the new "intellectual property?" In this instance, both authors of the original papers were listed as authors on the new text; however, the ideas from these initial texts were secondary to the ideas formulated within the new ones. As a result, what qualifies as a contribution needs to be discussed in further detail.

If a discourse community is to base authorship off contribution, then it needs to be determined what types of contribution are considered the most beneficial to the overall project. In both cases, the contributions regarding "content," or technical aspects, were favored over who performed the most research or did the most preparation for a project or even who worked the most with the text itself. It is contributions such as these, whether they are combined with actual writing, which affects how scholarship and authorship are noted and determined. It is then with this in mind that some may ask how is someone outside of the discourse community to assert his or herself as a writer and attain ethos within the field?

For people such as me to attain ethos outside of and within my discourse I must prepare the text in such a way that the "content" is clearly communicated to the audience. Or, according to Dobrin's definition, I use my position as a technical writer to accommodate the technology to the user (118). If I fail to effectively articulate those key concepts or ideas in a manner that is easily understandable to the reader, then I have essentially have not fulfilled my purpose as a technical communicator. What is unfortunate for me, however, is that the rhetorical changes that I employ may or may not necessarily be accounted for or deemed important in the assessment of contribution, in the determination of authorship because the those changes may be glossed over as simply doing more "writing" rather than contributing to creating intellectual property. And, prior to this research, such a situation would have led to confusion on my part because the failure to recognize the use of rhetorical strategies undermines what I know to be important as a writer in my field. For both projects though, as M1 told me in an interview, authorship and scholarship was determined

first by the contribution of "content" and secondly by the amount of actual writing that each group member did. While this type of author assignment makes perfect sense, it does bring some interesting elements in regards to roles and identity to light as well as call attention to the difference between "authorship" and what Peeples's calls "situated authorship."

For the majority of the members in the group, we most likely use our specified roles and the text to further ourselves individually. For example, the content expert will generate the core concepts and/or ideas that the text is build around, decide what he or she hopes to achieve with those ideas and suggest how it be done. The technical writer can then collaborate with the content expert to advise or reinforce strategies that best suit their information, the ends which they wish to achieve and then successfully implement those strategies using his or her knowledge and skill of rhetoric. It seems that this specific difference is most likely the reason for Peeples' "authorship" and "situated authorship." Since my expertise and my authority is largely situational, my authority was based on the needs of the group at a specific time, it would only seem appropriate that how my contributions were measured (Katz 125). My role and purpose was to "situate" the ideas and concepts that my fellow group members came up with in writing so that it would be accepted by the larger discourse community. This, of course, is different from what my fellow group members did. Their ideas and the content that arose from those ideas are what made the text a form of intellectual property and, as a result, a piece of "authored" discourse. This distinction needs to be made because the end result is different for me than it is for my fellow group members. Instead of gaining and being recognized for scholarship in my field, I am

recognized for my ability to work within a given situation; I have achieved socialization because I have been accepted into the discourse community as well as gain social authority whereas my fellow group members, who are and have already been accepted within the community, achieve individuation for the their attempts to change the field through discourse; however, the distinction between the "situated authorship" and "authorship" is not widely discussed amongst group members. As a result, the situation at hand presents an interesting quandary, and one that is not uncommon to scholars studying notions of collaborative authorship because it is difficult to measure individual success when working towards a group goal

This assignment method employed in both of these projects, of looking first at contribution of content and second at percentage of actual writing, arguably, relates to modernist theories of authorship. By determining authorship by how much the individual contributed to the "idea" and the "substance" of the overall paper first, it seems to indicate that the authors listed first have manifested their intentions and that those intentions can be drawn from the text. This, of course, is different for those listed further down the line as their placement suggests that these individuals only made minor contributions to the overall meaning and had less authority over the text. Had authorship been listed randomly, alphabetically or was done on a rotating basis, it would relate more to postmodern ideas of authorship and would indicate that authorial intent was inconsequential to the overall meaning of the text and that, that meaning could simply be derived from the content alone; however, since this was not the case, it would seem that conflicts regarding "authorship" and authority could arise between members as well as specifically between group members and the technical writer. It

seems that the perceptions of the professional communicator has bearing on how he or she is treated throughout the writing process and particularly when they are referred to as an "author" opposed to just a "writer."

