Fertile Grounds in Technical and Professional Communication:

Identity, Legitimacy, Power, and Workplace Practice

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Dedication

This dissertation is dedicated to my friends, my family, and my beloved Cincinnati and Hamilton County, Ohio.

Abstract

This dissertation is about the nature and value of technical and professional communication (TPC) as a field of workplace practice, particularly about how perceptions of TPC among those outside the field can influence the perceived legitimacy of the field more broadly and what implications those perceptions can offer on practical, scholarly, pedagogical and programmatic levels. The dissertation is organized into five chapters. Chapter 1 deals with how TPC has been characterized in academic literature over the years and how a disconnect between academic theory and workplace practice has evolved into the present. Chapter 1 also introduces four constructs—competencies, professional identity, legitimacy, and power—that become a basis for a practical model of TPC in this dissertation. Chapter 2 deals with three concepts from other disciplines that are useful in conceptualizing and studying workplaces in TPC scholarship. Next, chapter 3 begins with the practical framework for TPC and then proceeds to discuss a rhetorical basis for studying workplace phenomena in TPC and an empirical study methodology for studying extradisciplinary perceptions (those held by non-TPC professionals) of TPC. That methodology is based upon a modified grounded theory approach using semi-structured interviews and two-cycle qualitative coding.

Chapter 4 presents detailed findings from the empirical study. Findings include the results of 31 interviews and eight patterns developed from analysis of interview data. Limitations of the study are discussed. Chapter 5 provides a detailed discussion of implications of empirical findings for practice, research, pedagogy and programs (both

praxis-focused and academic research-focused) as well as thoughts for future consideration in scholarship.

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Introduction

At one point, many years ago, I had reached an impasse in my career. I had worked for an engineering services company for many years, the first technical writing hire in an organization of 70 mostly engineers, industrial designers, and project managers. During that time, I had established myself within the company's organizational culture. I had become involved in numerous internal projects and billable work for external clients, at one point serving as a long-term contract technical writer at a biopharmaceutical client site. Three years into my tenure with the company, I earned one of the highest raises I had gotten to date and felt valued for my skill set and position.

All of this changed one summer after the company experienced a downturn in business. After telling four of us that our positions were to be eliminated, management gave us two weeks' notice, paid our health insurance premiums through the following month, and invited us to use company resources for our imminent searches. Thus began a whirlwind of impromptu lunches with coworkers, random offers of help, even a round of applause after I gave an extemporaneous goodbye speech to a large group of colleagues. Though a common occurrence in industry, for me the prospect of unemployment was new and chilling.

On my last day, one of the company's owners sent me an early morning email asking me to stop by before I left the building. I entered his office about 9 a.m. and took a familiar seat at his desk. He was the engineer who had co-founded and helped build a multimillion-dollar business designing and implementing automated manufacturing and packaging lines for a wide array of clients. I was the technical writer who had been hired on a leap of faith that I would help grow parts of their business; had done so; but was now seen as an ancillary role to their core engineering competencies, a cost center to be jettisoned. From his point of view, it was his time to speak and mine to listen.

At one point, the owner told me plainly that I had not sought opportunities for billable work aggressively enough and that, if I had, "we may not be having this conversation right now." This statement struck a particularly emotional chord, and it contradicted my own belief that I had not only sought billable work fervently but also advocated for the value of my position with management, cross-departmental colleagues, and clients. There I stood at the precipice of a new and unwelcome chapter in my career, and at this precipice I felt sadness, confusion, and uncertainty. This was not the stuff of the American Dream. This was not anything I had learned about in school. This was a rhetorical situation whose nature I had neither encountered nor considered much in theoretical or practical terms. Yet it was a situation that made an indelible mark on my career and, though I didn't realize it at the time, on my path toward workplace research when years later I became a PhD student in rhetoric and scientific and technical communication.

Negotiating Realities of Industry

This sort of experience has a way of leading one to a certain philosophically pragmatic stance on occupational matters. Such a stance manifests in communicative interactions and rhetorical moves during a period of mandatory *kairos—a* fitness of action borne of uninvited necessity. Though I didn't recognize it as much at the time, I was making frequent rhetorical moves as I navigated the jobless terrain: in deciding how to respond to the owner's deflection of responsibility (I mostly kept silent), in contacting recruiters (I did so but focused on a small group with whom I'd developed trust), in collegial networking (I reached out to a very large group of people, pushing myself out of my introverted comfort zone), in tailoring resumes and cover letters (I was sending out a few dozen each week), and in positioning myself as a communications professional (I kept my options open and adapted my career narrative accordingly). What better way, I found in retrospect, to understand audience and purpose than when you're in the middle of a job search; your position of power has been compromised; and you're relying on your own competency, connections, and rhetorical finesse to assert your value.

This is not to say that anyone should invite such an experience to hone their skills; nor is it to say that I have an intrinsic research interest in downsizing mechanisms in particular. Sometimes, we have to understand what something is not in order to understand what it is, maybe something skin to *différance* in Derridean deconstruction (see Derrida, 1982). In my case, I learned much about what it was like not to have employment after many years of learning what it was like to have it. That experience led me to intrinsically question whether technical writing was valued as much as I wanted to believe and how conflicting notions of the field could be reconciled in a way that benefited multiple stakeholders (including the kind who would end up hiring me for a future position).

I use this experience as an anecdote that led to an ongoing philosophical evolution informing many of the questions behind this dissertation project and the research on which most of its scholarly and empirical arguments are built. In disciplinary terms, this is a project about the nature and value of technical and professional communication (TPC) as a field of industry practice. Yet this is also a project about philosophical assumptions: those that underlie TPC scholarship on workplace practice, those that influence perceptions on “workplace” itself, and those that attend the work of technical communication both within the field and among non-TPC practitioners who (at least potentially) help build collective perceptions of TPC in their respective workplaces and fields. It is here, in this “non-practitioner” space, that I will later establish and apply an empirical basis for studying relevant perceptions of TPC, with implications that span pedagogy and practice alike.

Seeming Incommensurability: The Academy-Practice Dichotomy

One of the challenges of the academic study of TPC and TPC-related themes in workplace contexts is a well-documented ideological gulf between academic and industry approaches to technical communication. Citing Gambrell (1998), Kynell & Tebeaux (2009) wrote:

> Gambrell noted that technical communication as a discipline pursues theory, whereas technical communication in the work places applies theory and knowledge. Although technical communicators in the corporate world recognize the need for research, they do not seem to find much of what the academy produces very valuable. The difference, Gambrell

> noted, exists because the goals and the reward systems for those in the academy and those in the profession differ. (p. 138)

In a special issue of *Technical Communication*, Albers (2016, p. 293) introduced the issue in part by asserting that "[a]cademics' research is poorly communicated to practitioners" and noting a simultaneous "gulf of communicating practitioner needs to the academics" (p. 293). In the same issue, St.Amant & Melonçon (2016) echoed Albers in noting that "[p]ractitioners think academic research does not apply to them, and academics think practitioners are not recognizing the importance of their research" (p. 347), even adding that "[t]he practitioner voice . . . has historically been more limited in the existing academic research" (p. 349). In essence, St.Amant & Melonçon's work is noteworthy in that academy-practice discussion for at least two reasons. First, through asynchronous interviews of 24 TPC practitioners, they empirically examined practitioner perspectives on academic research in TPC—something that, again, is not immensely common in contemporary scholarship (though there are other scholars, such as Boettger & Friess [2016] who have done so). Second, observing that "the practitioners interviewed feel a major divide between what is published in technical communication journals (i.e., academic research) and what they need for their own work in industry" (p. 361), they make a clear call for interaction and engagement between practitioners and academics in efforts toward mutually "meaningful" research (p. 361).

In seeking ways to help bridge such a gap—and in a larger sense to respond to St.Amant & Melonçon's call for "meaningful" alignment of academic and practitioner research interests—it is important to recognize (at least) three things:

- **Efforts to explain or align academy-practice relationships are highly iterative.** Workplace and practical research is, without doubt, not an exact science. The workplace is continually changing. Even if the workplace were more of a static thing, the multiplicity of methods available to TPC researchers means that there is no one way to study a given work context; different methods may turn up different insights. Relating those insights to academic scholarship and teaching adds another layer of complexity to an already iterative art—a fact that leads to my next point.
- **In technical communication, the interplay between academic work and industry practice is noticeably complex.** As if the presence of a conceptual gap weren't enough in itself, scholars and practitioners alike are not often sure of how best to align or integrate one another's work. Relationships range from industry advisory boards (Duin & Tham, 2018) to curricular partnerships (Bridgeford & St.Amant, 2017) to job shadowing and direct immersion opportunities for students in our programs (St.Amant, 2003). Yet lack of clear paths to cooperation, as well as different reward structures (Kynell & Tebeaux, 2009) and priorities (St.Amant & Melonçon, 2016), make it difficult to determine where, how, and when to cooperate effectively.
- **The effort to analyze apparent dichotomies must be not only deliberate and careful, but also purposive.** This point may sound somewhat blunt, but it's said with good reason, and not with the intent of

> being heavy-handed. Melonçon and St.Amant (2019) call for “sustainable” research, which they define as “that which can be replicated and confirmed, refuted, or modified through . . . iterative testing, and it must be considered trustworthy through its transparency of conducting and describing the actual research process” (p. 131). Here, I draw attention to the latter part of that definition in particular: When we perform research, we have to be clear and deliberate about why we’re doing it. How can this work contribute to the conversation about workplace-related phenomena in TPC? What are the potential implications, both near-term and long-term? Can we reasonably recognize when our findings aren’t what we expected, and can we suggest additional research that’s going to be helpful in advancing the larger conversation (and still have it be sustainable)?

I’d like to turn one more time to my own anecdote. As I write about this academy-practice dichotomy, it is helpful to reflect on where I started thinking about it; that would have been during the time period shortly after I was laid off. After that event, I eventually took a job writing manuals for a company that produced control equipment and software used in metallurgical processing (the best industry position I’ve had to date, and a story that commands more time than I have to describe here); then, a few years later, I began teaching technical writing to engineering students as a part-time adjunct in a professional writing program near my employer, where I continued to work full-time. This experience afforded me the opportunity to do two things: (one) to bring my own industry experience to bear in a professional writing classroom and (two) to experience an industry perspective while at the same time getting periodic exposure to an academic space. It was during this time that my interest in teaching and research grew. As I started to consider returning to graduate school, I began considering more deeply the differences in industry practice and the academic study and teaching of technical writing. This is a line of thought that has continued into my doctoral work at the University of Minnesota and, as a workplace scholar in TPC, has led me to seek opportunities where I can learn about, hear about, and study workplace practices that relate to TPC.

In this dissertation, I will describe a model of TPC workplace practice that I will use to contextualize the work I will summarize later in this project. Before I construct this model, however, I will discuss—and to some extent critique—scholarly perceptions on the nature of TPC: what it is, and how it should be defined as a field.

The Nature of Technical Communication

Any analysis of technical communication—whether in terms of its character as an academic field or a field of industry practice, its practical legitimacy, its future prospects, or otherwise—benefits from an understanding of the nature of technical communication *writ large*. This may seem like an obvious statement, but an imperative one when one considers the relative ambiguity of what technical communication *can* potentially mean to different people—practitioners, academics, users/audiences, affiliated and interested stakeholders.

One way of characterizing the nature of TPC is to use a *definitional approach*. This approach is common in academic literature over several decades, and it has influenced the ways in which TPC courses are taught and the ways that TPC scholars research and write about the field. Though definitions abound, in the next few paragraphs, I will summarize some of the significant literature pointing to a definition for TPC over time.

Defining technical and professional communication, as with any discipline, is important to understanding its professional and academic characteristics. As I will discuss in this section, there are several sources of insight on TPC's definition, and that definition has evolved considerably over 30 or so years. In fact, it is my position that the "definitional question," as it were, is not only an evolving one, but also a contentious one when a number of factors are considered:

- When considered relative to more established disciplines in the humanities and social sciences, TPC is a comparatively young field.
- TPC has strong academic and practical applications that, at times, feature rather inconsistent topical emphases and do not always intersect in the ongoing professional conversation.
- TPC's multidisciplinarity often leads to simultaneously beneficial yet challenging diffusion of its practical roles in industry.
- Workplace perceptions of TPC are very often inconsistent.
- Ongoing challenges of professionalization and professional identity, though important and necessary, often complicate the definition (or, at the very least, the field's collective ability to advance a consistent definition).

I agree with Katherine Durack's (1997) observation when, arguing for a more gender-inclusive definition of technical communication and its history, she stated, "I do not know if it is possible to construct a single definition for technical communication that can flexibly accommodate past and future changes in the meaning and significance of work, workplace, and technology" (p. 257). Partly for this reason, suggested definitions for TPC and related terms have changed over time; and partly for this reason, I think, I am reasonably circumspect in considering the definitional approach. The definitional approaches I will discuss here start with Connors's (2004) historical observations and follow a chronological pattern: Miller (1979) to Dobrin (1983), Rutter (1991), Johnson-Eilola (1996), Cook (2002), Rude (2009), Kimball (2017), and Henning & Bemer (2017). Some of the cited scholars employed a concrete definition (e.g., Dobrin), while others provided implications that can be used in a definitional approach to TPC (e.g., Cook).

In "The Rise of Technical Writing Instruction in America," Robert Connors (2004) provided an example of an early definition from Britton (1965), who held that technical writing was characterized by the "effort of the author to convey one meaning and only one meaning in what he says" (Britton, 1965, quoted in Connors, 2004, p. 15). In her classic "A Humanistic Rationale for Technical Writing," Carolyn Miller (1979) included another piece to Britton's definition where he said, "That one meaning must be sharp, clear, precise. And the reader must be given no choice of meaning" (quoted in Miller, 1979, p. 613). Miller's stance, however, was not aligned with Britton's; to the contrary, she sought to reconfigure philosophical underpinnings of technical writing previously rooted in positivism. Her conception of the field was rhetorical, humanistic, and (as she called it) "communalist." That conception arguably became a significant part of the field's philosophical underpinnings—especially in the academy and in TPC pedagogy.

Miller's argument was revisited in Dobrin's (1983) "What's Technical about Technical Writing?". Using Miller's argument in part to address what he saw as inevitable subjectivities in language, Dobrin advanced an historical and philosophical examination of technical writing which led him to a concise definition: "writing that accommodates technology to the user." Some eight years later, Rutter (1991) delved deeply into histories of rhetoric and writing theory, citing among newer figures Miller, Dobrin, and Merrill Whitburn and asserting that "[i]f, as seems certain, technical communication is essentially rhetorical, then the very definition of the discipline must undergo change" (p. 144). Yet Rutter's approach was more one of extended description and analysis than of concise definition. Though he did not call for an abandonment of its practical aims, he critiqued a field that had "sometimes been hampered by its strengths" and "[had] insisted on its separateness from entrenched, basic composition and from the beautiful impracticalities of literature and literary theory." In language reminiscent of some TPC teachers even today, he argued that "[i]n the name of practicality it has scoured away flowery style, it has cleansed itself of subjectivity, it has purged away what it regarded as the hocus-pocus that prevents the university writing major from being prepared to write in the real world" (p. 147). To Rutter, that was unfortunate and problematic. What he asserted, in essence, was that the discipline of technical writing resides in rhetoric and in liberal education; and that its definition and pedagogy should reflect those qualities just as much as they reflect any pragmatic aims.

Johndan Johnson-Eilola (1996) argued that “rearticulating technical communication in post-industrial terms provides a common ground between academic and corporate models of communication, which are notoriously disparate” (p. 245). His symbolic-analytic model, based on Robert B. Reich’s work, combined practical necessity with rhetorical and social context. This model helped advance outmoded industrial conceptions of technical communication, Johnson-Eilola maintained, and it helped bridge the gap between academic concerns and industry pragmatism. While this model was framed as a “rearticulation” rather than a (re)definition, it became highly influential in conceptions of technical communication practice.

Kelli Cargile Cook (2002) advanced a pedagogical model of “layered literacies” for TPC pedagogy that included basic, rhetorical, social, technological, ethical, and critical literacies. Much as I do with Johnson-Eilola’s model, I consider the “layered literacies” model not a definitional effort as such, but rather a basis for reconsidering technical communication, especially in pedagogical terms. Additionally, this model in part addresses competencies, which have become important in framing technical communication practice (see, e.g., Henschel & Melonçon, 2014), particularly in the workplace.

More recently, Rude’s (2009) central research question has been used to help provide definition for the field, its identity, and overarching research: “How do texts (print, digital, multimedia; visual, verbal) and related communication practices mediate knowledge, values, and action in a variety of social and professional contexts?” (p. 176). In addition, Kimball (2016) and Henning & Bemer (2017) have offered their own discrete definitions of technical communication. Chronicling different "ages" in technical communication, Kimball arrived at a definition that saw technical communication as "an activity that manages technological action through communication technologies, including writing itself, in a particular setting and for particular purposes" (p. 17). Henning & Bemer (2017) argued that a "united front" in presenting TPC in industry contexts enhanced its legitimacy and power. To help frame their argument, they offered a practitioner definition:

> Technical writers, also called technical communicators, produce documents in a variety of media to communicate complex and technical information. They employ theories and conventions of communication to develop, gather, and disseminate technical usable information among specific audiences such as customers, designers, and manufacturers. (p. 328)

Besides Durack's qualification that I discussed earlier, there are two additional qualifications to the definitional approach that I would like to address as well. One is the difficulty of a "true" definitional approach. In 1990, Allen said, "At this point in our field's development and in our discussion, a satisfactory definition of technical writing eludes us. It strikes many as ironic—if not downright embarrassing—that a discipline that so frequently constructs definitions cannot muster one for its own enterprise." And, later, cogently: "We should be careful, in our earnest desire to create a definition, not to exclude or disenfranchise writing that falls outside our strict categories" (p. 75). Her conclusion was largely that "no definition will adequately describe what we do" (p. 76) because of the historical problems of doing so and the diversity of technical communication practice up to that time.

While Allen's argument concerned a definition that, in essence, was not possible, the second point I make here is about an aspect of definition that is still in development—and that, given sociopolitical goings on in society and in TPC, will have to be considered in definitional approaches in the future. Since 2010, a new sociopolitical turn in TPC has been taking place. Over time, part of the philosophical conversation surrounding TPC has ranged from what scholars have characterized as ethics (e.g., Clark, 1987) to feminist approaches (e.g., Lay, 1991) to intercultural communication (e.g., Hunsinger, 2006) to more recently discussed social justice themes connected with areas such as decolonial methodologies in intercultural research (Agboka, 2014), inclusivity (Jones, Moore, & Walton, 2016), and critical race theory (e.g., Haas, 2012), with implications for pedagogy, research, and ongoing conversations about TPC practice. Though most of the literature to date has dealt with establishing and using certain frameworks in research and teaching, the implications for a definitional approach to TPC will no doubt bear out in the future.

To me, there is no complete definition of TPC. It is an iterative, changing, and highly contextual definition that evades the kind of conceptual bounding for which an academic definition may strive. Is that a wholesale disavowal of the definitional approach? Absolutely not. In general, I think that the definition question is a very good, compelling, and extremely important one. I think it's a question that works at the undergraduate and graduate levels, and it is a very good question for industry practitioners (who may not be asked it in so many words, but periodically or regularly will have to consider it abstractly when advocating for their roles, current or envisioned) as well.

Another way of characterizing the nature of TPC, as well as workplace communication practice more generally, is to take on an *empirical approach.* This approach implies that one or more empirical methods are used: interviews, surveys, ethnographies, and so on, with a defined and systematic way of analyzing the results. In many cases, empirical research is performed with a primary goal of understanding communicative practice theoretically, rhetorically, or practically, without a specific definitional impetus (e.g., Brumberger, 2007; Lanier, 2018; Whiteside, 2003). In others, though less frequently, the empirical work may be associated with a new definition or adaptations to an existing one (e.g., Henning & Bemer, 2017). In the research I describe later in this dissertation, I adopt an existing definition (Henning & Bemer's) to help contextualize my analysis of workplace communication practices; then, using an empirical approach, I describe implications for advancing scholarly understandings of the nature of TPC and workplace communication practice.

The Construct of *Workplace* and its Relationship to this Research

Another point essential to this dissertation is the concept of *workplace*. Plainly said, this is due to the fact that TPC is predominantly a field of workplace practice. That practice may be in for-profit, non-profit, technical, government, educational, community-embedded, and a number of other contexts (Rosselot-Merritt and Bloch, forthcoming). When we teach students, we are teaching them how to perform effective technical and professional communication in future workplaces. Indeed, the viability of our programs—the majors, minors, emphasis areas, and certificate programs—depends on having students who enroll in those programs and take the classes; and those students ultimately want to find jobs.

Academic research, on the other hand, does not have the same kind of requirement that researchers engage with workplace-related themes or engage with work contexts in any way: theoretically, empirically, philosophically, or otherwise. Let me be clear on certain nuances of this statement. First, plenty of TPC researchers do study and write about workplace-related themes; this has been the case for more than 40 years (Rosselot-Merritt & Bloch, forthcoming). Second, the work that these researchers have done has advanced our understanding of TPC practice and workplace communication in valuable ways. These are very good things.

Yet it is also important to acknowledge that there is not only no codified mandate to do such work; there is no metric to determine how effectively and how extensively academic research engages with workplace-relevant themes even when the attempt is made. The closest things we have on the academic side are peer-reviewed writings that speak to the need for greater engagement with the workplace and with workplace professionals; on the trade or industry side, we can find a bevy of arguments for greater collaboration and involvement between academics and practitioners in publications such as STC *Intercom* and on websites such as Tom Johnson's *I'd Rather Be Writing.* Still, however, those assertions, while compelling, are infrequent and often scattered over time, often with little follow-up other than a citation in another academic piece or a mention in a later trade article.

The workplace construct, while connected to this dissertation, is complex in its history and development within the field of technical and professional communication. This is true in both the academic and the practical iterations of the field, and a detailed discussion of it exceeds the scope of this dissertation. However, it is worth noting that my colleague Janel Bloch and I have systematically studied ways in which that construct has evolved over time, particularly in academic scholarship, and have worked on ways to conceptualize workplace so that the concept can be aligned more effectively with non-academic practice and can be used as a foundational concept in further research. We thus proposed the following definition of *workplace*.

> In technical and professional communication, a *workplace* is any context in which communicative practices or activities meeting any of the criteria below can and/or do take place:
>
> - Further a mission or purpose which may be implicit or may be codified in a formal statement (such as a "mission statement")
> - Involve an exchange of physical materials, virtual quantities of something, and/or ideas
> - Often, but not always, involve material or financial gain on the part of those conducting the communicative practice or activity or the individuals or organization on whose behalf they are acting.

> Over time, workplaces relevant to TPC have developed to a point at which work contexts may include any combination of the following:
>
> - For-profit (such as privately owned or publicly traded businesses)
> - Not-for-profit (such as charities, foundations, or non-profit educational institutions)
> - Community-embedded (such as food co-ops, environmental communities, or groups of people intrinsically tied to a given locality)
> - Virtual (such as work done "in the cloud" or using networked teams)
> - Decentralized (such as work conducted without specific oversight or without centralized management of resources). (Rosselot-Merritt & Bloch, forthcoming)

This is the definition I use when positioning the implications of interview-based research described in later chapters. To help establish context, I will now address four constructs that are useful and important in building a model of TPC as a field of workplace practice: competencies, professional identity, legitimacy, and power.

Competencies

It is difficult, if not impossible, to discuss technical and professional communication in nearly any context—academic, applied practice, or otherwise—without considering competencies that technical communicators can or do possess. For the purpose of this work, I define a *competency* as a concrete or abstract skill. In general terms, woodworking—the skill at doing it—is a competency. Skill at writing a pharmaceutical validation report suitable for review by the Food and Drug Administration is another competency. What those two particular competencies have in common is that they are concrete: there is a tangible or physically observable result (a chest of drawers, a printed or emailed report) involved. Other competencies may be more abstract: perceptiveness about social cues, for example, or the ability to analyze stock market trends effectively.

In TPC, there are a number of competencies ranging from the more concrete (e.g., proposal writing skills) to the more abstract (e.g., understanding of visual rhetoric, audience analysis), yet notably, there is a collective group of competencies that, over time, have been discussed as being important to TPC practice. These competencies are not always necessarily agreed upon. Furthermore, they are not static; they change and evolve over time, and sometimes they wane in relative emphasis for any number of reasons (none of which are arbitrary, by the way). Consider some of these competencies on which academics have written:

- Writing and editing (Blythe, Lauer, & Curran, 2014; Brumberger & Lauer, 2015; Hart-Davidson, 2001; Rainey, Turner, & Dayton, 2005)
- Visual design (Gillenwater, 2017)
- Usability (Lauer & Brumberger, 2016)
- Interviewing (Rainey, Turner, & Dayton, 2005)
- Collaboration (Hart-Davidson, 2001; Rainey, Turner, & Dayton, 2005)
- Project management (Rainey, Turner, & Dayton, 2005)

- Content/knowledge management (Hart-Davidson, 2009; Rainey, Turner, & Dayton, 2005)
- Software such as the Adobe suite (Brumberger & Lauer, 2015)
- Digital technologies (Cargile Cook, 2002; Dicks, 2009)
- Augmented and virtual reality (Tham, 2018)
- Social media communication (Blythe, Lauer, & Curran, 2014; Brumberger & Lauer, 2015; Katajisto, 2010)

Do these and other competencies, at the time relevant studies were conducted, match up with industry realities? Given the level of empirical robustness for which TPC researchers are known, I am inclined to say they do. And to be clear, it is not competency research itself that gives me pause; it is, rather, a conglomeration of philosophical moves that (a) devalue competency research or (b) seem to circumvent competencies as a significant construct in TPC practice in favor of other priorities. On that note, I will now turn to the relevance and currency of competencies, not only as a topic of research, but also as a foundation for TPC as a field of practice.

Competencies: A Passé Construct?

The first point I would like to address is why I consider competencies such a prominent foundational construct in this project. To start that argument, I'm going to mention a few contrary arguments. After all, at least two senior scholars I know have opined that competency research has reached such a saturation point in TPC that there is little left to say about competencies, or that competencies themselves have not changed much in the last 20 or so years in the field of TPC. Any of those arguments is a difficult place to start a discussion, for example, about what practicing technical communicators (including, someday, many of the students that we have in our classes) need to know in order to be successful in their jobs.

Consider, too, that it is difficult, if not impossible, to engage in any discussion of TPC without discussing competencies, at least tangentially. Even then, a tangential discussion probably won't suffice. Students want to know competencies they'll need in the job market, and employers require certain key competencies in technical writers that they hire. Recognizing this, academics in the field have written on an array of competencies in TPC, and they continue to do so.

Yet there is the dissenting voice in the case for emphasizing competency research. For an example of that, I turn to a series of public tweets by Lisa Melonçon (@lmeloncon, 2019; see Figure 1). This thread of tweets summarized Melonçon's view, in essence, that TPC researchers do not need to investigate industry needs as frequently as some scholarship seems to presume is necessary. Retweeting a reflection on liberal arts' preparation of the student as a "whole person" (@profpatch, 2019), Melonçon stated that, "...I have been saying that #techcomm programs don't need to keep asking employers if we're giving the students the right skills. We are and we have been for over 50 years." In a follow-up tweet, she wrote, "do you know when the first attempt to ask employers for 'what skills should we be teaching' type of thing happened? IN the early 80s"—implying an oversaturation of such questions over time—and, in the same thread, later wrote that "[t]his is not [to] say programs should not innovate or pay attention to industry or to trends. Not what I am saying at all" yet that "[w]hat I am saying is that we don’t have to run to employers with a survey every couple of years.” In a final tweet, she commented, “Of course, there is always room for improvement. But, we’re doing still ok. So on a Sunday, I say we should all take a moment . . . and bask in the idea we’re doing a good job. #techcomm”

Figure 1

Tweet Thread by @lmeloncon on Industry Research Needs in TPC

To her credit, Melonçon does acknowledge the importance of researching industry needs with respect to curriculum designs—the kind of alignment she has advocated repeatedly for many years (see, e.g., Melonçon, 2012; Melonçon & Henschel, 2013; St.Amant & Melonçon, 2016—though it's worth noting her more recent call against "hyperpragmatism" in TPC capstone courses, discussed at length in Melonçon & Schreiber, 2018). Although I am generally favorable to what Melonçon has to say about TPC, I do take exception to some of the assertions in this thread—particularly the implication that (a) important practical skills have changed so little over time that investigating industry needs frequently ("every two years," as she put it) is not needed and (b) TPC courses are already doing such a good job teaching students what they need to know that further investigation of competencies would seem to undermine warm sentiments about our ability—or, as Melonçon put it, teachers' ability to "bask in the idea we're doing a good job." While I in no way argue that TPC instructors are not doing a good job, I would offer three arguments in response to Melonçon's comments here:

- Industry needs and associated competencies can and do change rapidly. Quoting Dicks (2009), Brumberger & Lauer (2015) observed both historically and empirically that, "although technical communication work has remained constant for some in the field, 'the nature of work for many technical communicators is changing so rapidly that many now perform an entire task set that they did not even know about five years ago' (p. 51)" (Brumberger & Lauer, 2015, p. 239).
- Programmatic and curricular needs may derive from local and regional considerations (e.g., specific requirements of local companies for which TPC

graduates may work) and thus may benefit from investigation at the local and/or regional level, for programmatic or curricular benefit.

- Ongoing competency research, performed well, reinforces the kind of repeatability and capacity for “iterative testing” involved in sustainable models of research (see St.Amant & Melonçon, 2019).

In my own reading, I would say it is possible that competency research, or research focused in large part on exploring or characterizing competencies in TPC, has lessened since the late 2000s or early 2010s; however, research that speaks to or significantly takes into consideration competencies in some way is essential and, it seems, hardly in danger of disappearing. In essence, I argue that competency research is neither passé nor unimportant. In part by studying them, TPC researchers not only study the nature of the field, but also follow its evolution and help articulate value premises that practitioners can use in their own careers. For the field, this is research that should be conducted frequently and iteratively.

The Need to Study Competencies

It is my argument that competencies are not only a construct of continued importance in technical communication as a field of industry practice, but also a construct that merits new and evolving research in terms of the competencies needed in technical communication practice and the ways in which competencies relate to other constructs in technical communication practice. The first part of that argument (that of “continued importance” in technical communication) is probably not that surprising; indeed, discussion of competencies, especially in pedagogical and industry-oriented research, is common and will continue to be. The second part (the need for "new and evolving research" on the most important competencies and the ways in which competencies relate to other constructs in TPC practice) is where, by contrast, I am more likely to find some confusion. What exactly are these "new and evolving" competencies? How can scholars identify them? How do we study them? How can our research impact the field in a positive way?

Melonie McMichael, a technical communication scholar at University of Colorado-Colorado Springs, once told me in an email that, in terms of skills needed in industry:

> Usability and instructional design are taking over. Writing is no longer the primary skill needed, though it is still ONE of the primary skills needed. As augmented and virtual reality enter the workscape, they will change the field even more — with writing becoming even less necessary and technical skills becoming vital. So, the technical writer [as people have commonly thought of it for years] is becoming a thing of the past, morphing into new and varied positions. (Personal communication with Melonie McMichael, August 19, 2019)

McMichael's points are well taken. In this excerpt, she mentioned a competency, writing skill, that has long been associated with technical communication. Usability and instructional design are competencies that have entered the scholarly discussion since at least the 1990s; indeed, I remember usability as a key construct from my master's program in technical communication from the mid-2000s. McMichael also mentioned augmented and virtual reality (without prompting from me in that conversation, to be sure). When I started as a technical writer in industry some 20 years ago, AR/VR was scarcely if ever mentioned. Fast forward to the late 2000s, and AR/VR is being used everywhere—from consumers to business—and has found its way into TPC research, including workplace research. (It has, for example, become a key part of work being done in the University of Minnesota's Emerging Technologies Research Collaboratory, or ETRC, a group of interdisciplinary scholars studying various new and emerging technologies, such as AR/VR and wearables, for research and pedagogical purposes. Working in this group has demonstrated to me that, consistent with McMichael's point, AR/VR is growing in its application and is something with which technical communicators will increasingly need to work for documentation, user experience, and other purposes.)

In sum, I think of competencies as a basis for technical communication as a field of industry practice. With this statement, I do not intend to essentialize TPC as a mere "collection of competencies" any more than I would think of engineering as a collection of applied equations and principles. Nor do I make the argument that other areas of scholarly, theoretical, or practical interest do not or cannot have a bearing on TPC practice. For example, if someone wants to think of workplace settings through the lens of actor-network theory (see, e.g., Fraiberg, 2013, where such an example is developed on p. 13), there's plenty of room to do that, and doing so can add considerable value to the workplace discussion. Yet, for all its value, the skill of theorizing in actor-network terms *per se* is unlikely to find its way into most technical writing job descriptions or competency-based courses in TPC and professional writing programs.

Put another way, the competency basis I am proposing is one that helps explain TPC as a marketable force in industry practice. The first "level" of that model, in essence, is a set of competencies that change and evolve, vary among roles, yet (in some observable way) attend each role involving TPC practice. That level helps facilitate other elements of TPC's practical force, which I will describe in future sections.

Professionalization and Identity

One important concept in any field, particularly a rapidly changing one like TPC, is that of *professionalization*—the development of a field's professional identity and body of knowledge—and *professional identity*—how practitioners characterize their work and their place in broad occupational settings. These constructs are often used synonymously to some degree in TPC literature—and, to be fair, they are related. In my research, I view professionalization as the formation of professional identity; that is to say, professionalization is a process, whereas professional identity is an abstract construct reflecting (at least in TPC literature) a technical communicator's sense of professional self and field.

Questions of Professionalization

Scholars such as Spilka (2002) and Pringle & Williams (2005) have written of the importance of professionalization; and, at least in theory, professionalizing our field is of great value to practitioners because it helps establish a more cohesive notion of the field's capacities, which, to use Henning and Bemer's (2017, p. 312) term, enables the field to present a “united front” in establishing its purpose, value, and potential to various employers.

The reality, however, is somewhat mixed. Rachel Spilka (2002) once observed: “The field of technical communication is suffering an identity and credibility crisis. Ask any technical communication specialist, in industry or in academia, to list uncertainties about this field, and almost inevitably, critical issues of identity, credibility, and value emerge” (p. 97). Fifteen years later, Miles Kimball opined that “[f]or all the effort we’ve expended, professionalization initiatives [in technical communication] seem akin to convincing water to flow uphill” (p. 334). And even though Pringle & Williams (2005), reflecting a rosier view of things, wrote that “technical communication has quite possibly arrived at a point where we are able to articulate a set of professional attitudes and practices that give us a sense of group identity” (p. 369), scholarship since then does not support that notion (see Bloch, 2011; Carliner, 2012; Cleary, 2012; Coppola, 2012). On a positive note, efforts by the Society for Technical Communication in the United States and Germany’s tekom (see Carliner, 2012; Hart & Baehr, 2013) have led to certification efforts within the last decade; less favorably, some of these efforts have led to arguably disappointing results (see Kimball, 2017).

Parts of the professionalization challenge can be found in arguments over what professionalization should look like and, frankly, whether professionalization is even of much value to practitioners. Earlier, I already established my own belief that professionalization *does* benefit TPC as a field of practice; I mention this sort of internal debate because it further illustrates the identity struggle that technical communicators face. Two examples can be found in what I call the *professionalization approach debate* and the *cohesive identity debate*.

Describing the first debate (at least in part), Carliner (2012) wrote about the three types of professionalization he noted in the field. These are formal professionalization, which emphasizes structured efforts, degree programs, and formal certifications for practitioners; quasiprofessionalization, which sees professional identity as individually defined and organically achieved, with formal pieces such as certification being more or less optional; and finally contraprofessionalization, the least prescriptive professionalization type, one that sees formality and structure as potentially constraining and allows for highly informal, unstructured ways of achieving proficiency as a practitioner. Carliner called professional identity part of “branding,” or “the sum of the total impressions” (p. 59, citing Herzog, 1973, reported in Dobni & Zinkhan, 1990) that help create a collective image and sense of value for the field. Efforts that strengthen that branding only strengthen the perceived value of the field to various stakeholders.

Though their words may or may not include *professionalization* as a term of art, some scholars have even argued against a cohesive practical notion (or identity) for TPC. In their 2016 piece “Disrupting the Past to Disrupt the Future: An Antenarrative of Technical Communication,” for example, Jones, Moore, & Walton critiqued historical efforts to construct that kind of cohesive image:

> The official narrative of our field indicates that TPC is about practical problem solving: a pragmatic identity that values effectiveness. But this is not the whole story. The narrative should be reframed to make visible

> competing (i.e., a collection of nondominant) narratives about the work our field can and should do. (p. 212)

In essence, their argument against having a coherent identity stemmed from the belief that such an identity limits notions of TPC to practical teleology, thus constraining the field's capacity to address social justice issues on a broad level. To Jones, Moore, & Walton, TPC has been mired in accommodationist (some may use other terms, such as "neoliberal") attitudes toward work practices, and those attitudes have been complicit (intentional or not) in enabling injustice and trampling on the broad group of users that technical communicators claim to value. Part of the solution, in their view, is to deconstruct that coherent pragmatic notion. While I totally agree that TPC can and must be attentive to social justice issues, the practical deconstruction of which they speak is problematic to the field's professionalization.

The viability of any field—be it law, medicine, supply chain management, food service, physical plant maintenance, crop agriculture, or what have you—depends on the utility (or usefulness) of that field and its applicability to addressing issues of significance in the world or in a given society. With each field, there are common notions of that utility and applicability that derive from functions common to it. For example, lawyers are commonly known to engage in litigation and to prepare legal documents. Food service workers are commonly known to prepare various foods and beverages at restaurants and cafeterias. Yet if a lawyer were to say, "I spend one-third of my work day preparing paninis in the cafeteria," or if the food service were to say, "The company has me on retainer as I help evaluate all of our locations for potential customer liability issues," most people (within those fields and among the general public alike) would probably be confused; those roles are generally not thought of as part of their commonly held functions. While these examples are probably unlikely in practice, they metaphorically illustrate part of the professionalization challenge in TPC. In terms of roles that technical communicators are asked to take on, there is considerable variety both within individual jobs and among the collective array of roles that can be considered as part of the TPC category. This is part of another challenge to professionalization: a phenomenon I call *role diffusion*. Let us look at examples of two types: role diffusion within a single job, and role diffusion across a range of jobs that fit under the "technical communication" umbrella.

When I did a search on indeed.com for the term *technical writer*, I got a number of results (8,385 on September 25, 2019, the day I performed this search). One of the positions listed was for a technical writer at a security consulting company in Dayton, Ohio (see Figure 2). This position called for a number of responsibilities and included proficiency in document (RFP) analysis, writing and organizational skills, interviewing skills, editing, visual design, document control, and quality control, among others. While some of the "classic" TPC competencies such as writing and editing do not come as much of a surprise, this position also includes ostensible work in quality control/quality assurance roles—something in which not every technical writer will be formally trained. Needless to say, whoever took on this job would be taking on a large number of internal roles within the company. This is an example of role diffusion *within* a job; note that this example does not take into account duties that become “add-ons,” if you will, outside the original job description.

Figure 2

Job Listing from Company in Dayton, Ohio

Technical Writer

Altamira 9 reviews - Dayton, OH

Apply Now

Altamira Technologies has a long and successful history providing innovative solutions throughout the U.S. National Security community. Headquartered in McLean, Virginia, Altamira serves the defense, intelligence and homeland security communities worldwide by focusing on creating innovative solutions leveraging common standards in architecture, data and security. Altamira believes that our people and the culture of our company differentiate us from other companies.

Altamira has an immediate opportunity for a Technical Writer who will be responsible for creating and maintaining content used in support of proposal development initiatives. The person selected for this role will be an experienced writer and editor with strong organizational skills and an ability to work within and meet tight deadlines.

Essential Duties & Responsibilities:

- Review RFP requirements and, under the direction of the Proposal Manager, determine best outline and writing approach, ensuring a compliant and compelling response.
- Develop, write, coordinate, track progress, and edit various materials in support of proposal operations.
- Interview Subject Matter Experts (SME) for technical volumes, past performance, and resume development.
- Assist with creating and updating proposal artifacts library.
- Provide writing and editing support for additional documents, as assigned, such as White Papers and Requests for Information (RFI).
- Complete writing assignments according to RFP requirements regarding clarity, conciseness, style, and terminology.
- Conduct quality control checks to ensure compliance with guidelines, specifications, and deadlines.
- Work closely with BD, Capture, Operations, and Proposal personnel to develop compliant, compelling, and accurate written sections for proposals and related materials.
- Participate in color reviews and revise assignments according to recommendations for improvement and Proposal Manager's review recovery plan.
- Assist with developing conceptual images, flowcharts, diagrams, and other graphics, as needed.
- Collect feedback, evaluate recommended revisions, and update documents throughout the writing process.
- Validate style, consistency, grammar, and syntax of assignments and re-write to clarify and simplify content.

For an example of role diffusion among the gamut of job types that can be considered a part of TPC practice, I turn to three different technical writer jobs in three different areas and companies, all found on indeed.com: a product manufacturer for the food service industry with a presence in Bloomington, Minnesota (see Figure 3); an IT solutions company in San Antonio, Texas (see Figure 4); and an engineering services company with a presence in Alexandria, Virginia (see Figure 5). As seen in these examples, the responsibilities overlap in some ways (all, for example, include some kind of writing and/or document work), yet differ in others, such as the Texas position's including project management and payroll-oriented work, and the software emphasized in each (the Minnesota job mentions FrameMaker; the Texas job mentions Microsoft Office; and the Virginia job mentions SharePoint, with an implied application to document control that is even more implicit in the Minnesota job and not mentioned at all in the Texas job).

Figure 3

Job Listing from Company in Bloomington, Minnesota

Technical Writer

Rudolph Technologies, Inc 36 reviews - Bloomington, MN

Apply On Company Site

We are seeking a Techncial Writer to join our team. As a Techncial Writer you will provide technical information in an appropriate and usable format to internal/external customers. Such information relates to the configuration, operation and maintenance of Rudolph Technologies products and processes.

Responsibilities

Prepare/maintain technical documents targeted to internal/external customers.

- Such documents include, but are not limited to: operational manuals, training guides/materials, custom applications and hardware installation procedures, maintenance guides, site preparation guides, crating/uncrating guides, upgrade instructions.
- Documentation may apply to hardware, software, or both.
- Preparation of documents includes (1) interviewing subject matter experts, (2) writing, editing and proof reading text and (3) creating and/or modifying graphics (digital photographs, screen capture images, line drawings and diagrams, flow charts, etc.).
- Documentation is developed for distribution in print and/electronic form, such as in PDF format, from established templates.
- Participate in all relevant requirement and/or functional specification reviews.
- Provide internal customers with access to all released documentation.
- Maintain necessary department standards (style guides, FrameMaker templates, etc.)

Works with:

- *Subject matter experts* (software and hardware engineers, technical account managers,

Figure 4

Job Listing from Company in San Antonio, Texas

Technical Writer

Purple Drive - San Antonio, TX
Contract

Apply Now

Responsibilities and Duties

- Create new or revise content for SOPs Responsible for describing problems, identifying possible causes, collecting and organizing existing data, comparing causes to facts, identifying probable root causes and determining the best solutions
- Works with process experts to fully understand and solve the problems
- Provides technical expertise and recommends improvements
- Act in a project management capacity to ensure SOPs are completed on Schedule
- Ability to multi task and to work in a deadline driven environment
- Payroll experience, Technical Writing Skills, good command of MS office suite

Job Type: Contract

Experience:

- Payroll: 3 years (Required)

Work authorization:

- United States (Required)

Contract Length:

- 1 year

Figure 5

Job Listing from Company in Alexandria, Virginia

Technical Writer

C.C. Johnson & Malhotra, P.C. (CCJM) - Alexandria, VA
$40 - $45 an hour

Apply Now

Job Summary: This position is responsible for developing technical documents such as project charters, business requirements, specifications, standard operating procedures, requests for proposals, reports, and other documents. The selected candidate will also perform editing, formatting and conducting quality audits to ensure consistency in the written project communication materials. She/he may also be called upon to support supervisors and peers in other tasks related to drafting, writing or documentation. He/she will perform tasks and duties under direct supervision using well-defined processes, policies and procedures.

Essential Functions:

- Write content for project charters, business requirements, standard operating procedures, specifications, requests for proposals, and other documents.
- Edit and format content written by others, ensuring consistency in writing style and approach throughout various procurement documents, authored by different authors.
- Proactively gather required information through research, statistical reports, and interviews with technical staff. This includes attending meetings and following projects as required to gain an understanding of the subject matter.
- Perform document control tasks, such as setting up and maintaining file structures and file sharing sites. Ensure all produced materials are properly versioned and stored in appropriate location within SharePoint.
- Prepare graphics as needed for reports and other documents.
- Perform quality audits working with team members to verify compliance with stated requirements of project and company guidelines.

Professionalization questions continue in TPC, and for good reason, they will continue to be studied. Challenges surrounding the professionalization approach debate, the cohesive identity debate, and role diffusion—both within individual jobs and across the landscape of jobs in TPC—contribute to such questions. Another challenge for the field is that of professional identity—a concept I discuss in more detail in the following section.

The Importance of Identity

Professional identity is an abstract concept reflecting a TPC practitioner’s sense of professional self and field. Identity, much like definition, is an arguably foundational concept in TPC literature. This interest in professional identity is well founded. As discussed earlier, professional identity helps establish what Carliner (2012) called a “brand identity” for the field; in a sense, professional identity in TPC is analogous to a person’s self-concept and, to a large extent, sense of self-worth. In that sense, if a technical writer were to say, “I write, edit, and design communications for users in collaboration with engineers and product managers; I also play an important part in my department’s advocacy for our products’ users,” the professional identity communicated is notably different from one who said, “I take what the engineers give me, plop it into InDesign, and then clean it up a little before it gets sent to the printer; that’s basically what I do.” The first is action-oriented, describes a succinct range of crucial activities, and is emphatic about user advocacy. The second is more passive, vague, and anemic. If a manager were to hear the first statement, he or she gains a clear sense that the person who made it is clear and confident in their role. The second statement is more likely to lead to the dreaded “Well, couldn’t we just have the [engineer / drafter / admin / whoever else] do this stuff, if that’s all the tech writer is doing?” type of discussion.

Studies have been conducted to help determine professional identity, with results often showing uncertainty or variability (Bloch, 2011; Clearly, 2012). Issues such as role diffusion complicate matters further. In this chapter, I have critiqued the often unaligned or misaligned relationship between academic theory and industry practice in TPC. In terms of professional identity, I credit the academy for recognizing the challenges of identity that technical communicators face (Savage, 1999; Spilka, 2002; Carliner, 2012) and for supporting both research that seeks to better understand the problem and course designs that help inculcate a positive, clear sense of professional identity. Further scholarship is needed in order to advance this discussion.

Legitimacy

Legitimacy is another key concept in the model of TPC workplace practice. For purposes of this work, legitimacy has to do with the extent to which a field is valued. In industry terms, that value finds application in marketability and perceptions (both internally and externally) of the field's viability. Not surprisingly, TPC has experienced challenges achieving broad affirmative legitimacy in practical settings. Gerald Savage, for example, spoke of such a challenge in his introduction to volume 1 of *Power and Legitimacy in Technical Communication* (Kynell-Hunt & Savage, 2003); he also provided a strong basis for connecting legitimacy to professional identity as well as (more directly in his case) the "prioritization" of competencies. Scholars have continued studying legitimacy in TPC on multiple levels (Henning & Bemer, 2017; St.Amant & Melonçon, 2016).

In essence, there are two forms of legitimacy that are particularly important to TPC practice. One is internal legitimacy: the extent to which TPC is seen as valuable and viable by internal stakeholders—practitioners, academics, and students, for instance. The other form, external legitimacy, has to do with the extent to which stakeholders outside the field of TPC see it as valuable and viable. Both forms of legitimacy are essential to the success, growth, and continuation of the field. I will explain the reasons for their importance in this section.

Internal Legitimacy

Internal legitimacy refers to the perception of viability and value felt by practitioners in a field toward that field. To continue an earlier example, it is the degree to which a lawyer feels that the field of law is worthwhile—for herself, for her clients, for society at large. In TPC, particularly in regard to practitioners, internal legitimacy refers to how we feel about the value of our field, about its viability and long-term sustainability with respect to current and foreseeable conditions in the occupational world that we inhabit.

It is this construct—internal legitimacy—that TPC scholars seem to have studied more closely, even though (a) they may not use the term *internal* legitimacy and (b) the connections to internal legitimacy may be indirect, implied, or deduced from related findings.

External Legitimacy

External legitimacy refers to the extent to which stakeholders who do not work in a given field feel that that field is viable and valuable in a given context. Again recalling the example of law, we can say that external legitimacy is the extent to which a group of people who do not work in the field of law see it as viable and valuable. This group of people may include clients, potential clients, political figures, members of the general public—the list goes on. The same principle applies to TPC as a field of industry practice. When we think about people who are not TPC practitioners yet still have a stake in the work that such practitioners do, we could make a really long list: consider, for example, that such persons include not only potential colleagues (engineers, scientists, managers, clerical persons, and so on), but also persons in the larger end-audience of a technical communicator's work products. Then add the fact that those roles may be interchangeable (for example, a manager overseeing internal instructions written by a technical writer may end up using those instructions for their own work someday).

In TPC scholarship, external legitimacy is something that gets some acknowledgement—if not in such terms, then at least on a conceptual basis. Two very good examples can be found in articles I've already discussed: Carliner's (2012) concept of "branding" and Henning and Bemer's (2017) definitional approach to presenting a "united front" for the field's collective applicability in industry contexts.

Let me be clear about the importance of external legitimacy when discussing TPC practice. It is well known that technical writers often collaborate with non-technical writers in their day-to-day work. As we consider the value premise for technical writing, it is also important to bear in mind two other considerations. First, in many workplace scenarios—more than the academic side of the field often seems to consider—the people managing a technical communicator's work are very often not technical communicators themselves; in fact, the people in those management roles may indeed have little to no training in technical writing. Second, much of the discussion surrounding a technical communicator's value will involve non-technical writers in planning and resourcing meetings, proposal writing for client projects, even perhaps in informal conversations found in the company lunchroom and other "unplanned" settings. The perceptions of those outside the field of technical communication are what I refer to in this dissertation as *extradisciplinary perceptions.*

In both of these scenarios, the importance of extradisciplinary perceptions becomes very high. Although scholars have addressed the related topics (such as competencies, professionalization, and internal legitimacy) well over time, the academic part of our field has an opportunity to further investigate extradisciplinary perceptions of TPC. As I will explain in chapter 3, this is something I seek to do on an empirical level.

Power

In their paper "The Technical Communicator as Author: Meaning, Power, Authority," Slack, Miller, and Doak (2003) discussed three communication models related to power in communicative acts. The first of these, the transmission model, sees communication as simply extending from sender to receiver. The second model, that of translation, acknowledges the receiver's ability to reconstruct the meaning of the received message. The third model, articulation, holds that meaning is "culturally agreed on or, more accurately, struggled over in ongoing processes of articulation and rearticulation" (p. 184), Slack, Miller, & Doak saw the complexity of articulation as part of communication dynamics in which humans "struggle to articulate and rearticulate meaning and relations of power" (p. 184). Significantly, these are dynamics in which technical communicators can and should take part, and they form a potent basis for contextualizing the influence of technical communication practice. In my project, I utilize concepts of articulation and power to help contextualize both communicative practices within organizations and the technical communicator's (potential) place in exercising influence in those communicative practices.

In combination with Slack, Miller, & Doak's (2003) concept of power, I use Henning & Bemer's (2017) concept of power—in essence, ability or capacity, influence, or authority—to contextualize the way in which technical communicators can influence work processes and communications. In Henning & Bemer's model, power can be thought of as a functional aspect of work (i.e., "this is what power does"); Slack, Miller, & Doak, on the other hand, think of power in its communicative dimension (i.e., "this is how communication exerts power"). Both are important in contextualizing technical communication practice, whether potentially or in observed practice.

The Need for Further Research

As I've described in this chapter, the perceived nature of technical and professional communication has a significant impact on both how it is approached in workplace practice and how it is researched and taught in academic spaces. That nature of TPC—its definition, purpose, theoretical and practical characteristics, stakeholders served, and so on—has been a matter of considerable discussion in academic circles and literature for several decades. One of the long-standing challenges to the field is a continuing dichotomy between academic research and industry practice; in academic contexts, scholars have studied this phenomenon and suggested ways to reconcile or find common ground in such perspectives. In workplace contexts, competencies, professionalization, legitimacy, and power are key elements of TPC practice; these elements, when studied and characterized with an eye toward practical understanding, help us conceptualize TPC practice on a deeper level. Since at least the 1990s, each of these constructs has been studied and written about in academic literature. In general, the emphasis has been internal to TPC—that is to say, the research has been mostly intradisciplinary—a fact that makes sense and has contributed to our evolving understanding of TPC's nature, value, and key characteristics in broad workplace settings.

This research must continue. In chapter 3, I will to reflect on another needed area of research that will likewise help advance our knowledge of TPC practice: the perceptions, observations and experiences of people in workplace settings who are (a) not TPC practitioners, yet (b) work with workplace-generated communications (either internal or client-facing) and (c) work with, have worked with, or have the potential to work in the future with practicing technical communicators.

What I am suggesting here is that TPC research also needs to account more for those aforementioned extradisciplinary perspectives—those held by people outside the field of technical and professional communication. Such perspectives, in theory, may not reflect a "textbook understanding of the field"; however, what they show are perspectives of consequence to TPC among people who have the ability, in both the short and long term, to influence others' perceptions of our field, to contribute to discussions on the utilization or hiring of technical communicators, to supervise the work of technical communicators (since managers of technical writers often hail from other disciplines, particularly when there is a limited number of decentralized technical writers in any given organization), and to work on teams where technical writers are present (even when the project in question is for a “one off” or very limited scope task where the same team members may not work together often in the future, if at all).

In short, the perceptions of people outside our field matter, and they matter a lot. Because of phenomena such as role diffusion and multiplicity in paths toward professionalization, oftentimes it is the experience, knowledge, and perceptions of extradisciplinary stakeholders that determine (or strongly influence) the relative value, viability, and ultimate utilization of a technical communicator in a given organization or project. In a very real sense, the legitimacy of TPC as a field of workplace practice thus becomes a matter of broader perception. This is a characteristic that is not necessarily specific to TPC; to be sure, a whole gamut of different fields is impacted by perception. Yet, something relatively distinctive about TPC practice is not only its potentially diffuse functions, but also the fact that a number of such functions (document management, writing and editing, information design, etc.) can be and often are performed by non-TPC professionals. Although it is very feasible and reasonable to argue a value premise for the role of a proficient technical communicator in a myriad of workplace contexts, doing so may be a matter of changing existing perception through active demonstration (e.g., bringing on a technical writer on a contracted “trial” basis and seeing how it works out) and some cogent rhetorical moves.

All of this being said, I will now turn to the aims of this dissertation project through the five chapters that comprise it.

What This Project Seeks to Examine

At its core, this dissertation is about the value and viability of TPC as a field of workplace practice, both present and future. That value and viability tie into how people feel about and perceive TPC as a field, how we contextualize workplaces in workplace research, how academics relate with the practitioner piece of the field, and how teachers of TPC incorporate such concepts as professionalization and legitimacy into their own teaching.

The primary research questions of this project center on the four interrelated constructs associated with this work—competencies, professional identity, legitimacy, and power—and a single, additional construct of critical importance: that of perception. These research questions have potential implications for TPC practice, academic scholarship in the field, and pedagogy.

- How are extradisciplinary perceptions associated with TPC's legitimacy in workplaces?
- How do individuals' and organizations' perceptions of technical communication practice contribute to legitimacy and professionalization of the field?
- What strategic moves can technical communicators make to broaden their influence and power within today's workplaces?
- How can academic programs more effectively address issues of professional identity and legitimacy of TPC for workplace application?