The Treatment of the Writer versus the Author

This distinction between writer and author ultimately may have caused hesitancy towards embracing me and my role because the term "author" often infers that some kind of authority and ownership over a text; a "writer," on the other hand, may possess authority and ownership but is not necessarily *recognized* as the "author" is, especially if technical "writers" are not often considered "authors" (Slack, Miller, and Doak 80). This may also relate back to the difference between "authorship" and "situated authorship." The payoff is obviously different between group members and me. Because both texts were accepted for publication, we were all successful in a sense. My fellow group BCIS members gained individuation because their contributions changed the discourse within their field (Katz 145). I, on the other hand, achieved socialization within the BCIS discourse because I was able to situate and clearly communicate those same ideas in their field (125). However, because these distinctions were not made and because modern notions of authorship persist, those within the group may have been more hesitant to accept me due to my background and view my role and authority over the text.

Since both my group members and I were well aware of my limited content knowledge, I was led to question how I would assert myself as a writer outside of my own discourse, especially when I had little interaction with the rest of the group.

Calling attention to this led me to reexamine my assumptions about what it meant to be a "writer" and what constituted as "writing" both in and outside of my field. This most likely refers to differences between the humanities and scientific communities, what it considers as writing and, as a result, technical data, such as coding, was taken into consideration first and foremost when determining authorship.

After recognizing that my view of "writing" would not be the basis for measuring scholarship or determining authorship, I then wondered how I could attain ethos within the BCIS discourse. What it boiled down to was that in order for me to achieve socialization and authority, I would first have to convey the meaning of the text clearly, with my knowledge of rhetoric and language, to and then gain acceptance from the discourse community. This is because "[a]ll phases of communication offer the communicators an opportunity to apply particular rhetorical strategies to gain their objectives" (Warren 89). If this occurred, then I arguably was successful in and useful to the BCIS discourse. This, of course, is different from how my fellow group members attained recognition. Their contributions made in terms of content and their name on either project earned them noted scholarship and ethos within their field; however, as previously mentioned, since these distinctions were not made, confusion, hesitancy and indifference toward my role may have occurred. Had I known or been more aware of my station and outside perceptions of my role, I would have (a) realized that the view of my role was flawed in a sense; (b) seen that the concept of writing differed from discourse to discourse and not only I was unaware but so were my fellow group members; and (c) recognized my attempt to gain credibility within the BCIS discourse was based on my ability to convey the meaning of the content to

the audience rather than generate intellectual property. What this possibly implies is a lack of background knowledge on my part as well as on the part of my fellow group members regarding my role and identity.

What situation indicates is the need to completely understand the context in which one is working in order to create a better working environment and produce better results. In addition, doing so it may have created a more accessible path for the group success because each participant would have been able to fully recognize and utilize the capabilities of each member. Had our group communicated more at the beginning of each project, perhaps, then the lack of interaction throughout the duration of the project may not have caused any clashing perceptions regarding my identity and/or role.

Since the lack of connection between participants most likely accounted for my fellow group members' view of me, it most likely also thwarted my attempts to assert myself as a writer. The differences between discourses on what it means to write and be a writer is vastly different, and my humanities background, although prepared me for the general tasks I was given, did not prepare me for how my contributions would be measured or what the general payoff would be. What this suggests is fault on my part to understand the discourse I was entering. If I had, then perhaps I too would have better understood how I was to gain ethos within the BCIS discipline, my own discipline as well as with my fellow group members.

Although I would need to continue working with the text in a similar manner, I would need to change my focus slightly and communicate more with the group, openly contributing in discussions and contacting them directly through email for

assistance. Informing the group about my view of writing may help them recognize that aspect of my work, which may, in turn, lead to better working relations between group members. Moreover, acknowledging that my expertise through situational authorship does not in fact tarnish theirs may end in clearer communication and more successful collaboration because our successes are measured differently within our respected discourse communities. In addition, if this in fact would occur, then it would seem that there would be fewer conflicts when issuing authorship.

Since authorship was based primarily on intellectual property, it is safe to suggest that modern theories of authorship still persist outside of the academy, perhaps, particularly in the sciences and technologic fields. This also implies that the author's intention and/or meaning can be derived from the text and that the "author(s)," or at least the leading author(s), are held the most accountable for the information that is presented to the discourse community. However, determining authorship in such a manner may downplay the contributions of some and give credit where credit may not be due. I am not suggesting that this occurred in this study; however, it could occur in other instances.