In the chapters that follow this one, I will build on the work that I have already done. Chapter 2 will describe perspectives from other disciplines that are relevant to the research questions of this dissertation. Chapter 3 will describe the practical, rhetorical, and methodological basis of an interview-based study of extradisciplinary perceptions of technical communication. Chapter 4 will discuss the study itself, including the sample population and key findings from the interviews. The final chapter, 5, will feature a discussion of practical, scholarly, pedagogical, and programmatic implications and thoughts for the future.

Chapter 2: Examples of Potential Multidisciplinary Influences upon Technical and Professional Communication

Multidisciplinarity and TPC

In this chapter, I will discuss how TPC scholars can incorporate multidisciplinary concepts by using them to inform theory and research in the field and adapting pedagogy and broader curricula to include relevant multidisciplinary perspectives. Those moves could ultimately benefit practitioners, both present and future, by augmenting practically oriented research (such as that surrounding competencies and professionalization) and providing students in TPC programs (future practitioners) with specific knowledge they need to be successful in their careers as communication professionals.

Multidisciplinarity is not new to TPC. As Carolyn Rude (2009) wrote, "Technical communication shares and borrows methods, theories, and even content areas with design communication, speech communication, and rhetoric and composition as well as with psychology, education, and computer science" (p. 175). Research methods in the academic field of TPC, for example, tend to be adapted from the social sciences (particularly in empirical, person-based research) and rhetoric (notably in analyses of communication and other artifacts). Theory in TPC often pulls from existing areas such as critical race theory (Haas, 2012) and rhetorical theory as it relates to specific kinds of communication, such as environmental rhetoric (Killingsworth, 2005) and the role of stakeholders in environmental communication (Coppola, 2000). Even in the practical side of the field, we find that certain competencies and principles are similar to—sometimes said to be “borrowed from”—disciplines such as graphic design and information design (Albers & Mazur, 2014; Carliner, 2001) and usability (Redish, 2010).

My suggestion to look outside the field for theoretical, methodological, and conceptual cues is therefore not surprising. That said, I believe that a brief discussion of potential multidisciplinary influences that relate to workplace studies is both valuable and important. I intend this discussion not to be all-encompassing, but to be useful and representative of multidisciplinary connections that relate to and can enhance communicative practice. The discussion may also serve as a basis for future research involving these conceptual bases.

Before I proceed, I want to differentiate the terms *multidisciplinary* and *extradisciplinary* in the context of this dissertation. These terms have distinct and important meanings in the dissertation, and their importance is linked to a similar rationale. *Multidisciplinary*, in this context, is referring to concepts that are drawn from more than one discipline and, in the case of TPC, disciplines that exist outside of writing studies yet offer ideas and arguments of potential value to TPC on a scholarly, pedagogical, and/or practical level. *Extradisciplinary*, as discussed in chapter one, denotes a perspective external to TPC; in most cases, the extradisciplinary perspective will come from someone in any number of non-TPC fields that have workplace application (engineering, education, restaurant service, and so on). Though the two terms have different meanings, their place in this dissertation is tied to a similar rationale: that the perspectives and concepts of non-TPC disciplines help strengthen the viability and applicability of TPC as a field of workplace practice. In terms of the multidisciplinary perspective of this chapter, the concepts I have chosen to discuss are organizational culture and climate and discourse in organizations.[1]

The Case for Considering Organizational Culture, Organizational Climate, and Discourse in Organizations in TPC Scholarship

From a scholarly standpoint, these concepts are well represented in the organizational psychology (often considered part of the larger discipline of industrial and organizational psychology, or I/O psychology) and organizational communication disciplines. I/O psychology can be defined as "a branch of psychology that is concerned with the study of behavior in work settings and the application of psychology principles to change work behavior" (Riggio, 2018, p. 23) while organizational communication can be thought of as "the process of creating and negotiating collective, coordinated systems of meaning through symbolic practices oriented toward the achievement of organizational goals" (Mumby, 2012, p. 30). During my time as a PhD student, I have taken courses in both, a fact that helped me make potential connections between my own discipline (TPC) and these other disciplines. In my own experience and reading, the connection between TPC and organizational communication is fairly well established (in fact, a course in organizational communication was a required part of the curriculum when I was working on my master's degree in technical and scientific communication years ago). The connection between TPC and organizational psychology may be somewhat less apparent;

[1] It is important to note that these are but examples of potential multidisciplinary influences upon TPC. In the TPC literature, other disciplines with specific concepts and theories have found their way into the larger scholarly discussion. Examples include critical race theory (see, e.g., Haas, 2012) and studies of health and medicine, including the rhetoric of health and medicine (see, e.g., Scott & Melonçon, 2018; Segal, 2005) and studies of medical discourse (see, e.g., Barton, 2001). The disciplines and concepts discussed in this chapter are relevant to workplace studies in TPC and particularly to this dissertation.

however, there are obvious grounds for drawing connections given that TPC work very commonly involves people and organizations, both of which organizational psychology is concerned with.

In this discussion, organizational culture and climate are most closely connected to organizational psychology. Discourse in organizations is treated mostly in organizational communication literature. It is worth noting that organizational communication scholars are also interested in organizational culture, and their perspective should be considered as well. For the purpose of this discussion, however, I will focus on the organizational psychology perspective for two reasons: one is the emphasis on human actors and their contributions to organizational dynamics in that field; and the second is that, even in organizational communication, citations pertinent to organizational culture often point to work in organizational psychology (see, for example, Harris & Nelson [2008], in which Edgar Schein [1990, 1999] is cited).

In each of the following subsections, I will first describe important disciplinary terms: *organizational culture, organizational climate,* and *discourse;* then, I will briefly discuss their importance in the discipline where they are commonly taken up in scholarly literature. The discussion of these multidisciplinary concepts will help set a context for their incorporation in discussions surrounding TC workplace practice, research, and pedagogy in chapters 4 and 5.

Organizational Culture and Climate

Organizational culture and *organizational climate* are terms commonly taken up in the discipline of organizational psychology. In the discipline, they are seen as key to the life and function of an organization, and their characteristics can be studied empirically. An oft-cited definition of *organizational culture* comes from Schein (2010, p. 18): “a pattern of shared basic assumptions learned by [an organization] as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (quoted in Ehrhart, Schneider, & Macey, 2014, p. 2). Ehrhart, Schneider, & Macey (2014, p. 2) define *organizational climate* as follows: “an abstraction that represents the cognitive structuring of a whole out of many observations and experiences; the whole is the meaning attached to those many observations and experiences. Thus, climate is conceptually an abstraction about the meaning of a setting for the members that experience it.”

Organizational culture, therefore, derives from shared assumptions held among organizational members about their organization; those assumptions resulted from solving problems within it and persist in the organization’s identity. Organizational climate is about the meaning that is formed as organizational members cognitively process their own experiences and observations. Though both constructs are important, Ehrhart, Schneider, & Macey (2014) observed at least two challenges in the organizational psychology literature: first, that there is some disagreement about the precise meaning of each term, and second, that culture and climate have not been well integrated in the literature (see, for example, pp. 196-197). Some exceptions to the second point do exist. For example, in 1996, Denison wrote about distinctions in each as part of a discussion of what he called the “paradigm wars” in culture and climate. As another example, Ostroff, Kinicki, and Muhammad (2012) sought to build an integrated view of organizational climate and culture in their work. In terms of the similarities, overlaps, and differences between organizational culture and climate, the following table summarizes several of the arguments in the literature.

Table 1

Organizational Culture and Climate in Organizational Psychology

Similarities and Overlaps	**Points Specific to Organizational Culture**	**Points Specific to Organizational Climate**
From Ehrhart, Schneider, & Macey (2014)		
Focus on a macro view of organizational context Focus on context rather than individuals in a context Focus on shared experiences Role of meaning Role of leadership Issues of strength and alignment Relationship with organizational effectiveness	Theoretical roots and methodology: Anthropology, with a focus on case and qualitative studies “Breadth with which the constructs are operationalized”: More levels of inferred and observable variables “Awareness of the culture/climate by employees in the organization”: “[D[ifferent levels with the deepest levels below consciousness” “Malleability” or changeability of the construct: Different levels very difficult to change Strategic focus: Less evidence of such a focus in the literature	Theoretical roots and methodology: Psychology, with a focus on attitude surveys “Breadth with which the constructs are operationalized”: Near-exclusive emphasis on observables “Awareness of the culture/climate by employees in the organization”: Variables are observables “Malleability” or changeability of the construct: Easier ability to change Strategic focus: Apparent in the literature
From Ostroff, Kinicki, and Muhammad (2012)		
Integration can be achieved by “viewing climate as the lens through which the deep layers of culture can be understood” (p. 644, citing Zohar & Hoffman) Artifacts are important in both Practices, policies, and procedures serve as a “ linking mechanism” between culture and climate (p. 657)	Culture is about *why* things happen Is a property of the collective Less immediate “Culture represents an evolved context embedded in systems, is more stable than climate, has strong roots in history, is collectively held, and is resistant to manipulation” (p. 644)	Climate is about *what* happens Resides within individuals and their perceptions More immediate Climate is experiential, based on what people see and report in an organizational situation. It involves employees’ perceptions of “what the organization is like in terms of practices, policies, procedures, routines, and rewards” (p. 644)

Similarities and Overlaps	Points Specific to Organizational Culture	Points Specific to Organizational Climate
"[C]ulture can lead to a set of relevant practices that are then perceived by organizational members as climate" (p. 657) "Levels" of analysis are emphasized in both, though the levels themselves can differ	Pertains to "fundamental ideologies and assumptions" and " is influenced by symbolic interpretations of organizational events and artifacts" (p. 644)	Focuses on situation and its link to perceptions, feelings, and behavior of employees. "...can be viewed as temporal, subjective, and possibly subject to manipulation by authority figures" (p. 644)
Both emphasize shared meaning and perceptions Can be considered "strong" or "weak" in the research—e.g., "strong [organizational] culture," "weak [organizational] culture"	Historically, more qualitatively studied Cognitions, interpretations, and schema "are based on artifacts, values, beliefs, and Assumptions" (p. 663)	Historically, more quantitatively studied Cognitions, interpretations, and schema "are based around . . . policies, practices, procedures, and routines" (p. 663)

In terms of organizational culture and TPC, it is first important to assert that TPC—and, to a large extent, some of the shared assumptions that guide the field—needs to be integrated into the culture of an organization in order for (a) TPC to be valued within the organization and (b) the organization to benefit from TPC practice intrinsically and fiscally. For example, it may be difficult to convince everyone in an organization to read Miller's "A Humanistic Rationale for Technical Writing" (and from their perspective, would they feel the need to?); but establishing the relevance of training sessions on audience analysis, writing workshops, and "lunch and learns" on the effective use of layout tools (however limited) in commonly used software such as Microsoft Word is not only feasible in many organizations, but also quite advantageous to the technical communicator in increasing their visibility in those efforts and beneficial to helping establish a culture of valuing clarity of communications and the interests of customers and end-users.

When the place of technical communication becomes apparent in the experiences and observations of an organization's members, the climate—the effect borne of the structured cognitive experience that organizational members have—becomes conducive to valuing TPC explicitly, tacitly, or both. When TPC is an identifiable and valued part of the culture, the technical communicator has visibility and long-term applicability in that culture. In order for this to happen, TPC needs to be visible and identifiable in key organizational processes, organizational leadership must recognize its value, and—as the research in this dissertation suggests—the broader membership of the organization needs to have some knowledge of what technical communicators do or are capable of doing. The lattermost piece is a challenge and in many ways serves as a prerequisite for long-term value within an organization. In chapter 5, I will further describe ways in which these ideas can be incorporated into TPC.

Discourse in Organizations

As mentioned earlier in this chapter, organizational communication has a great deal to offer TPC practice and scholarship. In my own reading, much of what organizational communication has to offer relates to the analysis of organizational dynamics and the texts and oral conversations that are created or take place within organizations. In TPC practice and scholarship, discourse is important as both a construct (see, e.g., Arduser, 2013; McDaniel & Daer, 2015; Wolfe, 2009), and as a research method (see Berkenkotter, 2002). When we look at the work that organizational communication scholars have done, we see strong evidence that (1) organizational discourse is an important object of inquiry in that discipline and (2) there is a strong basis for applying an organizational communication perspective on discourse to both TPC practice and scholarship. In this section, I will provide an overview of how discourse has been discussed and studied in organizational communication. This overview will not be exhaustive, but it is intended to provide a representative idea of organizational discourse and its study in organizational communication work.

First, it is important to understand "discourse" in the context of organizational communication. In order to do that, it is important to point out differences between discourse and organizational discourse. Cited by many organizational communication scholars (such as Conrad & Cheney, 2018; Deetz & Eger, 2014; Fairhurst, 2014; Fairhurst & Putnam, 2004), Alvesson and Kärreman (2000) argued that *discourse* as a construct has no agreed upon meaning. In some scholarly discussions, they said, discourse is seen as "a device for making linguistic sense of organizations and organizational phenomena versus seeing discourses in the context of revealing the ambiguities of social constructions and the indeterminacy of organizational experiences" (p. 1127, citing Keenoy et al., 1997); in others, it may be seen as "between a position looking at discourse in a social context, including the social and political dimensions in addition to the discursive versus a more narrow focus on the text per se (treated as existing in a contextual vacuum)" (p. 1127, citing Keenoy et al., 1997).

In organizational communication, *organizational discourse* has been defined as ‘‘the structured collections of texts embodied in the practices of talking and writing (as well as a wide variety of visual representations and cultural artifacts) that bring organizationally related objects into being as these texts are produced, disseminated and consumed'' (Grant, Hardy, Oswick, & Putnam, 2004, p. 3), which Monge & Poole (2008, p. 684) characterized as being "based on the premise that organizations are created and sustained through discourse, which can be discerned in multiple spheres at multiple, overlapping levels." This definition is associated with four domains of organizational discourse scholarship that Grant, Hardy, Oswick & Putnam identified: conversation and dialogue, narratives and stories, rhetoric, and tropes. Finally, according to Monge and Poole (2008, p. 685), there are "two important dynamics . . . that cut across the four domains." One is intertextuality, which "posits that no text exists alone, but that texts achieve meaning only through interplay with interconnected texts and associated symbols, tropes, and other discursive devices." The other is reflexivity, which has to do with the reflexive relationship between conversations and text, text and text, and context and discourse.

In terms of views on discourse analysis, Potter (1997) identified five; two of those were of potential interest in the aforementioned Alvesson and Kärreman discussion. The first was a Foucauldian (1976, 1980) view that "[l]anguage, put together as discourses, arranges and naturalizes the social world in a specific way and thus informs social practices [which] constitute particular forms of subjectivity in which human subjects are managed and given a certain form, viewed as self-evident and rational" (Alvesson & Kärreman, 2000, pp. 1127-1128). To Foucault, discourse analysis could be archaeological or genealogical; the former is more historical, the latter more based upon forces that shape discursive practices into units, wholes, and singularities. The second version of discourse analysis of interest to Alvesson and Kärreman came from Potter &

Wetherell (1987); that version saw discourses “as texts and talk in social practices [and] language ... as a medium for interaction, rather than as a system of differences (as in structuralism), or a set of rules for transforming statements (as in Foucauldian genealogies)” (Alvesson & Kärreman, 2000, p. 1127).

In a later article, Alvesson & Kärreman (2011) pointed out reasons for the popularity of discourse analysis among discourse scholars: it “emphasizes the communicative character of human interaction,” “captures vital (although partial) aspects of dominant organizational activity,” “is useful for empirical analysis,” and “allows for a critical-performative view on organizations” (pp. 1123-1124). Methodologically, Gail Fairhurst and Francois Cooren (2018) stated that organizational discourse analysis (ODA) “represents a broad class of approaches examining the constitutive effects of language; processes of text production, distribution, and consumption; and reflexive, interpretive analysis aimed at deciphering the role of discourse in a socially constructed reality” (p. 82, citing Grant et al., 2011, p. xvii). ODA, they said, is meaning-centered and adopts a “muscular” view of language and interaction that can be observed in, according to Fairhurst & Cooren:

> *turn-taking patterns* that reveal interruptions and floor dominance (Fairhurst et al., 1995); episode initiation and closure through *speech act* use (Cooren & Fairhurst, 2004); *category wor*k that automatically frames one outcome as more logical than another (Jayyusi, 1984; Sacks, 1992); *ventriloquizations* in which one actor speaks for or on behalf of the organization writ large or other entities (Cooren, 2010); or simplified

> *argument structure* as an indicator of institutionalization (Green et al., 2009). (p. 83)

Fairhurst & Cooren also stated that ODA applies to three overlapping domains of study where other methods of study present challenges. These include *processual views of organizing* (where ODA "studies the organizing potential of language, conversations, and texts" [p. 83]), *relational and subtle manifestations of power* (where ODA "studies power through what is made to appear natural or normal vis-à-vis the context" [p. 84]), and *issues of materiality* (where ODA "increasingly questions the limits of language and a purely constructionist orientation" [p. 84] because all language has a material foundation). In order to implement ODA methodologically, Fairhurst & Cooren wrote that scholars may use one of five forms: rhetoric, ethnomethodology/conversation analysis, narratology, critical discourse analysis (CDA), and communication as constitutive of organization (CCO).

Another important concept in this discussion is that of "organizations as discursive constructions"—a concept that is really about the relationship between organization and discourse, a relationship that Gail Fairhurst and Linda Putnam (2004) called an ontological one. Fairhurst and Putnam wrote that, in Alvesson & Kärreman's aforementioned (2000) work, there is an effort to "distinguish between discourse that refers to the study of talk and text in social practices and Discourses as general and enduring systems of thought" (p. 7). Although Alvesson & Kärreman addressed this duality, Fairhurst and Putnam argued, they did less to "unpack the discourse-organization relationship and to recognize implicit priorities placed on discourse, Discourses, or organization" (p. 8). For their part, Fairhurst and Putnam sought to address the relationship between organization and discourse by positing three orientations:

1. The *object* orientation, which "casts the organization as an already formed object or entity with discursive features and outcomes" (p. 9)
2. The *becoming* orientation, which "highlight[s] the dynamic processes of discourse in organizing" and "actively rejects the role of language as an artifact and embraces discourse as constituting the micro- and macroaspects of organizations" (p. 13)
3. The *grounded in action* orientation, which, drawing from ethnomethodological and other perspectives, "contends that structure is organized from within and endogenous to action," that "the unfolding details of organizing influence and are influenced by a reflexive immersion in the whole setting and ongoing stream of experience at a particular time and place" (p. 16).

A follow-up article by Putnam and Fairhurst (2015) traced how scholars had built upon their 2004 argument. They argued that organizations as discursive constructions had found relevance in relation to such topics as leadership, organizational culture, strategy-as-practice, organizational change, workplace bullying, identity, materiality, technology use, corporate social responsibility, ethics, identification, intercultural communication, and qualitative methods. Two of those—organizational culture and organizational change—relate with this chapter's discussion of multidisciplinarity and TPC. As mentioned earlier in this chapter, in chapter 5 I will discuss how these multidisciplinary concepts can be incorporated into TPC.

Forging ahead with Multidisciplinary Perspectives in TPC

In this chapter, I have discussed the potential value of perspectives from multiple disciplines; specific to this dissertation, I have discussed the value of organizational culture, organizational climate, and insights from organizational communication into the discourse of organizations. As a researcher, I incorporated these concepts into my own thinking about TPC both academically and in terms of workplace application. In forthcoming chapters—particularly those dealing with findings (chapter 4) and implications (chapter 5) of the empirical study I conducted—the value of multidisciplinary thinking will be underscored. Before those underscores can be better appreciated, however, an explanation of the conceptual model, rhetorical underpinnings, and research methodology behind my empirical study is needed. That explanation will take place in the next chapter.

Chapter 3: Extradisciplinary Perceptions of Technical and Professional Communication: Conceptual Model, Rhetorical Underpinnings, and Study Methodology

Continuing the Discussion

In chapter 1, I laid a foundation for discussing technical and professional communication (TPC) as a field of workplace practice. I provided an introduction to the context of my own work as a technical writer and its relationship to my research interests, discussed a long-standing yet unresolved dichotomy between academic scholarship and industry realities in the field, and then summarized much of the history behind efforts to define and characterize the field, particularly in academic literature. From there, I developed four constructs—competencies, professional identity, legitimacy, and power—useful in characterizing TPC's application and importance in workplace settings. The chapter concluded with a rationale for studying extradisciplinary perspectives on technical and professional communication—in essence, the perspectives of people who are not technical communicators yet are important in understanding broader thinking about the field that bears out in terms of utilizing technical writers on project teams as well as affirming (or not) the value of technical writers' work in multiple work contexts. From there, I discussed three concepts from non-TPC disciplines that can inform ways in which we think about and study workplaces in TPC.

Now, in chapter 3, I will describe the practical, rhetorical, and methodological bases for an interview-based study of extradisciplinary perceptions of TPC as a field of workplace practice. These bases are as follows:

- **Practical framework.** I will develop a framework for understanding TPC as a field of workplace practice built upon the four constructs of competencies, professional identity, legitimacy, and power. This framework helps establish a context for the empirical study of perceptions that impact the professional identity and perceived legitimacy of TPC in one or more ways.
- **Rhetorical underpinnings.** The rhetorical basis for this work draws from a larger argument for understanding the workplace *itself* in rhetorical terms; for that understanding, I turn primarily to the workplace scholarship of Dorothy Winsor.
- **Methodology.** The study methodology is drawn primarily from modified grounded theory, with data collection taking place in the form of semi-structured interviews and data analysis in the form of a two-cycle coding process.

In the sections that follow, I will describe these bases for my research in more detail.

Practical Framework: A Model of TPC Workplace Practice

In chapter 1, I defined and described four constructs—competencies, professional identity, legitimacy, and power—that helped place into context TPC's force and potential as a field of workplace practice. Competencies, I said, are concrete or abstract skills that form the basis of a technical communicator's professional repertoire; I further argued that, contrary to some contemporary academic views, competencies should be studied and explicated regularly and in a way that advances the practical profession. I then discussed the relationship between professionalization (the development of a field's characteristics and body of knowledge) and professional identity (how practitioners characterize their work and their place in work settings). Next, I discussed the importance of legitimacy, an affirmative value placed on a field either internally or externally. From these constructs, I defined power as "ability or capacity, influence, or authority," specifically as the kind that can affect work processes on a functional or communicative level.

My research in this dissertation is about studying extradisciplinary perceptions of TPC as a field of workplace practice and what we can learn about the legitimacy and viability of TPC from such research. The practical framework for this work flows from the constructs I discussed in chapter 1. As a sort of heuristic aid, I have developed the table below to break down the conceptual constructs, as well as their definitions, importance in TPC workplace practice, and potential consequences of their presence or absence in a given work scenario. (Note the direct linkage between professionalization and professional identity; I have included both for explanation, though professional identity is the construct of greater empirical significance in my research.)

Table 2

Key Construct Definitions, Importance, and Consequences of their Presence or Absence

Construct	Definition	Importance in TPC Workplace Practice	Consequences of its Presence or Absence
Competencies	A concrete or abstract skill	Specific competencies, such as in writing and project management, allow the technical communicator to complete specific tasks and perform in a given workplace scenario.	*Presence:* Capacity to perform a given work task *Absence:* Lack of capacity to perform a given work task

Construct	Definition	Importance in TPC Workplace Practice	Consequences of its Presence or Absence
(Professionalization)	The development of a field's distinctive characteristics and body of knowledge	Professionalization enables a field's practitioners to (a) codify a set of competencies and characteristics essential to its success and (b) help characterize their roles around those competencies and characteristics.	*Presence:* A tangible set of common competencies and characteristics *Absence:* Uncertainty, ambiguity, and arbitrary determination surrounding essential competencies and characteristics
Professional Identity	How practitioners within a field characterize or define their work and their place in occupational settings	Professional identity is central to how TPC is positioned and utilized in workplace settings.	*Presence:* Consistency and confidence in portraying a distinctive field of practice *Absence:* Lack of a "united front" (Henning & Bemer, 2016) in defining the field
Legitimacy	An affirmative value placed on a field of practice, either internally (by its practitioners) or externally (by stakeholders outside the field)	Affirmative legitimacy significantly helps solidify a field's basis for utilization in work contexts	*Presence:* Broad, extensive utilization in work contexts; reduced need for self-advocacy in individual work scenarios *Absence:* Reduced utilization in work contexts; increased need for self-advocacy
Power	An ability or capacity, influence, or authority that impacts, or has the potential to impact, work processes functionally, communicatively, or both	Power gives the technical communicator the potential to impact work processes that encompass their scope of work yet often extend into other areas of work (such as organizational climate and culture)	*Presence:* Increased ability to impact or change work processes; high(er) influence *Absence:* Reduced ability to impact or change work processes; low(er) influence

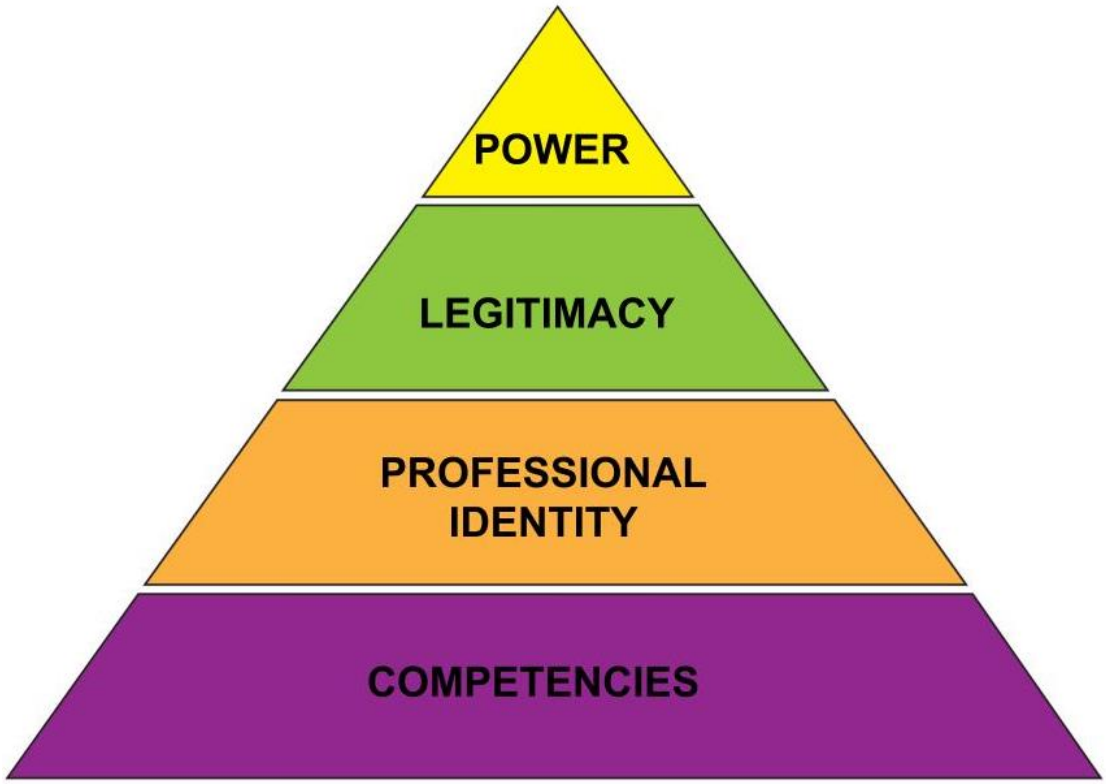
The order of these competencies is no accident. In fact, I assert a compelling relationship among competencies, professional identity, legitimacy, and power in TPC. This excerpt from an article I wrote in *Technical Communication* helps characterize that relationship.

> On the whole, therefore, legitimacy can be thought of as an affirmative value placed on the field internally (by practitioners) and externally (by other professionals). It derives from professional identity, which derives in large part from a set of consistently recognized competencies. From legitimacy is derived another important construct—one that may not be "needed" for the stability of technical communication as a field, but one that characterizes its ability to influence and shape thought and organizational processes: power. (Rosselot-Merritt, 2020)

As a visual aid, it is on this basis that I have constructed what I am calling a workplace practice model for TPC (see Figure 6).

Figure 6

Workplace Practice Model for TPC.[a]



[a]Note original image source: Link.

This model is for visual and explanatory effect; with it, I am illustrating the idea that significant constructs in TPC practice can and do effectively build upon one another in establishing viable scenarios for its long-term, successful application in work settings. Yet, despite its explanatory potential, the model cannot be used to explain every scenario a researcher (or a practitioner) may encounter. Furthermore, it is not completely analogous, for example, to something like Abraham Maslow's hierarchy of needs pyramid (see Maslow, 1943) in which one component (such as, in Maslow's case, a sense of safety) cannot exist if a more "foundational" component (such as physiological needs) is not present. Or, to use a TPC-focused example, this model differs from Kelli Cargile Cook's (2002) model of six "layered literacies," used frequently in technical communication pedagogy (see, e.g., Henschel & Melonçon, 2014), in that Cook's model incorporates a cumulative structure where, much like Maslow's hierarchy, one literacy builds upon another. A good way of explaining the model I am using is that each component strengthens or facilitates the component above it. For example, a clear professional identity is facilitated by having a set of identifiable competencies. Affirmative perceptions of TPC's legitimacy, in turn, are facilitated by a strong professional identity. Communicative and organizational power, then, is facilitated by affirmative legitimacy.

Does all of this mean that each component must exist in some optimal or clearly observable way? Not necessarily. For example, it is possible for a technical communicator to possess power or influence in an organization without having a strong sense of professional identity or, perhaps, an affirmative view that their skillset is legitimately needed within the organization (part of internal legitimacy); other factors outside the model, such as individual relationships within the organization, may affect that person's power. Through the arguments I've made previously, however, I assert that those factors will more often than not impact the viability and applicability of TPC in workplace settings where it is found (or can potentially be found).

A Rhetorical Approach to Workplace Studies

In building a rhetorical argument for this research, I critique existing work relating workplace with rhetoric, arguing that TPC scholarship needs more consistently developed, explicit treatments of the role of rhetoric in the workplace. Then, to help sharpen my focus within TPC, I look to Dorothy Winsor, whose studies of engineering practices (see, for example, Winsor, 1996) and explanations of the rhetorical acts of communication in technical and engineering environments (Winsor, 1998) place her among the most noted workplace scholars in TPC's history.

Usefulness, yet Relative Ambiguity, of Rhetorical Notions of Workplace

Rhetoric helps form the basis for the academic study of composition, technical and professional communication, and writing studies writ large. Indeed, to many scholars, rhetorical concepts help underpin the very nature of these disciplines—a fact that makes sense when we consider the rhetorical considerations of audience, persuasion, matters of canon, and other topics.

In this section, I will discuss examples of ways in which rhetoric has been specifically connected to workplace studies, a term I am using to denote the collective study of workplace practice, with an emphasis on communicative practices in workplace settings. My reasons for using the term *workplace studies* rather than a term like *workplace writing*, in this instance, are that communicative practice necessarily encompasses written, spoken, and other aspects of communication; and that an understanding of workplace in TPC contexts necessarily includes such competencies as networking, critical thinking, self-activation, and interpersonal collaboration (see, for example, Henschel & Melonçon, 2014; Rainey, Turner, & Dayton, 2005).

I want to make, in part, a foundational argument for the connection between rhetoric and workplace studies. For this purpose, Dorothy Winsor's work, which I will discuss in a forthcoming sub-section, is particularly useful. More generally in my reading of TPC and writing studies thus far, what has become apparent is that scholarly linkages of workplace studies with rhetoric are consistently implicit and often more surface-level than one would find in rhetorical treatments of science, health and medicine, place and space, and other phenomena whose rhetorical nature scholars have developed more fully. The result is somewhat surprising and at times a bit frustrating; it is a result that points to a need for a more rhetorical understanding of workplace in TPC. Indeed, it is difficult to find scholarly uses of a term such as *workplace rhetoric* or *rhetoric of the workplace* (though, notably, terms such as *rhetoric of workplace culture* can be found in various interdisciplinary sources—e.g., Garrick & Solomon, 1997—often with a more pedestrian, generalized meaning to the *rhetoric* part). I do not necessarily argue that such a term must exist, but I do argue that the place of rhetoric in workplace studies should be more explicitly acknowledged. One good example of such acknowledgement, I think, can be found in Stephen Doheny-Farina's (1992) research on technology transfers in multiple case studies; to his credit, Doheny-Farina spent an entire chapter discussing the theoretical work that underlies his rhetorical analyses in the chapters that followed it. Doheny-Farina argued, in sum, that

> . . . the varied, sometimes murky, and frustrating thing commonly called technology transfer is a locus of sophisticated rhetorical activity. Those who will participate in or study technology transfers, the commercialization of innovations, the dissemination or diffusion of ideas

> from labs to markets should come to some understanding of the rhetorical processes that are ever-present in these enterprises. (p. 30)

Still other sources seem to provide a more implicit use of rhetoric in workplace-relevant arguments. For example, Lisa Shaver (2011) made a valuable pedagogical argument for asking students to analyze “key messages” in organizational websites in order to “explore professional discourse in rhetorical terms” (p. 223) and to help bridge the gap between rhetoric and the workplace—an excellent goal. Yet the conception of rhetoric she offered, while valuable, focused on more generalized themes such as purpose (most notably) and audience.

As another example, Clay Spinuzzi (2017) wrote about the “rhetoric of entrepreneurship” in the introduction to a special issue of *Journal of Business and Technical Communication.* In that piece, the word *rhetoric*, or some form of the word, appeared 79 times. Yet in the in-text citations, treatments of rhetoric even in the pieces that Spinuzzi cited tended to be rather surface-level or indirect. Spinuzzi himself called out an example of two of the pieces that he cited: “Alvesson [1993; 2001] cited no rhetoric scholars in either article. But in its broad outlines, his description does seem to accord with what we in the field mean by rhetoric” (p. 280). Later, he argued, “So we in rhetoric and professional communication have begun to contribute to an understanding of how entrepreneurs such as Ada [a hypothetical person] work. But much more remains to be done” (p. 284). Spinuzzi was correct in that last point: there is a lot of work to be done. In his argument, the work to be done relates specifically to entrepreneurship; in the view that I advance as a workplace scholar, the work to be done applies to workplace studies more broadly.

There is at least one other question, though, that must be asked: How can and should the construct of *workplace* be treated in rhetorical terms? Frankly, this is something I am still considering, and I plan to develop it more fully over time. At the same time, I am uncertain of the degree to which I can do such development justice. In scholarly conversations on workplace that I have had thus far, concepts such as Burke's (1969) "identification" and Perelman & Olbrecths-Tyteca's (1969) "community of minds" have found repeated relevance. Identification, in essence, recognizes that for persuasion to occur, one party must identify with another and recognize that both parties have shared interests; in this process, Burke said, one party becomes "consubstantial" with another. The "community of minds" is relatable in the sense that, as Perelman & Olbrecths-Tyteca (1969, p. 14) argued, "For argumentation to exist, an effective community of minds must be realized at a given moment. There must first of all be agreement, in principle, on the formation of this intellectual community, and, after that, on the fact of debating a specific question together." This community is predicated on a preceding "contact of minds"—a concept very similar to consubstantiality in Burkean thought.

Recent work in business and professional communication (BPC) can be useful in considering a rhetorical notion of workplace studies. Before I elaborate on this point, I should note the positioning of my work in this dissertation as being located more squarely in the *technical communication* piece of the professional writing continuum.[2] Yet, given BPC's frequent emphasis on workplace research (Dubinsky, 2019), it is worth reflecting on rhetorical notions within BPC scholarship. Probably one of the best examples of such scholarship is Getchell & Lentz's (2019) edited collection *Rhetorical Theory and Praxis in the Business Communication Classroom.* While this collection is pedagogy-driven, it is worth noting as it is arguably one of the few works in BPC that explicitly connects BPC and rhetorical theory. Lentz & Getchell (2019) argued that business communication specifically "responds to the rhetorical exigence of workplace communication and the use of communication to solve business problems or achieve business goals; it moves the work of an organization and its employees forward" (p. 2). Citing Bell & Muir (2014) and Rentz & Lentz (2014), they defined *business communication* in a way that intersects quite well with workplace studies, and workplace scholars in TPC are well advised to take note of it:

> transactional, problem-solving communication that involves creating and disseminating work-related messages through appropriate channels, while being sensitive to the needs of the audience, the context, and culture in which the message is conveyed and the impression that the sender makes on the audience. (Lentz & Getchell, 2019, p. 2, quoting a definition

[2] Scholars have advanced this sort of disciplinary conversation for decades. Though that conversation is beyond the purview of this chapter, it is important and worth noting relevant sources, including Sullivan & Porter, 1994; Locker, 2003; and Getchell & Lentz, 2019; among others.

originally developed at the Association for Business Communication 2016 international conference)

Throughout the anthology, authors described ways of incorporating rhetorical approaches in BPC, leading to some notable findings for workplace studies. One is that rhetoric provides an effective underpinning for contextualizing workplace communication and for practicing workplace genres and communication competencies. As Rawlins (2019) wrote, ‘The balance of practical approaches to workplace problems with sound rhetorical theory strengthens students’ preparation for a rapidly shifting communication landscape.” Another is that, as I have argued, the relationship between rhetoric and workplace communication has not received the attention it has deserved (the Getchell & Lentz anthology, in part, attempts to address such a gap in business communication). Finally, there is an entire spectrum of approaches through which rhetoric can be brought to bear in workplace communication pedagogy and praxis; such approaches range from the use of very specific terminology such as *inventio* (Rollins, 2019) to more implicit application in lessons on workplace genres (Orwig, 2019) and discussions of rhetorical grammar in business correspondence (Lentz, 2019).

In sum, rhetorical notions of workplace are somewhat ambiguous, but they are useful in principle. For purposes of this chapter, I assert that a rhetorical approach to workplace studies should be practical; and it should be an approach whose rationale, explanation, and application are relatable both to academics and to workplace practitioners. In my reading of rhetorical concepts that can be applied to workplace studies, the work of one scholar in particular—Dorothy Winsor—resonates continually.

In the next sub-section, I will develop specific points of resonance and a broader notion of her work's applicability to a rhetorical notion of workplace studies in TPC.

Winsor's Notion

Dorothy Winsor is a scholar who has published work that is integral to my conception of workplace as a rhetorical construct. In her 1996 book *Writing like an Engineer: A Rhetorical Education,* Winsor offered a compelling perspective on rhetoric as part of her five-year longitudinal study of engineering co-op students' writing practices in workplace settings; in situating her work theoretically, she considered the knowledge work of engineers rhetorical in that such work "is part of the activity [of knowledge creation]" and in that "knowledge is formed in interpersonal negotiation over interpretations of evidence rather than simply in the close individual examination of an unambiguous reality" (p. 5). She challenged Perelman & Olbrechts-Tyteca's (1969) notion of science as a nonrhetorical field, arguing that more recent scholarship had seen "knowledge in all areas as [dependent on] rhetoric" (p. 5). Moreover, Winsor argued, a shared understanding of a discourse community was in essence a rhetorical understanding because "groups of people (such as the members of a given discipline) use language in ways that are unique to them and . . . these unique ways both reflect and partly constitute their epistemology and identity" (p. 8, citing Swales, 1990).

From this and other work, I am extending Winsor's notion of the engineering workplace as a rhetorical space to include multiple workplaces: for the purpose of this dissertation, such spaces may include those not only in engineering and science fields, but also in other work contexts in which TPC professionals do or foreseeably could work, including different economic sectors (for profit, not-for-profit, community-embedded, government, educational) and types of organizations (IT, manufacturing, financial, legal, labor-driven, and so on). To be sure, Winsor's association of knowledge and ideas with professional writing is, unsurprisingly, not unique (see, for example, Ferro & Zachry, 2014; Johnson-Eilola, 1996). Yet I think that what Winsor does particularly well is to build a conceptually sound relationship among rhetoric, knowledge work, workplace settings, and writing.

In using Winsor to create a rhetorical argument for my research, I cite four essential points from her scholarship:

1. The notion of an engineering workplace as a rhetorical space—as a rhetorical community in which knowledge is created (Winsor, 1996)
2. The notion of "exertion of power" through language (Winsor, 2004, p. 349)
3. The writer's significance in negotiating processes of knowledge construction and constructing power dynamics (Winsor, 2003)
4. The rhetorical construction of knowledge in workplace settings (Winsor, 1996; 1998).

My work both incorporates and extends these views. First, while Winsor was mostly concerned with the communication practices of practicing engineers, I am extending her notion of the "engineering workplace" as a rhetorical space (point #1) to include any space in which technical communication practice can or does contribute to the process of knowledge-making in an organization. My notion of workspace as rhetorical thus diversifies the context that Winsor originally advanced for the purpose of a longitudinal study and widens the scope of human agents involved in communication practice; furthermore, it does so in a way that accommodates the argument that technical communication practice takes place in diverse work contexts, including those that TPC scholarship may have largely ignored up to this point.

Winsor acknowledges that power is exerted through language (point #2). She also acknowledges that writers can play a significant role in both constructing knowledge and influencing power dynamics within an organization (point #3). Part of this research examines how formal communications produced by an organization are shaped by the people involved in existing processes within that organization, whether or not those people are technical communicators *per se.* Building a multi-organizational picture of communication dynamics—and technical communicators' (potential) place in those dynamics—speaks directly to concepts of power and legitimacy in TPC.

The fourth point that I cite from Winsor—the rhetorical construction of knowledge in the workplace—essentially connects rhetoric, knowledge work, the workplace, and writing. Winsor developed this notion notably in her aforementioned 1996 book and in her 1998 article "Rhetorical Practices in Technical Work" (in which she provided a theoretical and empirical basis for contextualizing the rhetorical work of scientists and engineers—even when they may not intrinsically "see" their work as such). To Winsor, perceptions of people in workplaces represent discursively negotiated, rhetorically shaped constructions of meaning. These constructions find expression in organizational texts and in perceptions of reality shared with her in conversations she had with the people where she conducted research. The mechanisms by which meaning is constructed, by which organizational realities are shaped—particularly in their written manifestations—are something that Winsor called “profoundly rhetorical” (1996, p. 84). This rhetorical construction of knowledge is present even when the rhetorical elements of that process are “invisible” to a given stakeholder (Winsor, 1998). In contextualizing extradisciplinary perceptions of TPC, I incorporate Winsor’s view of the rhetorical construction of meaning.

As I described earlier, there are other scholars—not only Winsor—whose work can be used in contextualizing the workplace in rhetorical terms. Michel Foucault, who Lay (1997, p. 59) importantly said “challenge[d] rhetoricians to think about the relationship of discourse, knowledge, and power in much more complex ways than I find in Winsor’s study.” Other scholars, such as Clay Spinuzzi (2013), have suggested methods for conducting empirical work on workplaces. As I discussed, scholars within TPC commonly relate rhetoric with workplace studies in an implicit, generalized way (for example, discussing a broad rhetorical situation in a workplace). In my reading so far, few scholars provide a way of contextualizing my rhetorical approach to workplace studies as fully, as clearly, or as seamlessly as Winsor does. In essence, I turn to Winsor’s rhetorical approach not because it is the only approach that applies to workplace studies, but because it is an approach I have found to be relatable to broad academic and practical audiences, well demonstrated in empirical practice, and repeatedly kairotic in my own research.

A Modified Grounded Theory Approach

I describe the methodology I used in this study as that of “modified grounded theory.” This term is used in a deliberate manner to denote a specific approach to gathering and interpreting empirical data. To be fair, a discussion of Grounded Theory could fill an entire book—and indeed it has (more than one, in fact). For the purposes of the research I am presenting in this dissertation, I will characterize a range of relevant approaches from what many would call “traditional” Grounded Theory to other, “modified” approaches that have been used successfully over time.

For the purpose of understanding the methodology I used in this study, it is first important to understand “traditional” or “classic” Grounded Theory as posited by sociologists Barney Glaser & Anselm Strauss in their seminal work *The Discovery of Grounded Theory* (1967). Around the time Glaser & Strauss wrote this book, “Qualitative research in sociology was losing ground,” Kathy Charmaz (2006), another proponent of this approach, observed. “By the mid-1960s, the long tradition of qualitative research in sociology had waned as sophisticated quantitative methods gained dominance in the United States and quantitative methodologists reigned over departments, journal editorial boards, and funding agencies” (p. 4). From the scientific method and Enlightenment had come an emphasis on positivism and objectivity (or, at least, attempts to find objective meaning); this emphasis, in turn, was predominant in the quantitative methods of the time. As a result, the common method of approaching a research problem was to develop an *a priori* concept (a hypothesis) and then to test that concept empirically using quantitative methods of analysis (such as experimentation).

Grounded Theory challenges such quantitative assumptions. It is a starting point for a more inductive approach to studying phenomena in the social sciences and humanities. With some researchers emphasizing causal relationships, a more fitting description of some Grounded Theory research may be to call it an *abductive* approach (see, e.g., Peirce, 1901). With any research based in Grounded Theory, one very significant component is an emphasis on theory-building rather than (as with the scientific method) theory-testing. As Kvale and Brinkmann (2009) wrote, Grounded Theory presents "a systematic strategy for theory development without a prior theoretical framework; grounded theories are developed through the use of conceptualization to bind facts together, rather than through inferences and hypothesis testing" (pp. 324-325, quoted in Spencer, 2012, p. 37).

Over time, Glaser & Strauss began to diverge in their respective views on Grounded Theory (Pigozzi, 2015). Glaser, for his part, reflected a more staunch loyalty to the Grounded Theory approach that he and Strauss had advocated in 1967—what many researchers would refer to as the "classic" or "traditional" Grounded Theory (some professors of mine have even referred to it as the "capital *G,* capital *T"* kind). This kind of Grounded Theory seeks to generate inductively reasoned theory and, as part of that process, calls for a suspension of the researcher's preconceptions (Pigozzi, 2015). As a result, classic Grounded Theory also calls for a deferment of the literature review and any early questions the researcher may have; those pieces, according to classic Grounded Theory, should take place after the research is finished and a theory has been developed.

Strauss, unlike Glaser, took upon a less prescriptive approach to grounded theory in future work. This approach became particularly apparent in his writings with Juliet Corbin. As they argued in books such as *Basics of Qualitative Research* (1990) and *Grounded Theory in Practice* (1997), Strauss & Corbin valued the prior experience of the researcher and saw the value of conducting a literature review earlier in the research process, arguing that "[e]ach type of literature tends to be useful in somewhat different and specific ways, yielding diverse sorts of ranges of data…or research findings, or theoretical formulations" (Strauss & Corbin, 1990, p. 56, quoted in Pigozzi, 2015, p. 68).

Kathy Charmaz is another proponent of grounded theory whose ideas merit discussion in this section. Though classic Grounded Theory no doubt informed her perspective on research, Charmaz took grounded theory in a somewhat different direction from Glaser & Strauss, both of whom were professors with whom she studied while she was a doctoral student in sociology at the University of California, San Francisco. (Strauss, in fact, was her dissertation chair.) Her book *Constructing Grounded Theory* articulated a set of principles and guidelines for performing grounded theory work, which Charmaz saw (as with any theoretical rendering) as providing "an interpretive portrayal of the studied world, not an exact picture of it" (Charmaz, 2006, p. 10). She further distinguished her treatment of grounded theory as follows:

> Throughout the book, I build on my earlier discussions of the grounded theory method . . . and on a symbolic interactionist theoretical perspective. Grounded theory serves as a way to learn about the worlds we study and a method for developing theories to understand them. In the classic

> grounded theory works, Glaser and Strauss talk about discovering theory as emerging from data separate from the scientific observer. Unlike their position, I assume that neither data nor theories are discovered. Rather, we are part of the world we study and the data we collect. We construct our grounded theories through our past and present involvements and interactions with people, perspectives, and research practices. (Charmaz, 2006, p. 10)

Key in this paragraph is the final sentence speaking to the idea of "constructing grounded theories," a concept that by no coincidence mirrors the title of her book. Charmaz herself has been a proponent of *constructivist* grounded theory (Charmaz, 2006; Mills, Bonner, & Francis, 2006), which "places priority on the phenomena of study and sees both data and analysis as created from shared experiences and relationships with participants and other sources of data" (Charmaz, 2006, p. 130); a constructivist approach "lies squarely in the interpretive tradition" (Charmaz, 2006, p. 130) and contrasts with an objectivist approach to grounded theory, which "resides in the positivist tradition and thus attends to data as real in and of themselves and does not attend to the processes of their production" while "eras[ing] social context, the influence of the researcher, and often the interactions between grounded theorists and their research participants" (p. 131). Also of importance, Charmaz said, is that "[a]n objectivist grounded theorist assumes that data represent objective facts about a knowable world. The data already exist in the world; the researcher finds them and 'discovers' theory from them" (p. 131). While this dichotomy does not by any means capture the entirety of the grounded theory debate over the years, it is imperative for any grounded theory researcher to recognize the differences in the constructivist view of theorists like Charmaz and the more objectivist view of theorists like Glaser.

Approaches to grounded theory vary both philosophically and in practice. Some researchers, for example, will opt to complete a literature review before conducting empirical research; others will opt to defer it. Another example can be found in memoing (a common feature of grounded theory approaches; see Charmaz, 2006): different researchers may approach it in different ways. With such imminent variation, many researchers refer to their methodology as a “modified” form of grounded theory (as I do later in this chapter). Regardless, despite those variations, there are general commonalities in the approaches and terminology among grounded theory researchers. These commonalities are described in detail in Antony Bryant’s (2017) *Grounded Theory and Grounded Theorizing: Pragmatism in Research Practice* (see, e.g., p. 19, which features a table on which the following list is based).

- **Methodology** (which Bryant thinks of as “rationale”): Seminal texts such as Glaser and Strauss’s *The Discovery of Grounded Theory* helped establish the rationale for grounded theory. (The rationale and purpose of grounded theory were described in more detail earlier in this section.)
- **Method:** Use of coding, conceptualizing, abstracting, and theorizing. The grounded theory method is iterative, centering around coding that becomes part of the analysis.

- **Techniques:** Coding, sampling, memo-making, theoretical sorting, and theoretical saturation (the point at which additional data does not significantly refine or advance a developed theory—see Bryant, 2017, p. 249; Charmaz, 2006, p. 113).
- **Tools:** Coding notes, memos, diagrams, sticky notes, color visualizations, software.
- **Models:** Codes, categories, and concepts; Grounded theories are classified as substantive (used in explain delimited contextual scenarios) or formal (used to explain larger phenomena) (see Bryant, 2017, pp. 97-98). Hypotheses are formulated as an outcome of the research.

In the following subsections, I will provide examples of the use of grounded theory in broad academic disciplines and in writing studies and TPC. I will also discuss some critiques of grounded theory. The final sub-section will discuss a modified grounded theory approach in the context of the research I am presenting in this dissertation.

Grounded Theory in Application

Grounded theory has gained wide acceptance in a number of disciplines. Clearly, as it started with the work of two sociologists, Glaser & Strauss, grounded theory has been used frequently in sociology and, as a cognate discipline, psychology. It has also found considerable use in such contexts as medical education, physical therapy, computer science, and organizational research. Table 3 summarizes ways in which grounded theory has been applied across many of these disciplines. To the extent possible, I have selected both examples that provide a methodological discussion or foundation for use in a given discipline and that represent an application of grounded theory in that discipline.

Table 3

Examples of the Use of Grounded Theory across Disciplines

Example of Discipline in Which Grounded Theory Has Been Applied	Example Citation(s) and Brief Summary
Sociology	Numerous foundational texts exist for sociology's use of grounded theory, as grounded theory was developed in large part as a sociological method. Glaser and Strauss themselves can be seen as foundational to this development. In later years, Charmaz & Belgrave (2007) provided a good historical account of grounded theory for sociologists, while Corbin & Strauss (1990) served as examples of researchers who helped establish methods for its use in the discipline. In a discussion of the use of grounded theory methods in the sociological study of death and dying, Belgrave & Charmaz (2014) mentioned the work of Horne, Seymour and Payne (2012), who used constructivist grounded theory in their research, "finding that those affected maintain integrity by living in the present while facing death" (Belgrave & Charmaz, 2014, p. 41).
Psychology	Henwood & Pidgeon (2003) argued for greater breadth of methodology in psychological research and provided examples of studies that had incorporated grounded theory effectively. Fletcher & Sarkar (2012) used a grounded theory approach to study the relationship between psychological resilience and optimal sport performance through interviews of 12 Olympic athletes.

Example of Discipline in Which Grounded Theory Has Been Applied	Example Citation(s) and Brief Summary
Medical education	Kennedy & Lingard (2006) provided a methodological foundation for the use of grounded theory in medical education research. Kennedy, Rgehr, Baker, & Lingard (2009) used a grounded theory approach to studying the motivations that lead clinical trainees in medical settings to ask for help from their supervisors.
Physical therapy	Mellion & Tovin (2002) established grounded theory guidelines for physical therapy research; it also served as an introduction to grounded theory for researchers in that field. Rindflesch (2009) used a grounded theory approach to study patient education practices in multiple clinical settings among nine physical therapists.
Computer science	Hazzan, Dubinsky, Eidelman, Sakhnini, & Teif (2006) discussed the use of grounded theory as part of advancing qualitative research in computer science education. Lewis, Yasuhara, & Anderson (2011) presented on a study that used a grounded theory approach to understanding how students' perceptions of their own computer science-related ability contributed to their decisions to major in computer science.
Organizational research	Researchers such as Martin & Turner (1986); Länsisalmi, Peiro, & Kivimäk (2004); and Goulding (2009) have argued for the use of grounded theory in organizational research and helped establish guidelines for its use in such work. In the service management industry, Sofia Martins & Patricio (2013) used a grounded theory approach in gathering and analyzing data related to the company social network (CSN) of a large retailer and how its members participate in the CSN.

Grounded theory has also been used in writing studies and TPC research. This fact is not surprising, since those disciplines have incorporated a number of empirical approaches from the social sciences over time (see, e.g., Conklin & Hayhoe, 2011; Hughes & Hayhoe, 2009; Gurak & Lay, 2002; Kirsch, 2012; McNely, Spinuzzi, & Teston, 2015). Conklin & Hayhoe (2011) noted grounded theory as part of the "rich harmony of perspectives" that is representative of technical communication research "as diverse as the field of technical communication (or, indeed, qualitative research) itself" (p. ix). In this collection, grounded theory approaches were featured in chapters on themes in the relationship between web design and museum design (Carliner, 2011), on how rhetorical invention is used in decision-making on what visuals to incorporate in technical documents (Portewig, 2011), on a study of pedagogical practices in science communication (Mogull, 2011), and on a case study of classroom simulations of "real world" workplace scenarios in technical communication (Vosecky, Seigel, & Wallace, 2011).

Other scholarship in TPC has discussed and/or utilized grounded theory as well. Examples, such as those shown below, range from methodological arguments to pedagogical examples to application in fieldwork:

- Observations about the use of induction (e.g., in grounded theory) in ethnographic research in technical and business writing (Cross, 1994)
- Use of the constant comparative method (Glaser & Strauss, 1967) in analyzing a company's communications largely dealing with a change in strategy after the loss of an aeronautical innovation (Mara, 2008)

- A study of the relationship between use of service-learning in a technical communication course and achievement of given learning outcomes (Soria & Weiner, 2013)
- A pedagogical study of the use of video in online writing instruction (Whithaus & Magnotto Neff, 2006)
- An analysis of job postings in technical communication (Brumberger & Lauer, 2015)
- A study of how people navigating psychiatric information use online data and contribute to discussions in web-based spaces (Holladay, 2016)
- An interview-based study of the use of “Virtual Worlds” in geographically distributed collaboration and communication (Bosch-Sijtsema & Sivunen, 2013)
- An interview-based study of managers’ perceptions of professional communication in their organizations (Blythe & Amidon, 2008).

In her recent book *Involving the Audience: A Rhetorical Perspective on Using Social Media to Improve Websites*, Breuch (2019) used a modified grounded theory approach in her analysis of “social web” data from two different websites, one for a large municipal library system, the other for a statewide health insurance system developed for Minnesota citizens. Among other implications, Breuch argued that “our rhetorical understandings of audience have evolved past traditional models of audience that were highly controlled by rhetors” and that “social media further actualizes [the] shift [in writing studies and rhetoric] toward understanding audiences as active participants” (p.

147), for example, in critiquing and identifying needed changes to dynamic web content and end-user systems.