In short, the study suggests that had I and my fellow group members been fully aware of the context in which we were working, perhaps relationships between group participants would have been stronger; higher levels of professionalism and formality may have ensued across the board, instead of just between BCIS participants; and the contributions and how those contributions were measured and portrayed in the final product could be more easily determined. In addition, group participants, particularly the technical writer, or me in this instance, would more easily comprehend their role

and identity within the group and the perception of role influenced their interactions with one another as well as how they were to achieve ethos within the given discipline.

In a broader sense, the results of this study imply a need to define the technical writer in practice and to educate those outside of the discourse community about what the technical writer does. First and foremost though, technical communicators need to understand themselves and their profession. Without this understanding, technical writers cannot assert themselves in their collaborative efforts with content experts to help them understand their profession and what it is the technical writer hopes to achieve through his or her skills.

Chapter 5

APPLICATION AND SUGGESTIONS FOR FUTURE RESEARCH

The final chapter discusses the application of the study in the industry as well as gives suggestions for application in an academic setting. Then the implications for future research are also discussed and how future studies similar to this one may be useful in helping technical communicators and content experts understand one another and what it is exactly that the technical writer does.

Application

As someone who intends on pursuing a career in technical communication after graduation, I intend on applying what I have learned in a number of ways. For one, I intend on learning as much as possible about both the contextual and rhetorical situations that occur in the workplace and how they influence and affect one another. Paying attention to these two elements would have bearing on how I approach those I am working with based on their perceptions of me and my role, how we as a group communicate and collaborate with one another and, finally, how those interactions influence the final product and my position within the group.

While I tie this largely into my own experience, this same attention to contextual elements could transcend my experience and be used in both the academy

and the industry. Using a similar approach to collaboration and how discourse communities are created may allow both students and professionals with the basics to understand the context of their writing situations and how those contextual factors affect their relationships with other group participants, their role, the perception of their role and how their contributions may be seen in that particular field.

By understanding these contextual factors, such as audience, purpose, group goals and expectations and others, perhaps instructors, students and practitioners may come closer to identifying and defining what it means to be a professional writer. Perhaps by identifying and defining ourselves and our discourse more explicitly, the perceptions of the technical writer as a translator may become less predominant and those views of the professional communicator as someone who articulates meaning rather than translates it will come to the forefront. In addition, these perceptions would most likely change more rapidly if the professional writer were allowed more time with the content experts. If more time was available to communicate expectations and goals, the technical writer would have to struggle less to be acknowledged in terms of contribution by noting the difference between "authorship" and "situated authorship."

Suggestions for Future Research

Although the study described herein was not representative of a typical academic or professional communication writing situation, certain aspects from the analysis may be applied in either setting for further research. The most obvious place to start is defining our field. The identity crisis that persists in our field has become

even more complicated with our new association with the terms professional writer or communicator and professional writing. How do these new distinctions differ from what has traditionally been called "technical writing" and redefine what it means to be a technical writer? Are they to be used synonymously as they have in this study? Are they only synonymous in certain situations? Or should they be separated from one another entirely? It would seem that exploring the relationship between these two terms would have bearing on how we define ourselves within the discourse and, perhaps, how others outside of the discourse community perceive us.

Studying how outsiders view these new distinctions of the technical communicator and how those perceptions affect communication and collaboration may also be helpful. In any collaborative situation, whether in the academy or in industry, specific roles and objectives are usually delegated to individual members; by viewing the roles and how they function within the structure of the group through a lens, such as social constructivism, all group participants may be able to better understand relationships of power, how knowledge is constructed and how the discourse operates. Students may be able to use this theory as a lens to examine writing situations in the academy as well as future situations they may encounter in industry. Technical writers could use this approach to examine collaborative or group structures and how the distribution of power may or may not keep them from successfully collaborating and communicating with content experts as well as achieving socialization and individuation outside their primary discourse community.

Discourse and, in turn, discourse communities are generally produced through research, invention, writing, experimentation, documentation, etc. and who creates and

how the discourse is created has bearing on the how knowledge is formed, or at least it does from a modern standpoint, particularly the "who." When considering a final product like the texts described herein from a modernist standpoint, whoever is listed first on the document had or has the most authority over the text and, in turn, the "knowledge" that exists within those pages. Those listed further down the line have less authority and are seen as less valuable when considering how the content was generated. However, measuring contribution and determining authorship in collaborative situations is highly subjective and complicated from a modern standpoint. Moreover, it does not acknowledge the distinction between "authorship" and "situated authorship." Calling attention to this difference may ultimately affect how authorship affects group members and roles, how authorship is determined and the relevance the final product may have on the overall community and the perceptions of those involved.

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