Across this body of work, two points become clear. The first is the applicability of grounded theory in TPC research (and, by extension, closely related disciplines such as the rhetoric of health and medicine and usability studies). In that context, Conklin & Hayhoe (2011) pointed out that grounded theory stands as “one of the more popular and rigorous qualitative research designs” (p. 83). The second, related point is that the application of grounded theory in TPC research will to some degree vary based on the intent of each study. Any number of examples in TPC could be used, but for the sake of illustration, I will provide two here. In one example, Mogull (2011) used a constructivist grounded theory approach to analyze data from interviews of science communication instructors as part of his research on effective science communication pedagogy; unlike many other studies using grounded theory, however, he was not seeking to generate theory, but to articulate key findings related to pedagogy. As another example, in their research on the use of communication metaphors among multiple firms in intercultural “offshore partnerships,” Wareham, Mahnke, Peters, & Bjorn-Andersen (2007) recognized that “[g]rounded theory is a useful methodology to employ when a phenomenon has not been explored extensively” (p. 97)—a rationale for their use of it—yet qualified its application in their study by using the “Straussian” allowance for the inclusion of prior knowledge and experience: “In our case, prior understanding of cultural and maturity differences, as well as technical communication and systems development, guided our analysis” (p. 97). TPC researchers, therefore, like scholars in other fields, have adapted principles of grounded theory to fit the context of their work while striving to maintain the systematic rigor associated with the methodology.

Criticisms of Grounded Theory

Despite its successful use across disciplines, grounded theory is not without its critics; even researchers who have used grounded theory have at times recognized limitations to it in certain instances (see. e.g., Olesen, 2007). In this subsection, I will briefly address some notable criticisms of grounded theory in general terms. (Later, in chapter 4 of this dissertation, I will incorporate some relevant criticisms appropriately into a discussion of observed limitations of the empirical study I conducted.)

- **Excessive emphasis on induction leading to challenges in generalizability.** One of the common criticisms of grounded theory is that it maintains an excessive—or, as Thomas & James (2006, p. 769) put it, "naive"—emphasis on inductive reasoning (Olesen, 2007; Thomas & James, 2006). Although grounded theory is often seen as not a "purely" inductive method (see, e.g., Spencer, 2012), the fact that conclusions are drawn from particularities can present challenges to generalizability. In essence, "grounded theory escapes the testing of theory. There is no clear distinction between context and regularities" (Mjøset, 2005, p. 390, paraphrasing Goldthorpe, 2000).
- **"Theory" versus "discovery."** Thomas & James noted an important difference between grounded theory as "theory" and grounded theory as "discovery." I am including a key excerpt that describes that difference:

> Discovery is a process of uncovering, revealing, disclosing that which is there. The assumption in the use of ‘discovery’ is therefore that meaning is laid open for all to see following the application of some method of finding. Discovery is in no way synonymous with ‘tentatively suggesting.’ The idea that a ‘theory’ can be ‘discovered’ therefore puts that theory a long way away from interpretation. In the opposition of the interpretative to the normative and the illuminative to the definitive, grounded theory—proudly boasting a pedigree from qualitative inquiry’s stable—surely aspires to interpretation and illumination. The mere use of ‘discovery,’ however, divulges expectations closer to the normative and the definitive—to a correspondence view of knowledge. (Thomas & James, 2007, p. 785-786)

The grounded theory researcher, therefore, must be clear about the intent of their work: Is it to generate explanatory theory—to arrive at an interpretation that may be elusive to some and untenable to others? Is it to discover a truth that’s plain to see—that an objective, empirical process of examination has uncovered and “laid bare” for all to know? These questions represent a sort of “continuum” that relates to the next criticism.

- **Excessive emphasis on positivism.** Many formulations of grounded theory have featured a great deal of positivist influence, particularly given Glaser’s original background at Columbia University that he brought into his work on grounded theory (Thomas & James, 2005). Such positivist persuasion can be problematic; feminist grounded theory researchers, for example, have observed that:

> Early and subsequent formulations of GT—with the exception of very recent advances which emphasize social constructionism (Charmaz, 2006) and postmodernism (Clarke, 2005)—fail to recognize the embeddedness of the researcher and thus obscure the researcher's considerable agency in data construction and interpretation, as well as the framing of accounts. (Olesen, 2007, p. 422)

- **Ambiguities and confusion in application.** The above quote brings up another important criticism: with divergent views of grounded theory, such as those of Glaser, Strauss & Corbin, and Charmaz, "the role of verification remains a 'puzzle' and the role of prior theory is unclear" (Thomas & James, 2007, p. 769). These kinds of criticisms were notably developed by Ian Dey (1999), though he ironically—and importantly—"sees grounded theory as capable of development and as offering a 'middle way' between ideographic and nomothetic theorizing" (Thomas & James, 2007, p. 769).
- **Concerns about reflexivity.** Reflexivity, defined as the "manner and extent to which the researchers present themselves as imbedded in the research situation and process" (Olesen, 2007, p. 423), is another concern in grounded theory. A positivist stance would hold researchers to objective goals; a more constructivist, interpretive stance affords more room for contextual considerations such as the

> researcher's own background, the researcher's knowledge of the study population, and the contributions of previous studies. Despite the difficulty of achieving "true" reflexivity in grounded theory research, "Reflexivity is a means to realize 'strong objectivity' [Hading, 1993, p. 71] which rejects reliance on value-free objectivity and foregrounds instead the relationship of researcher and participant in which the participant is seen as gazing back at the researcher" (Olesen, 2007, p. 425).

These criticisms offer a range of considerations that researchers who utilize grounded theory will need to make. As mentioned before, in chapter 4, I will bring such considerations to bear when I discuss potential limitations to my own empirical study.

Modified Grounded Theory in This Research

While grounded theory is well established in qualitative research, with observable precedents in writing studies and related disciplines, one question that naturally remains is my reasoning for using grounded theory in the research I am presenting here. To put it simply, my purpose in using grounded theory is to generate substantive theory—initial explanations for the existence of observed patterns discovered through empirical study—for extradisciplinary perceptions of TPC as a field of workplace practice, as well as ways in which those extradisciplinary perceptions influence the utilization and perceived value of TPC in workplace settings. As I discussed in chapter 1, despite an abundance of research on intradisciplinary perceptions of TPC, the body of work on non-TPC practitioners' perspectives is limited. A grounded theory approach offers a systematic, robust methodology for generating substantive theory on this evolving area of study.

The grounded approach that I have used in this research is, without doubt, different from some of the prescriptions associated with traditional or classic Grounded Theory. For example, I conducted a literature review and used elements of that review, such as writings on the academy-practice gap in TPC, to help inform a practical model for TPC's viability in workplace application and the direction of my interviews for later transcription and analysis—a practice seen as counterproductive by many Grounded Theory traditionalists such as Glaser but supported by theorists like Charmaz. These are but examples of ways in which my work adopts and adapts grounded theory guidelines in ways that suit its purpose well yet maintain a systematic rigor needed to construct substantive theory from findings. The table below summarizes characteristics of grounded theory and how they have been applied in this study.

Table 4

Grounded Theory Characteristics and Their Application in This Study

Methodological Characteristic	Use/Application in this Study
Rationale (termed "Methodology" in Bryant, 2017)	A grounded theory approach offers a systematic, robust methodology for studying extradisciplinary perceptions of TPC.
Philosophical variant (see Bryant, 2017; Charmaz, 2006)	Interpretive, constructivist
Intent (see Byant, 2017)	Generation of substantive theory
Techniques (see Bryant, 2017)	
Coding	Two-cycle coding: structural and pattern (see "Data Analysis" section below)
Sampling	Convenience and snowball (see "Sampling Method and Sampling Size" section below)

Methodological Characteristic	Use/Application in this Study
Memo-making	Memos are written in paper form, scanned, and stored in a secure repository (particularly in phase 1—see “Phases of the Study” below)
Theoretical sorting	Sorting is performed using Microsoft Excel post-coding
Theoretical saturation	Recognized as patterns become redundant
Tools (see Bryant, 2017)	Transcripts in Microsoft Word with coding in tabular format; PDF records; Microsoft Excel spreadsheet with tabulated codes
Models (see Bryant, 2017)	
Codes	*See Chapter 4 for a full discussion.*
Categories	
Concepts	
Theories	
Hypotheses—as an outcome of the research	

Study Methodology

In this section, I will describe the study methodology for the interview-based research that I conducted. First, I will describe the three phases of the study, the sampling method, and sample size before explaining the data collection and data analysis and security processes that I used. The study was given “expedited review” status from the University of Minnesota Institutional Review Board (IRB) in August 2017; it has undergone continuing review with approval in 2018, 2019, and 2020. With recruitment and interview activities concluded, IRB oversight ended in December 2020. The University of Minnesota study number is 617 (STUDY00000617).

Phases of the Study

To help place the study into a proper context, it is important to describe the three phases of the study that evolved over approximately three years.[3] These phases can be delineated as follows:

- Phase 1 (August 2017 - March 2018). Phase 1 consisted of a pilot study of 14 participants. Based on my experience from that phase, I improved the sampling, recruitment, and screening processes for the rest of the study.
- Phase 2 (April 2018 - August 2018). This phase consisted of 18 participants, most of whom I interviewed between May and August 2018, during which time I held a summer research fellowship at the University of Minnesota.
- Phase 3 (September 2018 - May 2020). Phase 3 of the study was the most protracted. It was during this phase that the prospectus phase of dissertation resulted in changes to the included sample from phase 1 (see Sampling Method and Sample Size below) as well as to the question set for the interviews (see Data Collection below). During phase 3, a smaller number (3) of interviews was conducted but still contributed to the dataset in meaningful ways.

Sampling Method and Sample Size

For this study, I decided on a sampling method that combined elements of the convenience sample and snowball sample, both described in an article by Koerber &

[3] Refer to Appendix D for a chronology of important milestones in the study.

McMichael (2008) covering qualitative sampling methods in technical communication. According to Koerber & McMichael, convenience sampling involves a sample with “ready availability” (p. 463); the sample is frequently comprised of participants who were previously known to the researcher (through work experience, social interactions, and so on). Snowball sampling, on the other hand, involves “start[ing] with a small sample of people who are readily available and easy to contact and then expand[ing] the sample by asking each participant to recommend other potential participants” (Koerber & McMichael, 2008, p. 463).

These kinds of sampling—in which the researcher recruits participants from a first-level network, potentially expanding to their extended network—are not without drawbacks. For example, as Koerber & McMichael pointed out, it may be tempting for a researcher to try to overgeneralize characteristics of a larger population based on the smaller sample of participants known (or referred by those known) to the researcher. On the other hand, in the case of convenience sampling:

> Paradoxically, the same close relationship between researcher and research site that makes a sample convenient often grants the researcher a level of access to and familiarity with the sample that guarantees a richness of data that could not be attained if the sample were less familiar, and therefore less convenient, to the researcher. (Koerber & Michael, 2008, p. 463)

While I think it may be an exaggeration to assume that the access and familiarity afforded by sampling methods emphasizing participants’ “proximity” to the researcher can "guarantee" a high richness of data, methods such as convenience and snowball sampling do offer the benefit of readily identifying participants who meet key criteria for a given study. This study incorporated both convenience and snowball sampling in that:

- Participants were selected partly on the basis of convenient access geographically (as with people who lived in one of the areas in which I was currently living or had previously lived) or professionally (as with people who were coworkers at one time). This type of sampling constituted a convenience sample.
- Participants were also identified based on their connection to someone I had interviewed or known previously—through a snowball sample, that is. One example of this was a communication executive for a software company based in the American South—a person I had been put in touch with by an interviewee from a separate study I had been conducting.

It is worth noting that Koerber & McMichael discussed at least one additional sampling method that could be applied to this study: that of purposeful sampling, which according to Koerber & Michael indicates that the "researcher is looking for participants who possess certain traits or qualities" (p. 464). In purposeful sampling, the researcher deliberately seeks participants who possess certain characteristics, as those characteristics are essential to the research focus. To some degree, this study did incorporate purposeful sampling with the perspective of non-TPC practitioners taking priority, especially in latter phases of the research. However, because the sampling method emphasized close degrees of social network proximity, characterizing the sampling method as a combination of convenience and snowball sampling made the most sense for this research. As described in part in the participant criteria below, the most important criteria for participants were that they were not practicing technical communicators themselves, that (with a few exceptions and nuances described later in this chapter) their organization did not have a known technical communicator on staff, that they could foreseeably have influence in the hiring or perception of technical communication in a future work context, and that they had a general working knowledge of formal communications produced by their organization.

In general, potential participants were first contacted through email. Through early communications, I could determine which participants would be best suited for the study. In a revised IRB protocol for the study, inclusion criteria were specified as follows:

> *Anyone who (1) works at a for-profit, not-for-profit, or government organization that, at his or her base office, does* <u>*not*</u> *employ a person with a title named in [Baehr, 2015] and (2) possesses a working knowledge of how formal communications are handled within that organization. Exceptions to criterion (1) may be made if the participant has an unusually high knowledge of technical communication practices and his or her participation would add exceptionally useful data for the study based on the student investigator's assessment.*

Exclusion criteria were specified as follows.

> *Any persons whose participation in the study could reasonably be foreseen to create a conflict of interest; any person who works at an organization employing a person/people in technical communication or related fields as*

determined in [the inclusion criteria]; any person who does not possess working knowledge of how formal communications are handled within the employing organization.

Based on the data participants shared during the recruitment process, these criteria were followed closely. As noted in the inclusion criteria, Baehr's (2015) article "Complexities in Hybridization: Professional Identities and Relationships in Technical Communication" served as a reference point for determining technical writing-oriented job titles (see Appendix A) that, if present within a potential participant's work setting, would with rare exception lead to the participant's being taken out of the study sample (once my dissertation committee had reviewed the prospectus, this actually happened retroactively with four phase 1 interviews). As the study progressed, the recruitment and screening process improved. For example, at the beginning of the study I used the formal screening email approved by IRB to help "vet" potential participants. However, as I became more comfortable with recruiting participants, I was able to determine whether they met inclusion criteria more easily, through conversation, often without needing to ask formal screening questions. As the study progressed, I was able to take steps to expand the study sample in terms of geography and, to some degree, social network proximity; some of these steps included the use of snowball sampling and a review in later phases of localities and regions in which study participants were (or previously had been known to be) working.

Data Collection and Security

I collected data through semi-structured interviews. Semi-structured interviews, as Wengraf (2001) wrote, are “designed to have a number of interviewer questions prepared in advance”; the questions the interviewer asks should be “sufficiently open that the subsequent questions of the interviewer cannot be planned in advance but must be improvised in a careful and theorized way” (p. 5). This type of interview was well suited to this study for a few reasons:

- It allowed for what I have previously called “dialogic improvisation” (Rosselot-Merritt, 2020)—the ability to have a carefully framed, inviting, and data-rich dialog with each participant.
- It allowed for clarification of or elaboration on specific points shared by the participant.
- It could be easily adapted to the medium most convenient to each participant.

Originally, the interviews were composed of nine questions: the first three were about the participant’s education and work background, the next three about the types of communications common in the participant’s workplace, and the final three about the participant’s perceptions of technical communication and its (potential) applicability in that person’s work setting. During the prospectus phase of dissertation, my committee noted that a tenth question about whether a person has ever worked with a technical communicator would be helpful for the interview process. With IRB approval, I added that question to the interview set and also included an alternative question for question 1 that enables participants to share more generic information about their employer so as to offset concerns about confidentiality and sensitivity of the information. (The specific sets of interview questions used can be found in Appendix B.) Because most of the interviews were completed in phases 1 and 2, most of the participants were asked the original set of nine questions.

Out of 31 total interviews included in this study, 7 were conducted in person, 15 by phone or Skype or another remote conversation protocol, and 9 by email. Nearly all synchronous interviews were recorded, resulting in 21 that required transcription; a grant from the Council for Programs in Technical and Scientific Communication (CPTSC) provided funding for transcription of all of the audio from phases 2 and 3.

Throughout the data collection process, strict security safeguards were utilized to protect participants' confidentiality and to maintain the integrity of the data. These processes included use of a secure, encrypted and password-protected data repository approved by IRB; non-disclosure provisions reviewed by IRB prior to transcription; and de-identification of participants in published findings. In addition, each participant read and signed a consent form prior to their participation in the study.

Data Analysis

All data from the study were analyzed textually; these data included email-based responses and the text of any audio files collected from synchronous interviews (the latter generally obtained from transcribed text files). Qualitative analysis of interview data consisted of a two-cycle coding process (see Saldaña, 2009). The first cycle consisted of structural coding, which Saldaña said "applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question used to frame the interview" (2009, p. 66). The second cycle consisted of pattern coding, a process made up of "explanatory or inferential codes [that] identify an emergent theme, configuration, or explanation" (Saldaña, 2009, p. 152, quoting Miles & Huberman, 1994, p. 69). Through the first cycle of coding, I laid out the structure of each interview based on these characteristics:

- Type of company (the company/organization type in which the participant worked)
- Role (the participant's reported role within the company/organization)
- Gender
- Background (education and credentials)
- Communication types (types of communications that the participant reported using or encountering in their workplace)
- Communication handling (how communications are handled/produced/disseminated)
- Communication effectiveness (the participant's perception of how effect communications are handled within their organization)
- Perceptions of technical communication (words/text strings associated with the participant's reported perceptions of technical communication—*this characteristic was added in phase 2)*
- Openness to hiring a technical communicator (based on the participant's knowledge, whether or not the participant's organization or employer would be open to the idea of hiring a technical communicator within the next 6 months)

In the second cycle of coding, I identified emergent themes from each interview using an open coding scheme (Bryant & Charmaz, 2007) that became more refined as data analysis continued. In phase 1, I experimented with different approaches to coding the data. For example, initially I would use written memos upon sections of text to identify key themes. As I worked with more and more data, however, I found it easiest to lay out each interview text in tabular form using Word format. Each table featured a two-column design: interview text in the left column, and emergent themes that I would insert in the right column. After reading and coding the interview text from each interview, I read the text again to see whether additional themes could be parsed out. Once finished, I then saved the coded data in PDF format to preserve formatting as closely as possible.

Through the process of iterative pattern coding, several patterns emerged. I will discuss these patterns in more detail, along with the data and reasoning that led to their development, in the next chapter. Also in the next chapter, I will describe aggregate interview characteristics with some more granular nuances that merit reflection. Finally, I will describe possible reasons for the observed patterns, offering what would be called in grounded theory terms some *substantive theory* (see Bryant, 2017) for their existence.

Chapter 4: Fertile Grounds: Results of Empirical Study

Overview of Study Goals and General Parameters

In this chapter, I am going to describe findings from the interview-based research study whose methodology was delineated in chapter 3. As chapter 3 explained, this interview-based study consisted of semi-structured interviews of non-TPC professionals who, despite in most cases not working with a technical communicator in their current role, have the potential to work with or in some way influence the utilization of a technical communicator in future work scenarios. Those interviews consisted of nine or ten questions (depending on when the interview was conducted, as one additional question was added later in the process): three dealing with individual and occupational background, three dealing with internal and external communications produced by the participant's organization, and three or four dealing with perceptions and utilization questions about technical communication. These questions are contained in Appendix B.

This interview-based study was centered on the following research questions first brought up in chapter 1:

- How are extradisciplinary perceptions associated with TPC's legitimacy in workplaces?
- How do individuals' and organizations' perceptions of technical communication practice contribute to legitimacy and professionalization of the field?

Besides offering insights into extradisciplinary perceptions of TPC, this chapter represents the culmination of three years of work: exploratory research, discussions with my advisor and other scholars, interviews, coding and analysis, and finally the presentation of results in this chapter.[4] Because of the importance of the topic to me professionally, and because of the amount of time and energy that went into it, the "Fertile Grounds" empirical study is easily one of the most memorable projects on which I worked in my time as a PhD student and candidate. It is certainly the most ambitious project on which I worked during that time, other than the cumulative effort involved in writing the dissertation. As I will explain in chapter 5, I seek to connect findings from the study to meaningful implications for TPC practice that scholars and practitioners alike can use.

This chapter is going to be structured in the following way. After this introduction, I will first present findings from the first cycle of coding—structural coding—in which specific details from each of the 31 interviews can be articulated. The next section will describe findings based on the second cycle of coding—pattern coding—in which analysis of interview data led to the discovery of eight key patterns. The last two sections of this chapter will deal with potential limitations of the interview-based study and a preview of the last chapter.

In this empirical work, I have found that tables do a very good job of summarizing many of the key findings. As a result, this chapter will contain many tables, particularly in the section on first-cycle structural coding. Because of the number of interviews conducted, many of the tables will be rather long, with rows that span multiple

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[4] A general chronology of this research—from initial concept to completion of the first dissertation draft—can be found in Appendix D.

pages. I will maintain header rows on each page and ensure that each table is labeled appropriately to aid in the readability of the tabular data.

To help with designating participants throughout the chapter, I will use the letter *P* followed by a number to indicate that participant. For example, *P21* would indicate participant 21. Where needed, I will identify or reiterate the job role and/or type of industry for a participant to help provide needed context.

Even though I have already expressed thanks to the participants in this study in the acknowledgements, I want to take a moment to acknowledge their participation again. Though the idea for this study is something I developed in consultation with my advisor, the participants in the Fertile Grounds study really made this study what it is in terms of the data and the results that I am now able to share. The participants came from a variety of educational and work backgrounds, and they became a part of the study in different and sometimes unexpected ways (consistent with the sampling method described in chapter 3). There was no compensation for participating in the study, and in many cases participants had to work around challenging schedules in order to be a part of this work. As a researcher and as a technical writer, I am immensely grateful for their contributions.

Results of First-Cycle Structural Coding

This section will discuss details on participant characteristics, work contexts, how internal and external formal communications are handled in those contexts, participants' perceptions of communication processes in their organizations, perceptions of technical communication, whether their organization currently employs a technical communicator, and whether the organization would be open to hiring a technical communicator in the foreseeable future. Additional details will be provided on participants' known or inferred history of working with technical communicators.

Participant Characteristics and Backgrounds, Roles, and Organizations (Based on Interview Questions 1, 2, and 3)

As mentioned, a total of 31 interviews made up the sample contributing to the empirical dataset. Besides the previously mentioned characteristic that most participants shared—their not working with a technical communicator in their work environment—more specific details of each participant's education, role, type or organization, and economic sector can be found in Table 5. All of these details were current as of the date the interview was conducted (no longitudinal follow-up was performed).

Of the 31 interviews in the sample, 7 were conducted in person, 15 were conducted remotely using a synchronous communication method (phone or conferencing software, generally), and 9 were conducted using email. The interviews that were conducted in person were for participants 1, 2, 8, 9, 11, 18, and 29; by a remote synchronous method, for participants 3, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 30, and 31; and finally, by email, for participants 4, 5, 6, 7, 10, 19, 26, 27, 28.

In terms of education, all participants had a high school diploma; that was the highest level of education attained in 4 cases (with 3 of the 4 pursuing college-level coursework). One participant attained two associate's degrees as their highest level of education; 14 participants attained a bachelor's degree as their highest level of education, while 9 attained a master's degree as their highest level of education. Three participants had completed a PhD. Several participants had earned additional certifications or licensures or pursued additional education; relevant details can be found in Table 5.

Nine participants had known supervisory responsibilities in their roles; 22 did not. A variety of organizational types were represented; several were related to manufacturing and supply chain fulfillment, engineering, IT, healthcare, and education. Of the organizations represented in the study, 23 of the organizations represented were for-profit, four were non-profit, four were educational, and one was military (note that one participant, P31, had two concurrent roles). Two participants, P20 and P23, reported very recent employment at the time of their interviews—recent enough that those roles were considered in the context of the study in addition to their current roles as independent consultants in their respective industries.

These data were gathered from answers to questions 1, 2, and 3 in the interviews.

Table 5

Participant Data: Education, Role, Type of Organization, and Economic Sector of Organization

Participant Number	Education	Role	Type of Organization	Economic Sector
1	Bachelor's Degree Some MBA Coursework	Director of Development	Engineering Services	For-Profit
2	Bachelor's Degree Master's Degree PhD Coursework	Teacher, German	Public Education	Education
3	High School Diploma Courses toward Bachelor's Degree	Director, Program Management	Insurance and IT Security	For-Profit
4	Bachelor's Degree	Staff Engineer	Engineering Services	For-Profit

Participant Number	Education	Role	Type of Organization	Economic Sector
5	Associate’s Degree (2) Bachelor’s Degree (2) PhD	Executive Director	Immigrant Rights	Non-Profit
6	Associate’s Degree Bachelor’s Degree	Marketing Coordinator	Industrial Gear and Motor Modules	For-Profit
7	Bachelor’s Degree Master’s Degree	Senior Product Manager	Enterprise Finance and HR	For-Profit
8	Associate’s Degree Bachelor’s Degree	Owner and Lead Technician	IT Services	For-Profit
9	High School Diploma Courses toward Associate’s Degree	Assistant Manager	Restaurant Supply	For-Profit
10	Associate’s Degree (2)	Maximo Specialist and Project Coordinator	Enterprise Asset Management Consultancy	For-Profit
11	High School Diploma	Senior Automation Consultant	Engineering Services	For-Profit
12	Bachelor’s Degree	Director of Operations	Branding and Consulting	For-Profit
13	Bachelor’s Degree	Marketing Manager	Industrial Pump Technology	For-Profit
14	Bachelor’s Degree	Art Department/Production Manager	Packaging	For-Profit
15	Bachelor’s Degree Master’s Degree	Nurse Anesthetist	Healthcare	Non-Profit
16	Bachelor’s Degree Master’s Degree	Speech-Language Pathologist	Healthcare	Non-Profit
17	Bachelor’s Degree Master’s Degree PhD	Assistant Professor	Higher Education	Education
18	Bachelor’s Degree Master’s Degree Graduate Certificate in Student Affairs in Higher Education	Assistant Director of Student Engagement	Higher Education	Education
19	Bachelor’s Degree	Multimedia Specialist	Higher Education (For-Profit)	For-Profit

Participant Number	Education	Role	Type of Organization	Economic Sector
20	Bachelor's Degree Master's Degree Courses toward Additional Master's Degree	Independent Consultant *Previously:* Institutional Program Marketing Director	Marketing Consultancy *Previously:* Higher Education	For-Profit
21	Bachelor's Degree Professional Engineer Licensure	Engineering Manager	Biopharmaceuticals	For-Profit
22	Bachelor's Degree	Automation Systems Engineer	Engineering Services	For-Profit
23	Bachelor's Degree Master's Degree PHR Certification SHRM-CP Certification Labor Relations Professional Certification	Independent HR Consultant *Previously:* HR Generalist	HR Consultancy *Previously:* Healthcare	For-Profit *Previously: Education*
24	Bachelor's Degree Dietitian Licensure Advanced Certification in Diabetes Management	Dietitian	Healthcare	Non-Profit
25	Bachelor's Degree Master's Degree PhD	Corporate Marketing Specialist	Software	For-Profit
26	Bachelor's Degree	Project Manager	Industrial Equipment	For-Profit
27	Bachelor's Degree	Writer and Digital Marketing Specialist	Environmental Consultancy	For-Profit
28	Bachelor's Degree Master's Degree	Engineering Program Manager	Biopharmaceuticals	For-Profit
29	High School Diploma Certified Scrum Professional Certification	Recruiter	IT Staffing	For-Profit
30	Bachelor's Degree Master's Degree	Academic Advisor	Higher Education	Education
31	Bachelor's Degree Military Coursework Master's Coursework	Student Worker Navy Reservist	Higher Education Military	Education Military

Handling of Formal, Published Internal and External Communications and Perceptions of the Effectiveness of Organizational Communication Processes (Based on Interview Questions 4, 5, and 6)

Formal communications in this study were defined as those communications that were created by or with the direct input of one or more members of an organization and subsequently published or disseminated in physical or digital form to members of a target audience; in some cases, that audience may be internal (for example, meeting minutes or newsletters provided to employees of an organization) or external (for example, a proposal or social media post intended for a customer or end-user). Not surprisingly, all participants were familiar with many of the internal and external communications produced by each of their organizations; the scope of knowledge each participant had of those communications was variable. In many of the interviews, I would provide examples of communication types that they might consider as being part of the communications with which they may have been familiar in their organizations; this was especially true in later interviews as I became more comfortable with asking the questions, as well as engaging in the semi-structured nature of the interview process. Also, in many of the real-time interviews, the input that participants provided led to rich discussions about the nature of their organizations’ communications and, I think in many ways, helped set the stage for participants’ thinking about a communication professional’s potential involvement discussed in later questions.

Summary data from the aggregate analysis of answers to questions 4, 5, and 6 can be found in the discussion of pattern 7 later in this chapter. Specific findings from the interviews are provided in Table 6 below.

Table 6

Internal and External Communication Types and Effectiveness of Communication Processes Reported by Each Participant

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P1	Weekly meetings Performance and forecasting communications Email	Email Proposals Customer notes Project notes Invoicing and forecasting	Effectiveness is challenged by lack of alignment in objective and vision. More transparency is needed.
P2	Email Monthly meetings for staff Monthly meetings for departments Meeting minutes Intranet	Email Messages from mobile messaging platform	"Generally effective when used correctly"
P3	Crisis communications	Legal communications Phone communications Email communications	Partly effective
P4	Emails with year-to-date billing amounts and multipliers for each department	Proposals Website	"My company lacks communication skills amongst themselves. A lot of time is wasted in meetings and get-togethers that could easily be put out in an email. I feel like we do a decent job communicating our scope of services to clients."
P5	Email Skype Meeting agendas and minutes Strategic plan Program plans Logic models for each program Articles of incorporation Bylaws IRS 1023 application Financial and donor reports	Website Print marketing — rack card/mailers Letterhead and envelopes Business cards Large banners and signs Donation boxes with logo Christmas cards Educational content for CE seminars RFPs/LOIs, grant applications Social media	Effective for now Efficiency is higher when choices are fewer Social media needs to be more effective Lobbyist hiring planned

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P6	Salesforce CRM communications Wiki site Metrics wall Email Social media	Proposals Fax Email Marketing materials Product manuals Web content	Mostly effective Many corporate communications are “not grammatically translated correctly.” Local level verification is needed. Local communications are filtered through HR department (hiring/firing; promotions; company activities)
P7	Email Company meetings in person and video Video messages Slack	Marketing collateral Online user guide Videos Online blogs Websites User conferences	Effective
P8	Cell phone calls Text messaging Email Social media	Website Email Social media (Facebook) Text Phone Newspaper	Difficulties in coordinating and scheduling communications as the main person responsible for that and nearly all other business activities
P9	Email Task manager software communications Face-to-face communication for associates Poster board for associates Reports (labor, stock, etc.)	Email (mostly email blasts) Newsletters from corporate	Effective, though sometimes there is a “glut of information” which causes an overload

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P10	Minutes Quarterly meetings Salesforce-generated communications	Salesforce-generated communications Add-ons to Salesforce Maximo Communication Templates mostly ignored; employees tend to draft their own emails) Email	"Formal communications here are not good. We have to draft them if there is any significant unscheduled downtime for any of our clients. We just recently created a process for this but the process has not been working and it doesn't follow what works best for us. We have too many people trying to manage something instead of picking someone to handle it. If we do pick someone to handle it, they aren't around when we need them to communicate. Or they don't listen to everything that happened and communicate the wrong thing."
P11	Weekly meeting via GoToMeeting Email Slack Wiki	Proposals Quotes Bids Articles on LinkedIn Social media Website Redmine (Linux) Print marketing for shows Manuals, if required by contract	Partly effective; some are very effective "Well, that's a mixed bag, some of them are very effective. When I'm in the middle of a podunk plant nowhere and something's not working, I know who I call. Or if somebody else is in the middle of nowhere, they can call me and I'll tell them who to call or else I know the answer. That kind of leveraging one another is huge for us."
P12	Email Slack SMS Online portal Internal communications blog Chat rooms - "Cafes" HubSpot (kind of like Salesforce)	LinkedIn Facebook Blog Instagram Pinterest SquareSpace Digital marketing materials Responses to RFQs User guides and facilitator guides	Effective when used correctly

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P13	Email Intranet	Website Email Email blasts Marketing materials (ads) White papers Case studies	External communications are generally well handled Internal communications do not always have processes associated with them
P14	Email blasts Meeting notes Newsletter in emailed PDF Email	Quality system documents Marketing materials (out of corporate) Email Proposals	Internal communications can get "lost" in the process. "It's like playing telephone," and meanings can be miscommunicated or misinterpreted. Proposals, newsletters, and email blasts are generally handled effectively
P15	Face-to-face communications Email Requests for funds Text messages	"On-one-one" (face-to-face) communications with patients and families Phone Greeting cards	At the small hospital where she works, communications are "absolutely ineffective." At the large hospital where she works, they are "very effective."
P16	Newsletter (emailed) Email Staff meetings Meeting minutes Agendas for meetings Employee information portal Consent forms	Website Radio informative spots Ads Billboards Radio Flyers Brochures Presentations Booths at events Proposal Policies and procedures Competency (a type of document)	Generally effective. Corporate does a good job of communicating important information.
P17	Memos (through email) Email Document / proposal for thesis or dissertation meeting	Document about changes to master's program Articles Conference presentations Long accreditation document for American Psychological Association Website	Internal communications are mostly effective. External communications are mostly effective, though there can be differences in how communications are handled coming from the university itself and from the individual department or program

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P18	Email Meeting minutes Face-to-face communications Meetings Instant messaging Google apps - Docs and so on Handwritten Physical hard copy documentation Proposals (less common for him)	Website Promotional pieces	He is "very satisfied" with internal communications Through the process of going through various groups, "some of the intentionality [of external communications] is lost to where you may have used very specific phrases and specific wording to get a message across, and that is lost through translation. So again, the content still hits all the necessary points, but again, some of that specific language may be dulled down or lost by the time it reaches the end goal or the end population."
P19	Intranet Meeting minutes Streamed and recorded meetings Wiki page per department Standard operating procedures Email Company town halls	Videos Email Listserv emails Social media Web content Webinars	"At an organizational level, I believe there are too many ways to get news or information. I think this leads to ineffective communication. I don't think this is as frequent as I made it sound, but I would like to see them streamline our communications into one solitary medium. If you have to check five different spots to get the information, maybe that isn't how it should be. It feels like a breakdown in the middle of the communicator and the audience of where to locate the information."
P20	Current position: Recaps for client Reviews of next steps for client Previous position: University newsletter Intranet Email SharePoint Google apps	Current position: Emails Contracts Previous position: Proposals Social media Marketing materials Web content Web-based project management system	Current position: He feels "a lot freer" as a consultant (his own boss). Communications with a single client have been working well. Previous position: Processes were often rather "chaotic" and "subjective" for both internal and external communications.

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P21	White papers Technical reports cGMPs (for FDA requirements) Quality standards Process automation documents Engineering formal standards Engineering best practices Email Meeting minutes Formal project documents Position requisitions Position descriptions HR rules and regulations	Processes for equipment vendors Technical specifications Documents leading to bids from vendors Contracts Non-disclosure agreements (NDAs)	"Very effective." The company's maturity helps make for "refined and optimized" communications "over the course of time." Writing and communication are emphasized for people in "upward technical trajectories."
P22	Meetings Conference calls Skype Email Internal wiki Web-based calendar	Proposals and quotes Facebook page—for marketing Website Business cards	Generally effective. Sometimes waiting on information from third parties can delay communications.
P23	Previous position: Daily updates from corporate Email SharePoint Meeting minutes Instant messaging	Previous position: Marketing materials Social media (Her role was internally focused.)	Mostly effective. Email chains can lead to misunderstanding and confusion. "Just pick up the phone, you know?"
P24	Email Internal meetings Intranet Instant messaging Newsletter (for the internal practice)	Email Meetings Telephones Patient-facing electronic medical records system Social media Print marketing materials Emailed marketing materials	"They're effective for things that need to get out immediately." Things on the back burner "tend to stay on the back burner."
P25	Email Wiki Intranet Collaborative editing tools Mailing lists Video series (company identity, company standards, organizational life, and so on) "Open" culture is emphasized, consistent with the software model.	Wiki Knowledge base Mailing lists Email Videos Websites Channels for interacting with the software community Announcements Seminars	"I am very grateful to work in the organizational context I do, because I have long been a champion of an open ethos, whether in open source software development or open culture more generally. I am a big proponent of the way that we default to open and transparent communication, and really are very thoughtful and deliberate about the channels that we use to discuss things and make announcements, and make sure that processes are inclusive, et cetera."

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P26	Email Meetings	Website Word of mouth Trade shows Slide shows Line cards Handouts Proposals Marketing materials Manuals Phone calls	"It's a mixed bag in the industry" due to frequent lack of tech savviness in the industry among people in it. Phone calls or emails may go answered at times. It's important to document interactions and agreements; at the same time, people need to be able to work within their comfort zones in terms of communication methods.
P27	Content editorial board meetings Few internal proposals or other "official forms of communication"	Newsletters Web pages with targeted search engine optimization (SEO) Proposals	"Because our business moves very quickly our processes for formal communication are sometimes too flexible — we are working now on creating more standards that people can refer to (style guide, more brand guidelines) so that when they reach out to a potential client (or present something internally) they stick to our communication standards."
P28	A3s Four-Blockers Email Meetings	(Can be up to the employee) Project plans Product-oriented apps Marketing materials Websites	"Quite effective"
P29	"Call blitzes" Batch reports Email Work orders Standard operating procedures and work instructions Proprietary learning management system SharePoints (multiple)	Proposals Marketing collateral (printed) Face-to-face meetings Digital Web Contracts	Internal training is "extraordinarily meticulous and rigid" in a good way Internal communications "may be slightly loose," though that is not necessarily a bad thing
P30	Email Newsletter Announcements Voting through a Qualtrics survey Phone calls SharePoint Meeting minutes	Email Email blasts Phone calls (sometimes) Social media Website	Mostly effective

Participant	Internal Communication Types Reported	External Communication Types Reported	Reported Effectiveness of Communication Processes
P31	Student worker position: Email Phone calls Walk-in meetings Blackboard LMS	Student worker position: Email Phone College fairs Marketing-oriented clothing for the university	Student worker position: "I do think they're effective, but there's always room for improvement…. They're effective because we meet the goals … for applicants." Students sometimes ignore emails from the university because there are so many emails. Therefore, there's always room for improvement in communication with students and prospective students.

Perceptions of Technical Communication (Based on Interview Question 7)

Although all of the interview findings were no doubt important and interesting, in many ways the answers to the question about each participant's perception of technical communication (question 7) fascinated me the most as a past practitioner and current scholar in TPC. As I will later describe in the discussion of pattern 1, there is a great deal that can be learned and applied from learning about extradisciplinary perceptions of TPC. And as I will describe more fully in chapter 5, those learnings have significant implications for pedagogy and practice alike. Those findings and implications make this part of the research very pivotal, in my view.

In terms of the collective perceptions that participants conveyed, I would say that they were among the most diverse and varied responses in the interviews. There was certainly some commonality among some of the perceptions, yet countering that commonality was a surprising range of statements that are summarized in Table 7 below. As much as possible, I am presenting these statements in verbatim form; where necessary, I am providing context around the statements to help characterize them. These findings are described in the aggregate in the section on pattern 1.

Table 7

Perceptions of Technical Communication Reported by Each Participant

Participant	Perception of Technical Communication
P1	It's about communication: "how I can communicate pieces of my business to my audience."
P2	"I suppose like information about the specifics of how something is going to happen? Or the specifics of how to perform a certain task or deal with a certain product, I guess? Or depending on the field something related business wise, or field wise like communication related to the activity being performed, I guess. Not really sure, that's not a term that I'm super familiar with." "In terms of I envision what a technical writer as someone that looks at more nitty gritty like engineering or scientific things in attempts to turn experiments or rubrics and designs and stuff into a more comprehensible written format I guess, so I'm not a 100 percent sure that if I take that understanding and look at my field if that would be something that my administration would require because I don't see how it would fit with what we do, I guess."
P3	"When I heard the term *technical communications,* I think a lot about detailed information for technologists, not the general business populace." "Yeah. I think of technical architecture documents, I think of project requirements."
P4	In part: " ...writing technical papers such as manuals."
P5	"What immediately comes to mind is someone who writes user guides and repair manuals. I think of technical writers in the engineering, automotive and medical equipment fields. However, I also think of a technical writer as a liaison between a field expert and the consumer. ...... I think the key in technical communication is having knowledge in a technical field as well as communication knowledge. The technical communicator is a hybrid who can accurately simplify complicated information to various audiences."
P6	"I think of communications regarding the internal workings of our products from an engineering perspective."
P7	"development or developer type communication, or communication just for the development staff"
P8	A technical writer is needed "if I knew someone has difficulties with manual writing or some sort of technical terminology that they're trying to figure out…"
P9	"Planning a process. So just any process I guess. How to help put something together. How to take something apart, whatever it is."
P10	"Technical Communication to me reminds me of someone who is explaining things of a technical nature to folks who aren't technical[ly] minded. "
P11	"Documentation definitely. I would say that I could wrap it all up as my idea of documentation is."

Participant	Perception of Technical Communication
P12	"I think a manual. I do. I think manuals. Things that tell me how to do things. Whether it's from putting things together to how processes at your office work; employee guides. That type of thing."
P13	"Yeah, so initially coming from a manufacturer of consumer products, my understanding of technical... My first technical communications are about operational equipment or writing manuals, that's usually the first thing I associate with it. But I would say that I also think that technical communications has to do with process implementation within the business…. And also in communications with customers in various manners regarding things like … case studies where we are describing how our products are used in a specific industry, and explaining to them the purpose of a product that we're using, and also how we can also aid them in process improvement." "...And also within the business itself, the process... Management of process improvement, that's also I would consider as technical writing. We have manuals and we have processes, instructions, especially we do have instructions regarding how to use various applications, business applications that we have and also how do you do certain things within the company, for example, how do you obtain a particular discount, there has to be a process for that, there has to be an approval process for it. Things like that, there has to be also how do you... We do things like we're [attracting] a large project, and within a framework of a CRM and so we have to spell out specifically how that's done."
P14	"Technical communication is a standard form of literature, I guess, publication that's going to, it's something that's going to be reviewed by perhaps some kind of lawyer, …[inaudible audio] the end-all be-all direction that it's trying to give, if that makes sense. *Formal* is another word that pops up when I think of technical publications."
P15	"I would consider that to be how to do something. It would be whatever technique or aspect that they're trying to figure out, that would be it. It could be as simple as, 'Okay, we have new healthcare insurance and we need you to check into here, you need to set up a password for that. You need to do this in order to get your new cards or whatever.' It could be simply technical as that or it could be, in my [professional] life, a new technique that they're doing in surgery in order to keep the brain swelling down, those sort of things. Here's what it is, A, B, C, and D."
P16	"I think of the technical aspects of your career, being able to communicate that to other people, so in whatever that career is. For my case it would be the technical aspects of my career, what I do for a living, whether that be to communicate to other therapists or other professionals that I work with or to even patients or to, like you said external vendors. That's what I think of it, as is technical being it involves your career. So what technical is the me has to do with thickened liquids and swallowing and evaluations and cognitive assessments of patients and the voice prosthesis, all kinds of crazy stuff that where there's not an engineer. It might be if something different or if somebody who's in architecture would be so I mean it's just teaching, I think it's whatever tech, whatever field you're in."
P17	"I don't really know. Maybe, I guess what I would think as technical communication, just the first thing that I think of is manuals for things."
P18	"When I hear technical communication, I tend to think of traditional communication, but focused around subjects that may not be generic. Things that may be very specific, and very specific towards very technical subjects. We tend to talk about it a lot in the College of Science and ... because we have very technical fields of engineering, math, and science. And so, when I hear technical communication, I tend to think about the communication in those fields. So again, very specific. Not just a layperson type communication and things like that, but writing for very specific purposes frequently within the areas of STEM. For specifically within very technical, highly educated areas."

Participant	Perception of Technical Communication
P19	"I think of a few different things: 1. Communicating technical knowledge like in a manual or something like that 2. Communication between several devices 3. Communication that is bad, but, 'technically' communication. 4. A communicator that acts as the main person to communicate out to both internal and external."
P20	"I would say product documentation first comes to mind. A collaboration with creators, like someone creating a heart pump, we need some kind of documentation about the heart pump. How do we link those together? I would say that's kind of the primary...our primary lean."
P21	"I hear 'technical communication' and I hear the written, usually written ... My mind goes to written. When I hear 'technical communication,' I'm thinking about writing a report. It's oral, as well. But for posterity, you're not going to record yourself talking. You're going to write it down." "To me, that's where the talent comes in, in transferring this incredible depth and breadth of knowledge and making it consumable to someone without your experience or your expertise or your education."
P22	"Oh, like an instruction set or a procedure or a written procedure or a description of operation."
P23	"I think of technology. That's where my mind goes to and I don't know if that's right or wrong, but I think of what technologies people use to communicate, especially in this day and age where everything is based on technology. So, whether it's texting, if apps you can use, that's what I think of."
P24	"Something that's related to my technical aspect of my job, which is primarily the computer."
P25	"When I hear the term 'technical communication,' I typically think of the art and skill of accurately describing complicated processes in a way that makes them easily replicable. I am not good at technical communication, I should add. There are people in our organization who are good at technical communication, they write technical documents. 'This is this thing, this is how it works, this is what it's designed to do. If you want it to get to do these things, here's what you do. Step one, do this, step two, do this,' or, 'This is a bug report, I am going to describe to you what I see, and the intended function should be this, the actual function is this, the gap between those two expectations is this. Here are the steps to reproduce, here are the steps to fix.' Those things are what I think of when I hear 'technical communication.'"
P26	"With my background, I first think about communication with technology (online FAQ, forms, etc.) In my current industry, I think about communicating technical details of the jobs we're working on. This could include someone seeking out our technical expertise or walking someone how to do something with the equipment."
P27	"I think of translating technical information (whether it is specific, scientific, or otherwise niche) from confusing or jargon-filled to something understandable, more broadly useful, something that better serves its readers, or all three."
P28	"I think of the communication of engineering data or product and process related information when I hear 'technical communication.'"

Participant	Perception of Technical Communication
P29	"I would say first and foremost it's going to come down to technical writing as a whole, and I know that's very vague. Generally that would mean two things for me in a professional setting where a technical writer... or actually three things. A technical writer could be focusing on doing tech manuals for a specific product line. They could be focusing on building out marketing materials or even within human resources as well. There are even, there's a company I'm working with where the position is titled 'tech writer' but they are building out LMS modules with...Articulate Storyline and Captivate." "That is what tech writing means to me, but I am very close to... I don't know, maybe I'm a little too close to the ground in terms of that, just because those are the types of roles I see from time to time. I understand the tech writing is going to cover a great many things, but for my day to day work, that is what tech writers do."
P30	"I guess, having really no idea, it would be kind of … announcements and things like that via a platform."
P31	"So my previous boss in the reserves, his other life was he was a technical writer for a company in [the city where she was located]. And what comes to mind is a very, very OCD personality. Very, you know what I mean?" "No, I know it's funny because I am actually a pretty OCD person. I've never met somebody like him who could find, I mean he, so like I said, when I think technical writer, that's my experience is working for him and the things that he emphasized because of his other job that he had in his brain constantly. I felt like sometimes he spent more time analyzing documents that were already okay, than he did completing the mission. Things like that." "So I saw value in it a lot of times, but it depended on the scenario. So if we were doing evaluation for our sailors that were going to go into their personal record, his skillset and his mentality about it all was super beneficial to everyone. But then in other cases we have, we have a training scenario and we just need to get the information out to people and it's already fine. A normal person would understand this schedule of events or et cetera, et cetera. And no one cares if there's some sort of different way to write the sentence because it's just going to agenda."

Organizations' Current Use of Technical Communicators (Based on Interview Question 8)

Responses to question 8 provided information on which organizations, to participants' knowledge, employed one or more technical communicators on staff. Those responses also helped inform findings related to patterns 4, 5, and 6, which are described later in this chapter.

I tried to perform as little interpretation on each answer to this question as possible. By this I mean that, if a participant said that their organization did not employ a technical communicator, I would take that answer at face value. Some researchers may question that approach and wonder why I did not perform additional interpretation or examination, since (as described in chapter 1) the definition of *technical communicator* can be somewhat variable. My reason for taking these responses generally at face value was tied, again, to perception: if a participant felt that their organization truly did not employ a technical communicator, I wanted that feeling to be reflected as such in the study. If, after reflecting on communication processes within the organization and their own perception of technical communication, the participant felt that their organization *did* employ a technical communicator, I wanted that perception to be captured accurately as well.

That being said, most participants said either that their organization did not employ a technical communicator or that they were not aware of one within the scope of the organization as they knew it. Several participants said that other parts of their organization (such as another office or division) may employ one, or it would make sense that one would be employed in some capacity elsewhere in the organization's structure; they simply did not know. Participants who confirmed the use of a technical communicator in their organizations were generally unambiguous about that confirmation; in many cases, however, they did not work directly with those technical communicators.

In summary, participants' responses reflected a disappointingly small percentage of known use of technical communicators within organizations. Numbers can be broken down as follows:

- Definitive yes, the organization does have one or more on staff: 5 (16.1% of the sample)
- The organization does not have someone with such a title, but someone who basically works as a technical communicator: 5 (16.1%)
- The participant is not aware of one on staff, but it is possible that another office or headquarters may employ one: 6 (19.4%)
- Definitive no, the organization does not have one or more staff: 11 (35.5%)
- That role, or something very similar, is subcontracted out: 1 (3.2%)
- Unknown/unsure: 3 (9.7%)

Table 8 provides details on reported utilization of technical communicators in organizations.

Table 8

Reported Use of Technical Communicator on Staff of Each Organization

Participant	Current Use of Technical Communicator
P1	No
P2	No
P3	No, but someone who functions in that role who is a communications specialist
P4	No. The engineers are the technical writers.
P5	No. The executive director handles the writing.
P6	No (not aware of any)
P7	Not sure
P8	No. He hired a designer to create content for marketing purposes.
P9	None known
P10	No. The support team handles communications with clients.

Participant	Current Use of Technical Communicator
P11	No. The co-ops or someone else writes documentation if needed. Marketing fills in some of the gaps, also. “That technical writer role to me is someone who knows enough about the technical side of things, but more about the ability to organize those ideas. Which technical people tend to not have. We don’t have that, that intermediary link. We don’t have that hybrid role of the writer, communicator, and technical person. But at the same time we do have a marketing department who is doing a great job with all of the social media and getting the message out. So in a way they’re also a sort of technical documentation.”
P12	No, not with that title. A person who does instructional documentation internally basically fills the role.
P13	No, at least, not at their US offices. The quality control team handles ISO (quality system) documentation. Marketing handles relevant content for that purpose. For manuals, someone else writes them.
P14	No, not locally. Possibly at corporate offices.
P15	No, not at individual hospitals. Possibly at the corporate offices of the larger hospital system.
P16	No, not in his department. Yes, probably in the corporate structure of the larger hospital group.
P17	No, not in her department. Likely at the university.
P18	No
P19	No
P20	No one with that title when he was at the university. There was a marketing writer who filled some of the gaps. “Well, I don’t know how you can define *technical*... This was several years ago now...I was able to repurpose [someone’s] job into a marketing writer job. And that was the first time we ever had somebody with the title and sole purpose doing marketing writing. And since I think the organization included more FTEs [full time employees] for more marketing writers. So they’ve definitely embraced the idea of having somebody with writing skills do the writing. So as we’re not making everybody wear that hat when they’re not comfortable or good at doing it. But I guess if you equate technical writing with marketing writing for my situation, I think that’s where we ended up.” In his current consulting role: No. (He would do any writing.)

Participant	Current Use of Technical Communicator
P21	Yes. "I can speak primarily to the manufacturing space, because I've worked on the same manufacturing site my entire career. We employ what we would consider to be 'technical writers' to come in and they may author change controls. They may write deviations. They're not the content experts. They're in charge of taking the meat and potatoes and crafting it up in [inaudible]." "This also makes them familiar with all of the systems in which these particular formal documents will be housed. So, we have technical writers who are ... They're simply our document controllers in [a proprietary software program]. If you have to route a requirements document. If you have to route a design spec, a test protocol, a test summary report. Anything that's going to route through approval in the document repository, there are technical writers on staff, generally contract, who will take that Word document, they'll do all the formatting. They'll construct the whole thing, and they'll process it through the various reviews and approvals."
P22	No, although the Quality Assurance Manager reviews and works on a good amount of documentation, internal and otherwise
P23	Yes, but with the title of "communications specialists." They handled most patient communications.
P24	Yes, though not in her office
P25	Yes. "Absolutely, because we have reams of ... Well, I shouldn't say reams, metaphorical reams, I guess, of technical documentation. We're a software company, so we maintain a knowledge base where that technical communication has to be maintained, and the upkeep on that is ongoing, like it's constant. That's actually part of our product, so technically in a way, you could say that we sell technical communication in some ways, and so meaning we would deploy tons of people to maintain that knowledge base. Because we are a company built on a certain set of software development practices, the communication practices from those software development practices seep into the organization more generally." "An engineer can engage on an email list, for example, I can always tell who's an engineer because of how they format their messages, or the way that they compose their sentences, or the way that they structure their paragraphs, or the way that they make arguments to things, steps or whatever, sometimes you can identify them. I think that's a natural extension of the engineering culture that drives what we do."
P26	"Yes and no." No one internally does this work, but an outside company assists with web content, blog posts, case studies, and social media content.
P27	"Yes, there is someone else on my team who doesn't identify as a technical communicator but that's what they do."
P28	Yes
P29	Not that he knows of in terms of a specific title, but there is someone with the title *training coordinator* who works on custom learning management system content. "It's a learning services division that is just focused on building out from a tech writing perspective, these LMS modules for literally hundreds of different companies."
P30	"My guess would be yes, but I don't know."

Participant	Current Use of Technical Communicator
P31	University: “I am sure they have; I am not aware of it.”

Organizations’ Openness to Hiring a Technical Communicator in the Future (Based on Question 9)

Responses to question 9 provided data on organizations’ openness to hiring a technical communicator in the future. For many participants, especially those who were less familiar with the mindsets and decisions of management in their organizations, responses to that question were admittedly somewhat speculative. And again, answers to the question are strongly tied to each participant’s perceptions: on the value of technical communication, on the business priorities of their organization, on how the organization was structured and where a technical communicator might fit into that structure, for example. Such perceptions are therefore important when considering patterns 4, 5, and 6, as described later in this chapter.

Overall, there was a clear tendency among participants to believe that their organizations would likely not be hiring a technical communicator in the foreseeable future. Table 9 below shows results for each participant.

Table 9

Reported Openness of Each Participant’s Organization to Hiring a Technical Communicator in the Future

Participant	Organization’s Openness to Hiring a Technical Communicator in the Future
P1	Yes. The organization has a plan to hire a technical writer in the near term. Engineers have been filling that gap, and “that’s failing.” It’s important to improve their communication, “not just in a billable sense.”

Participant	Organization’s Openness to Hiring a Technical Communicator in the Future
P2	No, not in the school itself
P3	No
P4	No “I don’t think my current company would be interested in hiring someone for the strict purpose of writing reports. While visual structural evaluation in itself isn’t overly difficult or technical, there are licenses required in order to write reports and stamp them.”
P5	Yes “We would be open to the idea. I would need to know more about the skills of a technical writer before making the decision. I suspect there is more to a technical writer than meets the eye.”
P6	No, not at the local office. Possibly at the corporate level as communications between countries and cultures can be very complex.
P7	Unknown
P8	Yes, potentially for the “linguistics of” marketing materials
P9	Not at the store level, but maybe at the corporate level for trucking and logistics communications (“I guess it would depend on, I don’t know. Where would they fit? Under which tree? Like the organizational tree.”)
P10	No “I don’t think we necessarily need a technical communicator, just need to better work our processes to let other folks do the technical communication.”

Participant	Organization's Openness to Hiring a Technical Communicator in the Future
P11	No, not under the current circumstances. It is more likely if a customer directly requested a technical writer for one of their projects. The business case would have to be made.
P12	Maybe "I think it's dependent on what the role is and what that means. Everybody here has multiple roles. So it just depends on what we're looking for at the time and what's needed. When we deployed writers."
P13	No "I don't know if it could be put to one role because, a, because of the variety of information that you would need. It's one thing to write a manual, it's another thing to write a document to do with document processes. And it's another thing to write case studies that updates your customers of the benefits of a product, or the benefits of how a product fits in an application or a process. So, I think also functionally it would be very difficult for us to have a singular person do that because one person would then [be] pulled by the various departments" to perform different tasks with competing priority levels. "So, I don't know if given the size of our organization that we can support an independent person or department that would be purely technical communications."
P14	Locally, no: "Locally . . . I would say no. I think that as far as what kind of communication needs to go on, there wouldn't be enough for the need for a position such as that." At the corporate level, yes, possibly. "So I mean I think on the bigger level, yes, it would help to have one. I'm assuming they probably do have a team of them, but I don't know."
P15	No, at the local hospital level. More likely for the corporate hospital group offices.
P16	No, not in his department, but he could see it at the corporate level
P17	At first, P17 said no, but rethought her answer during the interview. "I'm going to say that I think that probably my department would not hire someone for that purpose. Well, partly from a just strictly practical standpoint, they're generally a bit strapped for money, and so I think they try to minimize any additional [expense that they] don't have to have." "Yeah. Although now I'm starting to question that, because when I think about our documentation or things that we produce, I guess the biggest thing that we ever produced in our department that I know of is our APA accreditation document. Actually probably that person doesn't have to be a psychologist. So I think depending on what it was, I guess I can see it for special circumstances. So if we were able to hire someone to work on our self-study document, they would really just provide a lot of just detailed information about our department that you really wouldn't have to be a [behavioral sciences professional] to talk about necessarily.... I guess if we had the funding to hire someone to help write that document, I think that they would be open to that," though not as a full-time position.

Participant	Organization's Openness to Hiring a Technical Communicator in the Future
P18	Yes, in principle; no, in practice "I think in general I would answer yes. I think that our leadership within the college would be open to that, mainly because of the way that I define technical communication, and the specialty areas that our college maintains in science and engineering. So in that sense, I think that yes, they would be willing to do that because I think that there are stakeholders within science and engineering that would respond very positively to having that type of communication specifically developed, and published, and pushed to them." "On the other hand, there are certain other political and fiscal reasons why I can see why that would not be something that would necessarily be a priority for our leadership. And I can also see where our current communication staff is successful, and is competent in their field that it would not be a necessary addition to what we have that currently exists."
P19	Yes, eventually "I think that they could definitely benefit from this sort of communicator. But, I also think that the culture around here is sometimes hard to break through. I feel as though we often are just sprinting trying to put out fires. So, I feel like we would definitely benefit from one and I could see that happening. Eventually."
P20	Previous organization: Yes, if the university saw the need Current role: Was not discussed
P21	Yes See Appendix C for extended quote
P22	Yes. "Certainly if the management at any point feels that it will be beneficial to the company. I'm certain that they would absolutely be willing to do that."
P23	Yes, since they already had them
P24	Yes. " Being part of this organization, definitely. It wouldn't be specific to this office."
P25	Yes See Appendix C for extended quote
P26	No
P27	Not indicated, but one is already on staff
P28	Not indicated, but one is already on staff
P29	No "I feel the answer would be no, because my organization has done such a good job about creating an environment in which professional communication is already cultivated. We wouldn't need somebody to come in, in an advisory capacity to help transform our entire organization to be a little more conducive in that regard. Yeah, short answer is no."
P30	Yes, probably. It is hard to say where in the university. It could be at the university or college level.

Participant	Organization’s Openness to Hiring a Technical Communicator in the Future
P31	At the university: Possibly in the marketing department In the military: Not the area she works in. Possibly in public affairs, which is a different area.

Participants’ Previous Experience Working with Technical Communicators (Based Primarily on Interview Transcripts)

A tenth interview question was added based on committee input; that question had to do with whether a participant had worked with a technical communicator in any past professional experiences. As it turned out, due to the COVID-19 pandemic and other factors, only two interviews (with P30 and P31) were conducted after that question was added. In previous interviews, the point of the participant’s having worked with a technical communicator came up in some cases, but not in all; furthermore, some of those points were explicitly made, while some were inferred or implicit.

From interview data and prior discussion or knowledge, it was evident that 12 participants (38.7% of the sample) had worked with a technical communicator—in title or in function—in a current or previous role. 4 participants (12.9%) worked with a technical communicator in their current role; 8 (25.8%) had worked with a technical communicator in their previous role. Specific breakdowns are shown in the tables below.

Table 10

Participants Who Worked with a Technical Communicator in Their Current Role

Participants Who Worked with a Technical Communicator in a <u>Current</u> Role
• P21 (engineering manager at a biopharmaceutical company) • P22 (automation systems engineer at an engineering services firm) • P25 (corporate marketing specialist at a software company) • P27 (digital marketing specialist at an environmental consulting firm)

Table 11

Participants Who Worked with a Technical Communicator in a Previous Role

Participants Who Worked with a Technical Communicator in a <u>Previous</u> Role
• P1 (director of development at an engineering services firm) • P3 (director of program management at an insurance and IT security company) • P5 (executive director of an immigrant rights non-profit) • P6 (marketing coordinator at an industrial gear and motor modules company) • P11 (senior automation consultant at an engineering services firm) • P13 (marketing manager at an industrial pump technology company) • P23 (independent HR consultant; previously HR staff member in a large healthcare system) • P31 (student worker at a university and Navy reservist)

One participant, P28 (engineering program manager at a biopharmaceutical company) reported knowing that their company did have technical communicators on staff, but did not work directly with any; it was also not known whether that person had previous experience working with a technical communicator. Interestingly, both of the participants who currently worked for biopharmaceutical companies (those were two different companies) reported having technical communicators on staff.

Results of Second-Cycle Pattern Coding

As described in chapter 3, qualitative analysis of interview data consisted of a second cycle of pattern coding once the first cycle of structural coding was finished. I reviewed the interview data at least twice for each interview, noting patterns that arose among the interviews and recording those emergent patterns in an Excel sheet. A total of eight patterns emerged; those patterns are described in more detail below. Data throughout each interview contributed to the noted patterns; this was particularly true because conversational pieces from one question would become consistent themes of discussion in answers to other questions. However, some patterns tied more frequently to certain questions. Interview questions that were particularly relevant to a given pattern are mentioned at the end of the section on each pattern; note that a list of interview questions can be found in Appendix B.

Pattern 1: Varying perceptions of what technical communication is

One of the most obvious findings in the Fertile Grounds study was that perceptions of technical communication—what it is, how it functions in organizations, what value it has, and so on—are highly variable. Before I elaborate, I want to emphasize the fact that, much like a usability test, the interview process was not looking for “right” or “wrong” responses to the perception question. The point was absolutely and emphatically not to judge or assess the quality or “accuracy” of responses, but to gain an understanding of them. From that understanding I can then extrapolate how people may view technical writing in a collective sense and what implications can be drawn for research, pedagogical, and practical purposes. In essence, I can extrapolate, in part, how scholars and practitioners can better position TPC as a legitimate field of workplace practice.

Although perceptions were wide-ranging, there were some common themes that participants expressed more than once. For example, I counted 16 participants (P2, P4, P5, P8, P9, P12, P13, P15, P17, P18, P19, P20, P22, P25, P28, and P29) who spoke about manuals, documentation, or procedures, and 6 (P3, P10, P16, P24, P26, and P27) who mentioned something technical or technology-related, suggesting that over half of the participants made the connection to the “instructional” aspect or genre of technical communication and just under one-fifth emphasized something about the “technical” or “technology-related” aspect of technical communication. Some of the interviews included other, non-instructional genres (such as with P21, who mentioned reports, or P8, who mentioned marketing materials). Some of the participants spoke to several important elements of technical writing explained in a range of detail (as with P13, P18, P21, P28, and P29), and some even included intriguing, “textbook-like” responses (as with P5, P25, P26, and P27). All of this is encouraging on many levels, as it helps illustrate that technical writing is not a completely obscure field to every participant. At the same time, however, the wide-ranging nature of perceptions strongly suggests that technical communication as a field of workplace practice is not fully understood among many people. This idea has enormous implications for research, teaching, and TPC programs—implications that will be discussed in more detail in chapter 5.

This pattern derived especially from responses to interview question 7.

Pattern 2: The need for diversified skills related to communication within organizations and knowledge of organizations themselves

Analysis of interview results suggests that the skills that are needed in the workplace are not just about communication; that is not necessarily a new finding, but it is interesting here because in many of the interviews, organizational needs were often expressed that were (a) supplementary to writing and communication yet (b) still connected in some way to, or expressed in the context of, communication needs. Interviews with 21 participants (P1, P3, P4, P5, P8, P9, P10, P11, P12, P13, P15, P18, P19, P20, P21, P23, P25, P26, P28, P29, P30, and P31) were illustrative of this pattern; therefore, I think of it as being significant.

One good example of this kind of skill diversification was found in feedback from P3, a director of program management at an IT security and insurance organization. This participant reported having a person who largely dealt with communications in his department. That communications person did not identify as a technical writer; however, management was looking for them to take on additional duties involving project management within the organization. In other words, management felt that this person's role should move beyond direct communication-oriented tasks and into helping to manage other tasks, presumably performed by other people, within the organization. Yet it was apparent in the interview that that person's primary specialty would remain in communications.

One of the skills that was noted as a part of this pattern was skill at navigating and understanding the dynamics of organizations themselves. While this skill was notably important across many organizations, it was not necessarily seen as a "core" skill or competency most of the time. However—and this is very important—it was very apparent that knowledge of organizational dynamics would be not only useful, but essential to anyone regularly involved in creating or disseminating formal communications representing various organizations. Illustrative examples include interviews with:

- P3, who worked at an engineering services firm where communications produced and managed by engineers was "failing." The future technical writer working in this company would be required to work with these engineers and help align the organization's communications with management's vision—a potentially daunting task.
- P5, who directed a newly formed non-profit organization where communication processes were uncertain and evolving and the needs of stakeholders were highly complex.
- P13, who was marketing manager at an industrial pump company where he felt multiple groups would "compete" for time on communication tasks, presenting a significant project management challenge for any prospective technical writer.

- P18, a student engagement employee at a university who acknowledged that, while he generally felt his college would not specifically hire a technical writer, anyone involved in such a role would face unique internal political challenges that would have to be navigated (thus presenting a potential obstacle to hiring a technical writer to begin with).

This particular finding relates to the discussion of organizational culture and climate in chapter 2. It will also be important when I discuss the role of organizational dynamics in the work of technical communicators as part of chapter 5.

This pattern derived especially from responses to interview questions 4, 5, 6, 7, 8, and 9.

Pattern 3: The applicability of TPC competencies to all organizations and work contexts, with nuances in apparent applicability

As pattern 8 will help explain, communication is happening at all of the organizations discussed in this study. The range of communication types and processes that emerged in the overall dataset strongly suggest that TPC competencies can be utilized in all of the organizations. For example, nearly all of the interviews contained evidence of internal or external communications that would potentially benefit from the inclusion of a technical communicator in their creation, maintenance, and/or management.

Yet there were nuances in the ways in which it appeared that a technical communicator could be utilized in the communication work taking place in each organization. In some organizations, there was a high volume of documentation work to which it seemed that a technical communicator could be staffed if the business case could be clearly and persuasively established (e.g., in P11's engineering services firm, particularly if customers were asking for it), and indeed there were some work contexts where technical communicators were already being applied successfully (e.g., at P21's pharmaceutical company). On the other hand, some organizations may not readily see the need for a technical writer, or there may be capacity or political/organizational culture challenges discouraging their use (e.g., in the case of P4, whose engineering services firm would not be able to support a full-time technical writer, or P19, whose for-profit university could benefit from a technical writer but would need to experience a significant shift in its organizational culture). Other work contexts may benefit from a technical writer, but more on a part-time, contract, temporary, or as needed basis (e.g., in the case of P8, who owns a relatively small IT services firm, or P26, whose industrial equipment supplier already had a web site contractor providing writing services as part of its contract).

This pattern derived especially from responses to interview questions 4, 5, 6, 7, 8, and 9.

Pattern 4: Ambiguity in communication roles within organizations

As discussed in pattern 3, formal communications are being created by all of the organizations discussed in this study. In many of those organizations, there is considerable ambiguity in communication roles: who is performing that work on a defined, consistent basis. This pattern was generally evident in one of four ways:

- Communication roles were known to the participant, and those roles were well defined: P3, P12, P20, P21, P23, P25, P27, and P28
- Communication roles were known to the participant, and those roles were *not* well defined, were evolving, and/or were distributed among multiple persons: P1, P2, P4, P5, P6, P8, P10, P11, P15, P16, P17, P18, P19, P22, P26, P30, and P31
- Communication roles were at least partly known to the participant, but only partial definition of those roles could be determined: P13, P9, P26, and P29
- Communication roles were mostly unknown to the participant: P7, P9, P14, and P24.

It is difficult to gain a complete understanding of an organization's communication roles from a single interview of one of its employees—a concept that relates to limitations in access, which I'll discuss later in this chapter—yet study data strongly suggest that communication roles are often ambiguous in many organizations. Roles may be evolving or poorly defined; they may also be shared among multiple persons whose primary role is not communication-focused. At least one of those conditions was observed in 17 interviews in the study—more than half. In the eight organizations where communication roles were reportedly well defined, the good news is that only one of the organizations (P12) did not have a dedicated communication professional performing that work. Implications can be drawn from these findings; those implications will be discussed in detail in chapter 5.

This pattern derived especially from responses to interview questions 4, 5, and 6.

Pattern 5: The importance of positioning and utilization of TPC roles in organizations

This pattern relates to findings that call importance to organizational context (note, also, patterns 2 and 6). In essence, interview data suggest that the successful use of TPC professionals in an organization will depend on their optimal positioning and utilization within that organization. By *positioning,* I am referring to how a person is structured into an organization. For example, in which department do they work? How many levels removed is the person from top management? What kind of visibility does their role have in the organization? By *utilization*, I am referring to how the person is used in the organization. To what projects are they typically staffed? Is their role limited to a particular scope of work (for example, instructional documentation or quality system work)? Depending on the kind of company for which they work, is most of their work billed to external customers, or is it internally focused?

This pattern was noted in nearly all interviews, but especially so in interviews with P1, P2, P4, P5, P6, P9, P11, P13, P14, P15, P16, P17, P18, P19, P21, P23, P24, P25, P26, P29, P30, and P31. It's important to point out that this pattern was noted in both actual cases and in hypothetical scenarios based on organizational circumstances described by participants. One actual case could be found in the interview with P21, an engineering manager at a biopharmaceutical company; the technical writers in that organization took upon communication tasks (such as the writing of deviations—descriptions of instances where a process did not proceed as planned—and change controls) that engineers needed, and the involvement of technical writers was well established. A hypothetical scenario was discussed in the interview with P11 (an automation consultant at an engineering services firm), whose company did not employ a technical communicator currently; if a technical communicator was hired or contracted for any project work, the business case would likely need to come from a client company, and the application would likely be to client-billable work (such as engineering or software documentation for a specific project). In theory, that scenario would present the need for a technical communicator who had previous experience documenting software applications and automation and process control systems, such as Programmable Logic Controllers (PLCs) and Human-Machine Interfaces (HMIs) used in manufacturing, filling, and packaging processes.

This pattern derived especially from responses to interview questions 7, 8, and 9; like pattern 2, it is related to the connections to organizational culture and climate in chapter 2.

Pattern 6: The role of organizational size, scope, and positioning relative to other offices in determining the applicability of technical communication

From study data, three additional factors appear to be significant in determining the applicability of TPC to a given organization or work context:

- **The size of the organization.** As an organization increases in size, so does the capacity for employment of a TPC professional.
- **The scope of the organization.** As an organization expands the number of products and/or services it sells or markets—or expands the industries, economic

sectors, or stakeholders it serves—its capacity for using a TPC professional increases as well.

- **The presence of a central office or headquarters.** If an organization is composed of multiple offices or locations, much of the interview data strongly suggest that the strongest case for use of technical communicators will be at the organization's central office or headquarters.

In the study, the precise reason for the existence of each of these apparent factors is not completely known. It is possible to make an educated guess about reasons for the third factor; for example, several participants reported that their organizations' headquarters would simply have more documentation work because many of the marketing and centralized content management tasks were housed there. In the case of size and scope, the reasons for those factors' impact would be more speculative, but it is likely that increases in organizational size as well as scope lead to a corresponding increase in documentation and communication work. More research is needed to determine causation or association, but findings from the study strongly suggest a strong impact from these factors, particularly in interviews with P2, P6, P9, P13, P14, P15, P16, P17, P18, P21, P23, P24, P30, and P31.

This pattern derived especially from responses to interview questions 7, 8, and 9; and, like patterns 2 and 5, relates to connections to organizational culture and climate discussed in chapter 2.

Pattern 7: Commonalities in communication types within organizations

Questions 4 and 5 from the interviews led to a rich dataset on the types of communication known to participants in the organizations for which they worked. Among internal communications—those used within the organizations that produced them—email was by far the most commonly cited (28 participants, or 90.3% of the sample), followed by meetings and face-to-face communications (22; 71.0%) and hypertext/web-based communications (15; 48.4%). Among external communications—those intended for audiences external to the organizations that produced them—hypertext/web-based communications were the most commonly cited (20 participants, or 64.5% of the sample), followed by marketing materials (17; 54.8%) and email (15; 48.4%). Table 12 provides a numerical and percentage breakdown of some of the most common communication types cited in the interviews.

Table 12

Reported Use of Communication Types in Organizations

Type of Communication	Internal		External	
	Number of Organizations	Percentage	Number of Organizations	Percentage
Email	28	90.3%	15	48.4%
Hypertext/web	15	48.4%	20	64.5%
Meetings/meeting-based/face-to-face	22	71.0%	6	19.4%
Marketing communications	0	0%	17	54.8%
Phone	5	16.1%	7	22.6%
Social media	2	6.5%	9	29.0%
Proposal	3	9.7%	11	35.5%
Report	4	12.9%	0	0.00%
Instructions (manuals, user guides, procedures as part of a quality system, etc.)	2	6.5%	7	22.6%
Conferencing software (such as Skype, WebEx, instant messaging, etc.)	8	25.8%	1	3.2%
CRM-generated communications	3	9.7%	1	3.2%

Type of Communication	Internal		External	
	Number of Organizations	Percentage	Number of Organizations	Percentage
Legal, regulatory, or financial	9	29.0%	7	22.6%
SMS/text messaging	3	9.7%	1	3.2%
Newsletter	5	16.1%	2	6.5%
Web app-based tools (excluding CRM)	2	6.5%	0	0.00%

In this breakdown, some communications were grouped into a similar type for the purpose of categorization. For example, hypertext and web-based communications included web sites, wikis, communications in web portals, and other materials that can be accessed using a web browser. Marketing communications included both print and digital marketing. Multiple communications with an instructive purpose were grouped into a larger instructions category. Communications that had implications for legal application, comparison to existing regulations, or the financial status of an organization or individual were grouped together, since those communications often feature a formal style with a great deal of technical terminology appropriate to legal, regulatory, and/or financial contexts.

In addition, there were other, unique communication types that came up. For example, P5 mentioned program plans, articles of incorporation and bylaws as internal and “letters and envelopes” as external communications. P17 mentioned an accreditation document for the American Psychological Association as an external communication her department had to create. As internal communications, P28 mentioned A3s, a problem-solving outlining genre, and Four Blockers, a presentation format. Other examples can be observed in Table 6.

This pattern derived especially from responses to interview questions 4 and 5.

Pattern 8: Reported effectiveness of organizational communication processes

The reported effectiveness of organizational communication processes was mixed. 18 participants (58.1% of the sample) reported communication processes at their organization to be effective or mostly effective; those included P2, P5, P6, P7, P9, P12, P16, P17, P18, P21, P22, P23, P24, P25, P28, P29, P30, and P31. Seven participants (22.6%) reported ineffective processes: P1, P4, P8, P10, P19, P20, and P26. Finally, six participants (19.4%) reported partly effective or marginally effective processes: P3, P11, P13, P14, P15, and P27. Nuances, which were present in many responses, can be found in Table 6; some included that communication processes were effective when used correctly (P2 and P12, for example), that communication was a “mixed bag” (P11), and that there was a major difference in communication effectiveness in a large hospital group (highly effective) as compared with a small hospital (not effective) (P15).

This pattern derived especially from responses to interview question 6.

Limitations

Through a pilot study I conducted (results of which are part of this study), I determined several limitations of the overall research study. Results of the pilot study can be found in the article “Fertile Grounds: What Interviews of Working Professionals Can Tell Us about Perceptions of Technical Communication and the Viability of Technical Communication as a Field” from the February 2020 issue of *Technical Communication* (see Rosselot-Merritt, 2020). My experience has been that these limitations have remained fairly consistent throughout the study.

In study design and method. First, the study design and method present some limitations. For example, the people I interviewed were recruited through connections to previous contacts; therefore, there was no randomization, thus potentially limiting the generalizability of study findings. Although a truly random sample would be difficult to achieve in a study of this type, efforts toward greater randomization may help expand the dataset.

In researcher's access to participants. In this study, it was difficult to gain access to participants beyond one or two levels of connection in my personal learning network (PLN). For example, P25, a corporate marketing specialist at a software company, was referred by a participant in a separate study I had conducted the previous year. This represented a connection of two levels in my extended PLN. In the interview with P25, I gained a wealth of data that helped me to understand communications produced by his company and its positioning of writing and communications specialists within the organization. This was an excellent opportunity, and it added significantly to the dataset.

In all honesty, this second-level connection was about as far as the snowball sampling extended in the recruitment process. In total, 10 participants were recruited through a first-level connection (meaning those 10 were second-level connections); this was just under one-third of the total sample.

Another significant fact about the sampling in this study is that I did not have or gain access to multiple employees within the same organization. Therefore, it was difficult to gain access to multiple perspectives on formal communications and technical communication as a discipline within a single organization. That challenge is also significant for a reason discussed below with respect to participants' access to information, resources, and artifacts.

In interview settings. As discussed previously, interviews were generally conducted in one of three ways: remotely (via phone or synchronous conferencing), in person, or via email. None of the in-person interviews were conducted in a participant's place of work, with only a handful of remote synchronous interviews taking place while the participant was at their place of work. The challenges in interview settings were twofold: it was difficult—if not impossible—to hold interviews in analogous or consistent settings, and that lack of consistency meant that there were different dynamics in my ability to ask follow-up questions or engage with the participant in real time. This created challenges in getting clarification on some interview questions, for example, if an interview was conducted via email. On the other hand, as was the case with the pilot study, I *was* able to follow up with participants if needed in nearly all cases, and all of the interviews generated usable and useful data (the only interviews that were removed from the study were pilot study interviews where the participants were practicing technical communicators, and this was only for the purpose of examining focused extradisciplinary perceptions). The fact that few participants were at their workplaces led in part to limitations in access to various materials, such as documents and artifacts (discussed further below).

In participants' access to information, resources, and artifacts in their organizations. In an ideal situation, each of the persons I interviewed would have been privy to—or would have been able to gain access to—wide-ranging information about their organizations, a variety of internal resources, and artifacts such as quality system and marketing documents. That kind of access enhances a dataset in several ways: by facilitating greater breadth and depth in responses to questions about internal and external communications, for example. In practice, though, participants did not typically have such broad access, and that is understandable. In order to deal with this limitation, it would be necessary to ensure participants had wide-ranging access before interviews were conducted, to perform additional triangulation by interviewing other members of a given organization, or to request access to certain materials myself. The first two remedies would require significant additional time and effort, and the third would require organizational approval, which would not be easy to obtain.

In participants' organizational knowledge. Just as few of the participants had access to all of the information, resources, and artifacts in their organizations, none of the participants in this study could have been expected to understand every nuance of their organization. While expected and understandable, the fact that organizational knowledge has its limits among participants means that it was difficult to gain a complete understanding of each organization, and that limited potential findings relative to the likelihood that an organization will hire a technical communicator in the foreseeable future, and relative to patterns 2 and 5. As I will discuss further in chapter 5, the scope of a technical communicator's organizational knowledge has significant implications for their ability to navigate an organization's structure and, ultimately, to succeed in that organization.

Looking Ahead

In the first four chapters of this dissertation, I have:

- Established a model of TPC as a field of workplace practice that can be strengthened by academic research, even as academic inquiry often skirts practitioner issues;
- Discussed perspectives from other disciplines that exemplify ways in which we can conceptualize and study workplace issues in TPC;
- Set forth a research methodology for an empirical study of workplace communication practices and extradisciplinary perceptions of technical communication; and
- Described findings and patterns observed in that empirical study.

As I have promised readers, the next chapter will discuss scholarly, pedagogical, programmatic, and practical implications of this empirical research.

Chapter 5: Advancing Fertile Grounds: Implications for Workplace Practice, Pedagogy, and Programs in Technical and Professional Communication

Revisiting the Workplace Practice Model

In chapter 1, I laid the groundwork for an essential practical framework which I discussed in detail in chapter 3: the workplace practice model for TPC. In this dissertation, that model illustrates the basis through which TPC gains its power and viability in professional, particularly non-academic contexts. In that framework, I asserted that four concepts formed the basis of TPC's viability in work contexts:

- **Competencies:** concrete or abstract skills.
- **Professional identity:** how a field is perceived in terms of its positioning and purpose in workplace application.
- **Legitimacy:** the value placed on a field and its contributions in work contexts. The legitimacy perceived internally—within a field—is *intradisciplinary*; the legitimacy placed on a field by those outside the field is *extradisciplinary*.
- **Power:** the ability of a field and its practitioners to influence processes and structures in a given work context(s), such as a business or non-profit organization.

In broaching the workplace practice model, I advanced a model intended to help conceptualize the academic study and teaching of TPC as a field of workplace practice, yet in doing so acknowledged the essential, well documented argument that TPC in its academic manifestations does not always align with TPC as a field of applied practice. Expressing agreement with that argument, I asserted that academic scholarship in TPC should take into account workplace needs and considerations, particularly when such scholarship is intended to have some connection to practical application. In essence, therefore, the workplace practice model is a conceptual model for academic use in understanding a crucial, largely non-academic dynamic.

In chapter 3, I explained that the workplace practice model can be useful in *conceptualizing* TPC's viability in work contexts, but that field research is needed to better understand how components of TPC's viability play out in real-world application. Therefore, in chapter 3, I provided a detailed methodology for an interview-based empirical study focused on understanding a previously underexplored theme in TPC: extradisciplinary perceptions of workplace communication and TPC's place in workplace communication contexts. Findings and patterns from that study were then described in chapter 4, with implications to be covered in this chapter.

Before proceeding, it is helpful to qualify the notion of the workplace practice model in light of its forming a practical underpinning to this dissertation and the implications that I will share in this chapter. The workplace practice model is not a static model, nor is it intended to be a monolithic, all-explaining framework for TPC's viability in industry. To the contrary, it is a dynamic, iterative model that can be used to help position TPC as a field of workplace practice, and it does so as part of an ecosystem of potential models in academic scholarship. The workplace model is intrinsically practical: with modest rhetorical adaptation, practitioners should understand it and (optimally) see its potential application to their work. Other models that seek to position practical technical communication in some way may adopt different foci. Some, for example, may be more theoretical, such as Petersen's (2017) models of power. They may be rhetorical, such as Winsor's (1996) notion of knowledge-making in a technical organization; empirically genre-focused, such as in much of Spinuzzi's work (e.g., 2003); or intended for productive disruption of long-term hegemonic narratives in the field, as with the "antenarrative" lens provided by Jones, Moore, and Walton (2016). Because my research aims were practitioner-focused, I needed a model designed to address practical experience in a direct, one-to-one fashion. That is the basis of the workplace practice model, and that is the practical framework to keep in mind when considering the implications in this chapter. I will next discuss those implications in terms of workplace practice, research, as well as pedagogy and program development and assessment. In this chapter, I am defining implications as those points which are:

- Strongly suggested by empirical observations and findings in the study;
- Very likely worth applying in future contexts, be they practical, scholarly, pedagogical, or curricular;
- If applied or known, very likely to result (directly or indirectly) in one or more outcomes favorable to the viability and/or growth of TPC in one or more of those future contexts.

Implications for Workplace Practice

The first set of implications I will discuss are implications for workplace practice, specifically for practicing technical communicators and for TPC as a practical field.

Communication is pervasive across work contexts, and communication work is needed in all of them. One of the most obvious observations from interview findings is that communication is taking place in every organization or work context discussed by participants. There was, to my knowledge, no exception to this fact. Stemming from this observation is the obvious notion that communication work is needed in some form in nearly every work context. As an implication, this notion may seem obvious, almost like "low hanging fruit" that needs no mention. However, it is worthwhile when one considers practitioners' periodic questions of their own applicability in workplace works—questions reminiscent of one I answered on the blog site *I'd Rather Be Writing* (an excerpt of which I have shared below). Note how the writer indicated that there was not an issue with the quantity of work to be done, but (in their view) with how the roles of their technical writing team were valued in her company.

> I started my career as a writer last July. I came from technical support. I thought the support team was at the bottom of the chain at our company. Today, I stand corrected. It is definitely our tech writing team. Our company, along with many others, recently furloughed many employees.... It's not like there was no work for us. We were drowning in it. I don't know what the ratio is now, but I know it's bad. It is a constant uphill battle to get the resources that we need just to get our jobs done and we are often treated as last priority. I just wanted to ask you, is this normal? Are technical writers often treated as such an unimportant part of a company?

> Is there a common movement happening to get rid of technical writers? (“Guest post,” 2020).

This example illustrates a concern that technical writers sometimes share: that their work isn’t needed or valued. What I am suggesting here is that the root problem in utilization of technical writers isn’t necessarily that there isn’t a need for them; it’s that confounding factors create challenges in effectively allocating them. These factors relate to the next three implications I will discuss.

Extradisciplinary perceptions of TPC and its legitimacy are inconsistent; it is reasonable to believe that TPC as a field of workplace is not well understood outside of the practitioner community and those with close ties to that community. As noted in pattern 1 from the research, it was very obvious that extradisciplinary perceptions of TPC—the knowledge and beliefs about the field held by those outside the field—were inconsistent on many levels. Despite common themes surrounding manuals and instructional documents, perceptions reported in the interviews ranged from “communications regarding the internal workings of our products from an engineering perspective” (P6) to “the technical aspects of your career, being able to communicate that to other people . . . in whatever that career is” (P16) to the “technical aspect of my job, which is primarily the computer” (P24). Of all of the interview questions, the question related to this pattern led to arguably the most varied of responses other than those dealing with individual demographics and career background.

Perceptions of TPC as a field of practice are strongly related to perceptions of its legitimacy. If a field is perceived as legitimate, it is perceived as having worthwhile application in a given context. For example, if one were to ask a person if an attorney is likely to be able to provide legal advice, there is a strong probability that person would answer affirmatively. At least two factors influence such an answer: one, the perception of what an attorney does or is capable of doing, and two, the perception of how an attorney can apply their skill set to a given problem. Collectively, that sense of legitimacy makes a significant difference in someone choosing whether to represent themselves in a court case, for example, or to utilize the services of an attorney.

Though law and technical writing are distinct fields—unlike TPC, for instance, lawyers have a generally well-defined professionalization track and licensure process in each state—the importance of perception still applies. If decision-makers (executives, managers, HR leaders, and so on) within an organization have a positive perception of technical communication's legitimacy, they are more likely to employ and staff technical writers to different projects; this was very apparent in cases such as P1's engineering firm (where he was a director-level employee with prior knowledge of technical writers' contributions and the ability to advocate directly for a hire) and P21's pharmaceutical company (which had employed technical writers for many years and therefore had established a viable use-case for them). That perception of legitimacy is partly determined by decision-makers' prior knowledge (or what they *believe* they know) about what technical and professional communication actually is.

Even in cases where employees *without* hiring authority knew of the potential value of hiring a technical communicator in their organization, if hiring managers and other decision-makers did not know of or see such value, the likelihood was low that a technical writer would be hired at that particular organization in the near future. This phenomenon was apparent in cases like P18's position as a director of student engagement at a university and in P26's position as a project manager at an industrial equipment supplier. For example, in P26's company, most of the critical communication work was performed by a contract company with just enough corporate oversight to ensure accurate customer-facing web content. "Outside of what we are doing now," P26 stated, "I don't think they'd be willing to go any further" in hiring in-house technical writing. P18's college was quite interesting because, while he could see a possible use-case in principle, "there [were] certain other political and fiscal reasons" associated with college governance that would make it difficult to hire a technical writer for college-level communication work beyond the "successful [and] competent" work that in-house professionals were already doing. To expand on his assessment, P18 stated:

> I can see it from both sides [hiring and not hiring a technical writer]. I guess overall, to be a realist, I would say "no," that they [college administration] would not be open to that for the reasons that I mentioned. But if it were proposed, and if it were fiscally responsible, I think that it is something that they would be responsive to should the factors line up that would allow them to consider that. But again, being a realist, and knowing higher education, and knowing the way that a state-run public institution operates, I would have to say "no," that that would not be something that ... would be realistic.

Such ambiguity and organizational complexity, ultimately, would hamper a hiring case for a technical writer.

Technical communicators are likely underutilized across industries; macro-level and organization-specific moves are needed to improve that utilization. As I discussed in chapter 1, US Bureau of Labor Statistics data suggested a positive growth rate for technical writing between 2016 and 2026; though this projection was made prior to the Covid-19 pandemic, I believe that the growth rate will continue in a positive direction during and after Covid-19 given that a large number of positions in technical writing and related fields continue to be advertised, both in-office and remote, across the country. If this trend continues, that is good news for the field.

At the same time, it is quite possible—even likely—that current utilization of technical writers does not represent its true potential. This potential *under*utilization derives not only from the aforementioned inconsistencies in how the field is perceived by extradisciplinary stakeholders (seen in pattern 1 in the empirical study), but also from commonly observed ambiguity in communication roles within organizations (pattern 4) and the need to position TPC roles more effectively in organizations (tied directly to pattern 5). With greater extradisciplinary awareness of technical communicators' ability to contribute to business-critical activities (a macro consideration) will come greater potential for utilization of TPC professionals across industries. In addition, more precise definition of communication roles and responsibilities and better positioning of TPC professionals within work contexts (both organization-specific considerations) will lead to more effective utilization of technical communicators. These are efforts that practitioners, potential allied stakeholders (such as project managers, HR professionals, and others in influential roles), and academics in teaching and research roles can help advance.

Technical communicators should consider themselves as more than mere "communicators," and the professional identity of the field should reflect a strategically expanded skill set and potential for business-critical contributions. Academic researchers over time have argued that practical TPC is and should be seen as a field with a range of marketable, business-critical capabilities. In a similar vein, many researchers have argued that technical communicators should actively seek skill diversification and incorporate those skills as part of an expanding professional identity that the collective field can consequently acknowledge or adopt. While communication is no doubt one of the most prominent and important of a technical communicator's roles, other roles with particular characteristics have gained traction in the scholarly literature: that of knowledge worker (Ferro & Zachry, 2014), symbolic-analytic worker (Johnson-Eilola, 1996), content strategist (Brumberger & Lauer, 2015), project manager (Hart & Conklin, 2006), user experience (UX) specialist (Brumberger & Lauer, 2015), and social justice advocate (Jones, 2016; Walton, Moore, & Jones, 2019), among others.

As it turns out, findings from the study suggest these arguments for skill diversification have merit in principle. Although there is not enough data in this particular study to produce an extensive list of what roles may be most in demand across various industries, some resounding perceptions were:

- That a technical writer's skills would be relatively limited to communication and documentation.
- That many organizations would not have the need to budget for a communication-specific role; and
- That, if a technical writer were hired, such a person would need to have an expanded skill set in order to address specific organizational needs (and thereby justify the hire).

One or more of these themes were well represented in multiple interviews. For example, P3 (a director of program management in the insurance and IT field) stated that, when a communications specialist was hired in his group, "our C level [the person who directs the business unit, such as a CIO or CFO] wanted to hire a communications person who could also serve as a project manager when we're not doing communications." P11 (an automation engineer at the engineering services firm) said, although that his company doesn't have the "mindset to where they see the need for" a technical writer, he believes they would if a customer or someone in sales identified the need for consistency and greater attention to communication and documentation; having that, he said, could lead to a "strategic" budgeting and hire for a technical communicator.

A certain irony of this implication is that, in chapter one, I discussed the challenging effects of role diffusion upon TPC and its professional identity, and here I am suggesting (based on study findings) that technical communicators should work to expand their skill sets *and* that the field should, in turn, strive for a professional identity that reflects that kind of expansion. I believe this seeming dichotomy is inevitable: in order to expand TPC's application (and long-term viability), it is necessary to expand practitioner skill sets and potential roles within organizations; at the same time, however, too much of that kind of expansion leads to role diffusion that can confound and even disrupt the field's professional identity. This is a challenging predicament, but one we must engage for the good of the field.

Technical communicators should purposively engage with decision-makers and influencers within their organizations. Despite the challenges of skill set and role diversification, one notion that would seem valid in nearly any organization is the technical communicator's need to engage with decision-makers and influencers within their organizations. Doing so can lead to greater awareness of a technical communicator's capabilities and potential contributions to an organization (thereby addressing the related need to positively influence extradisciplinary perceptions of the field), and that kind of awareness can lead to a much greater likelihood that a technical communicator will be staffed to projects within the organization.

To be fair, the level of engagement needs to be strategic. In that sense, I picture a continuum of engagement with decision-makers ranging from detached and passive to overly involved, the latter bordering on aggressive or something perceived as desperate or obsequious. As with many realities of the workplace, the optimal placement in that continuum is likely to be somewhere in the middle, and it is going to be specific to each organization or work context; determining that zone of optimal engagement will require knowledge of the organization and its stakeholders. This kind of awareness of organizational dynamics is related to chapter 2's discussion of how organizational culture and climate offer a valuable multidisciplinary perspective for TPC; it is also a consideration relevant to the next implication I will discuss.

Technical communicators should work toward the best possible understanding of their organization and client(s) and should consider several strategic points and questions when advocating for their application, utilization, and positioning within an organization. Study findings strongly suggest that a technical communicator's positioning within an organization is well served by understanding the organization and its client(s) to the greatest extent possible. For example, there would be a significant difference for a technical writer working in P21's employer—a biopharmaceutical company where documentation roles are well established and seemingly clear—and one working in P19's employer—a for-profit university where 'the culture . . . is sometimes hard to break through" yet a technical communicator, if hired in the future, could help avoid a situation where employees are "just sprinting trying to put out fires," presumably (in part) in communications. Though the biopharmaceutical company actually employs technical writers and the for-profit university does not (but foreseeably could in the future, according to P19), the differences in culture are likely to lead to differences in how technical writers are utilized and positioned within each organization. A technical communicator, in turn, would need to make different strategic moves in each: at the biopharmaceutical company, those moves would likely involve understand the *existing* context of use, becoming enculturated to that context, and (potentially) identifying possible improvements where appropriate. Talking about those improvements would involve a certain level of timeliness and tact, to be fair. At the for-profit university, where there was no technical writer on staff at the time, any newly hired technical writer would have the simultaneous challenge and opportunity of building formal communication strategies for internal and external audiences; in fact, it's likely that is what the organization would expect. Doing so, in turn, would require an increasingly robust understanding of the organization.

A certain amount of advocacy in TPC practice is what I refer to as "self-advocacy"—the kind in which a practitioner asserts in various ways the value, application, and bolstering of their role and position within a given work context. In addition to developing an ongoing understanding of their specific work context, study findings also suggest that a technical communicator should strive for an understanding of such factors and conditions as whether an organization has a centralized headquarters with satellite offices, who produces internal and external communications, how those communications are produced, and how those communications are strategized (and by whom or at what levels of an organization).

This is a significant implication, one that can be written about at length and studied in future research. It is also an implication with relationships to disciplines such as organizational psychology, whose potential disciplinary contributions to TPC scholarship I discussed in chapter 2.

Implications for Research and Scholarship

In this section, I will discuss implications for research and scholarship. These implications are meant for ongoing consideration within TPC as an academic discipline;

they are not necessarily meant as implications for a *specific* study or studies (even though they could certainly be helpful in individual researchers' thought processes).

Academics should consider engaging with practitioners in workplace settings whenever possible, seeking mutually beneficial research opportunities and identifying areas where academic research can support and advance the interests of practitioners. This implication is important and may seem straightforward in principle; its application, however, may be more difficult to accomplish without changes in academic reward structures and training in graduate school research courses. That being said, as I discussed in chapter 1, the longstanding gap between academic scholarship and workplace practice continues with little sign of abating. It is my hope that the empirical study presented in this dissertation serves as a worthwhile example of research that helps to address that gap and that future research will continue to do so, affording tangible benefits to the practical side of the field. Part of that effort will necessarily involve direct engagement with practitioners, who are particularly well positioned to speak to ways in which academic scholarship can better meet their needs and benefit the field in both the short and long term.

When possible, practitioners should engage with academics and clearly assert how academic research can help them. Just as academics can work toward engaging with workplace practitioners more regularly, it is incumbent on practitioners to share with academics what research is needed to support the practical side of the field. There is a similar challenge with incentivization here, too: at least anecdotally, practitioners do not necessarily benefit from or see the benefits of taking the time to converse with academic researchers on these issues. Where there are opportunities for such conversations—within STC (both the national organization and the local chapters) or on websites such as Tom Johnson's *I'd Rather Be Writing*, for instance—we find that not every TPC professional belongs to STC, reads the trade materials and websites, and/or attends trade or professional meetings. And even though Tom Johnson does an excellent job of representing and advancing the practical interests of technical communicators through his site, he can't spend 100% of his time working to connect the academic and industry parts of the field, and even if he did, he couldn't be the only one doing it if such an effort were to be successful.

This is essentially a case where conversation and increased collaboration between academia and industry would likely benefit the field of TPC collectively in many tangible ways; yet we do not have strong, consistent incentives in place to encourage such cooperative dynamics. Mechanisms through which to facilitate those interactions do exist; however, not everyone (academic or practitioner) engages with them. In short, we have a situation in this field where more frequent mutual engagement is possible in theory, would be beneficial, yet would require a significant amount of work to realize in more common practice. At present, conditions do not seem to favor movement in this direction except in certain segments of the academy and industry; one example would be research collaborations with industry advisory boards (see, e.g., Duin & Tham, 2018), discussed for pedagogical and programmatic reasons in the forthcoming section "Implications for Pedagogy and Programs," and cases where purposive interactions through undergraduate and graduate internship programs and other non-academic contact points for research faculty lead to possibilities for engagement with non-academic workplaces (see, e.g., Bourelle, 2014; Tovey, 2001).

Academic settings (institutions and units within them) should seek ways to incentivize workplace-oriented research and ensure that it is well supported. As I have discussed, despite a need for workplace-oriented research in TPC, the incentives for doing that kind of work do not always seem to justify it. Although the results of my empirical study do not offer solutions to this problem, but rather illustrate the importance of workplace-oriented research, I see the lack of incentives as an important, multifaceted issue about which scholars have written (e.g., Blakeslee & Spilka, 2004) and of which many academics are aware on an intuitive and sometimes anecdotal level. In a competitive scholarly ecosystem, workplace-oriented scholarship will not be pursued if scholars do not see the reward for doing so, or if they do not think that their institution or unit will value it as much as other potential parts of that ecosystem. Given that few academics in TPC are generally familiar with non-academic work contexts—and the methods and approaches for doing that kind of work[5]—the incentive problem is compounded.

If workplace-oriented research in TPC is going to grow, institutions and units within them will need to move toward incentivizing that research to the greatest extent possible. Support from college deans, department heads, and departmental faculty is needed—for example, a commitment to stand behind a relevant research agenda

[5] This point about familiarity with non-academic work contexts and approaches to studying them relates directly with training and educational needs for early-career researchers, a topic covered in greater detail in the section "Research-Focused Graduate Programs" later in this chapter.

expressed as early as the interview stage for both tenure-track and contingent faculty, and certainly throughout a scholar's career at a given institution. Letters supporting tenure and promotion from workplace-oriented academics at other institutions should be encouraged in dossier reviews. Research funding and course releases to support workplace-oriented scholarship help ensure that such work can continue in TPC, especially for valuable ethnographic research, which is often highly immersive, and qualitative studies with large sample sizes (an *n* of 50 or more, especially when the research involves interviews or observational studies). And when it comes to faculty who are not as familiar with workplace-oriented research, it is incumbent on other faculty within that immediate scholarly community to help advocate for the need.

Scholarship examining both intradisciplinary and extradisciplinary perspectives is necessary. With this statement, I am asserting the importance of studying intradisciplinary (internal to TPC) and extradisciplinary (external to TPC) perspectives. Intradisciplinary views of the field are generally much better researched than extradisciplinary views (see, for example, Cleary, 2012, 2016; Hannah & Lam, 2016; St.Amant & Melonçon, 2016), and while I would encourage particular efforts toward extradisciplinary research to help fill that gap in TPC, research on internal perceptions will continue to be needed. Studies that look at both simultaneously—even putting them into conversation with one another—would be very valuable.

Workplace scholars in this field have well established the fact that studies of TPC practitioners' views and knowledge of important competencies, commonly emphasized project types, work conditions, and other important workplace subjects can provide essential insights into work realities that can be applied for practical and pedagogical purposes. My research has shown that extradisciplinary perceptions of TPC as a practical field can also lead to insightful data that scholars can use for the same purposes. Obtaining data in each participant context will necessitate different nuances in study designs and methods; for example, recruitment of TPC practitioners can be accomplished in part through a professional organization such as STC, whereas identifying extradisciplinary stakeholders may require contact with different organizations and professional networks. As such, effective methods of conducting workplace-oriented research with intradisciplinary and extradisciplinary participants should be emphasized in scholarly journals and graduate programs in TPC.

Immersive workplace-oriented research should continue to be encouraged. As part of a detailed literature review (metasynthesis) that my colleague and I conducted, we found that there were several different types of empirical workplace-oriented research in TPC since 1982. These included:

- Direct immersion (or “immersive”): research in which the investigator spends part or all of their time in a given work context. (Immersive research was common in ethnographies and observational studies.)
- Controlled research context (or “off-site”): research in which the investigator collects data without being present in a given work setting or without experiencing the work context directly. (My empirical study would be an example of this.)
- Textual: research in which workplace texts are primarily analyzed.

- Historical: research in which historical/archival work dealing with a workplace is conducted.
- Textual and historical: research in which textual analysis and historical/archival work is performed. (Textual and/or historical workplace-oriented studies tend not to involve human participants.) (Rosselot-Merritt and Bloch, forthcoming)

I include this implication about the importance of immersive workplace research, ironically, because my own study illustrated how important it is. To be sure, *all* workplace-oriented research in TPC is important, yet what I discovered is that off-site research may preclude possibilities of learning about organizations in ways that are only possible through immersive, on-site research. In the detailed literature review mentioned earlier, I also discovered that immersive workplace-oriented research appears to have become less common over time (Rosselot-Merritt and Bloch, forthcoming), which (if that observation continues) is unfortunate. My suggestion is that workplace-oriented scholars take steps to include immersive workplace components in their work whenever possible[6].

It is important to note that academic research is not always widely read outside of the scholarly community; that phenomenon is somewhat problematic in a field like TPC. At first, I hesitated to mention this as an implication *per se*. However, the literature review informing my empirical study revealed evidence that non-academics do not seem to be reading academic work, and also that the academic and practical parts of the field are very much disconnected. These are extremely important points, and we as

[6] To clarify, performing immersive workplace-oriented research during the Covid-19 pandemic would of course be inadvisable in most cases. This point is more for consideration in situations where Covid-19 has been brought under control.

scholars do well to consider the relatively limited *non*-academic audience for our work when we assert practical value or make statements such as, “Technical communicators should therefore *[insert practical call to action based on scholarly argument]*.” Earlier in this section, I argued for moves toward better aligning academic and practical perspectives on TPC. I argue that TPC practice has the important challenge of achieving a consistent identity *and* that academic research can help contribute to ways of strengthening that identity and how such identity can be better established among extradisciplinary stakeholders in workplace contexts. If academic research does not relate to TPC practice, and if TPC practitioners are not reading academic research, those beneficial possibilities simply cannot be realized.

Researchers in TPC and organizational psychology can learn productively from scholarship in one another’s disciplines. Chapter 2 featured a discussion of potential multidisciplinary relationships between TPC and organizational psychology. In that chapter, I discussed the concepts of organizational culture and climate, which have strong relevance to TPC. In terms of practice, I earlier established the importance of understanding organizational dynamics for practitioners in our field. The organizational psychology perspective allows us to take that statement a step further. For example, by studying organizational symbols and objects (see, e.g., Rafaeli & Worline, 2000), the technical communicator can better understand the culture in which they are working; that kind of analysis may be especially valuable in the early stages of a technical communicator’s employment, when elements of the organization’s culture may be less known to them.

This relatively is by no means the first time that concepts related to organizational culture or climate have emerged in TPC scholarship (see, for example, Constantinides et al.'s [2001] discussion of topics including organizational culture theory, corporate culture, organizational cognition, and organizational symbolism). It is clear, though, that understanding organizational culture and climate undoubtedly helps technical communicators to better understand how and why an organization functions as it does. It helps us to better understand organizational dynamics relevant to internal and external communications. It also helps widen our potential influence within organizations. For these reasons, TPC pedagogy—particularly within majors, certificate, and graduate programs—should be encouraged to incorporate these concepts from organizational psychology in units or lessons that incorporate analysis of workplaces or workplace dynamics. By the same token, TPC program administrators should identify opportunities to incorporate these concepts within their curricula, potentially with the input of industry and non-academic stakeholders.

At least since the 1980s, TPC scholarship has been strongly linked to workplace studies, and rightly so. The work of scholars like Dorothy Winsor, Clay Spinuzzi, Erin Friess, and Joanna Schreiber exemplifies ways in which TPC scholars can empirically study workplace themes—in many cases on a very productive level. That being said, the suggestion I would make for scholarship within TPC is, in essence, a gentle reminder: when we study workplaces and the activities (including communication) that take place within them, we need to consider climate and culture as part of those dynamics. In many cases, it is likely worth bringing organizational psychology into our work—not only citing it, but also engaging with it when appropriate.

I call that a "gentle reminder" because I don't mean for it to sound prescriptive or pompous. The same is true for an even gentler suggestion for organizational psychology scholars: consider what technical and professional communication may offer for your research. We know from organizational communication work that discourse (including texts) is part of the lifeblood of any organization. How might discursive elements of an organization (the texts, conversations, and so on) be incorporated into organizational psychology research? Is it possible to include usability studies or rhetorical analyses, for example, in research involving organizations and their personnel? These questions are not necessarily limited to culture and climate but could expand to other concepts within organizational psychology such as personnel-organization (P-O) fit, motivation, socialization, job attitudes and affect.

Similarly, researchers in TPC and organizational communication can learn productively from one another's disciplines as well. In terms of organizational communication—which, like organizational psychology, was first discussed in terms of its multidisciplinary connection to TPC in chapter 2—discourse in organizations is a concept with strong connections to technical and professional communication. I would suggest relevance in two areas in particular: application of organizational discourse analysis (ODA) methods and TPC's understanding of the relationship between discourse and organization. ODA can be useful in studying a variety of phenomena, such as leadership (see Fairhurst & Uhl-Bien, 2012), and I see ODA methods as potentially useful in studying particular phenomena of potential interest to TPC, including organizational roles of non-management employees; power dynamics within organizations; and (consistent with the empirical part of this dissertation) perceptions of TPC among broad groups of stakeholders, including extradisciplinary, non-TPC professionals. *Forms* of ODA may also be of use in TPC research. Though not typically framed in terms of ODA, rhetoric has been commonly taken up in the TPC literature over the course of many years (e.g., Coppola et al., 2000; Wright, 2019; Zappen, 1987). Other approaches with connections to ODA in TPC can be observed, though less often than rhetorical approaches; based on a literature search, apparent frequencies can be reasonably characterized as follows:

- Ethnomethodology—rare (e.g., Weedon, 2019); conversation analysis—occasional (e.g., Clinkenboard, 2018; Swarts, 2020).
- Narratology—rare (e.g., Henry, 1994)
- Critical discourse analysis (CDA)—occasional (e.g. Arduser, 2013)
- Communication as constitutive of organization (CCO) as a methodological form—very rare, if ever used, in the TPC literature.

The fact that most of these approaches have been used at least to some extent in TPC, combined with the likely applicability of ODA in TPC research, suggests a potential fit for TPC workplace scholarship in some cases.

The concept of “organizations as discursive constructions” (a more detailed discussion of which can be found in chapter 2) is not typically taken up in the TPC literature; however, the importance of discourse in organizations has been addressed in terms of such topics as the discourse community (Zappen, 1989), cultural perspectives on the regulation of discourse in organizations (Mara & Hawk, 2009), the role of metaphor in organizations (Williams, 2020, which notably engages communication theory in other ways as well), and the relationships between texts in an organization (Luzón, 2005). I propose expanding the concept of *discourse* in TPC to include the *orientations* that Fairhurst & Putnam (2004) proposed, with the object orientation emphasizing the ability of culture to influence discourse, the becoming orientation drawing attention to the ability of discourse to constitute culture, and the grounded in action orientation emphasizing the mutually constitutive nature of discourse and the culture of an organization (Messersmith et al., 2009). Organizational communication's take on culture can also strengthen the arguments previously put forth with respect to organizational psychology and TPC.

TPC's potential contributions to organizational communication may seem less obvious than what it can contribute to organizational psychology. This is due primarily to the fact that the two fields often overlap in terms of methodologies and topics of research interest. However, there are ways in which TPC can contribute to organizational communication scholarship: work in audience and personas, for example; incorporating technological literacy and emerging technologies in research; studying the visual and information design properties of texts; incorporating usability and user experience in research; and potentially expanding perspectives on social justice in communication.

Implications for Pedagogy and Programs

In this section, I will reflect on implications that can be drawn for the potential benefit of TPC pedagogy and programs. Because pedagogies and programs can differ based on focus (industry/praxis or research), I am dividing this discussion into two separate subsections based on those distinctions. In the subsection on praxis-based (workplace-focused) programs, I will address considerations for both service courses (for multiple, often non-TPC majors) and professional sequence (courses for students in a major, minor, or certificate program) as much as possible. In the subsection on research-focused graduate programs, I will discuss key implications for graduate programs in which academics in TPC typically study.

Praxis-Based (Workplace-Focused) Programs

These implications pertain to praxis-based programs designed for people pursuing a career in TPC as a field of workplace practice. These may be undergraduate or graduate programs. As of this writing, there are 209 undergraduate emphasis programs and degree programs in TPC, 141 minors, 79 undergraduate certificate programs, 110 master's degree programs, and 55 graduate certificate programs that fit this description (Melonçon, 2020).

As much as possible, instructors should engage their students with industry and community professionals in course projects and in facilitating feedback for students on their work. There are plenty of examples in which an instructor includes one or more industry professionals or community partners in a course project, some of which are represented in the academic literature (see, for example, Jones, 2017; Kimme Hea & Wendler Shah, 2016; Renguette, 2016). In professional sequence courses, those kinds of partnerships are fairly common as part of an effort to give students an opportunity to apply their knowledge and skills to real world situations: a business that needs a manual for unpacking a product, a community center seeking to redesign its website, a nonprofit organization with a limited budget looking for communication expertise in identifying and applying best practices for reaching its beneficiaries, and numerous other possibilities. This kind of “real world” application can be applied in service courses as well, particularly service courses that include organizational or community partnerships on various projects, although it is less common in service courses simply because of the need for breadth of coverage in them and the considerable time investment needed to support those kinds of partnerships.

My research supports the notion that industry and community professionals should continue to be included in course projects and in providing feedback to students. I would suggest that such efforts are especially important in professional sequence courses as part of competency development, networking, workplace application opportunities, and development of professional identity among TPC students. Such efforts could also positively impact knowledge and perceptions of TPC among extradisciplinary stakeholders.

As much as possible, instructors should engage with industry professionals in course designs and curricula. This implication, and the one that follows it, is in essence an extension of the implication that industry stakeholders should be included in course projects and student feedback in TPC courses. I also assert that persons in industry should be called upon to help establish important components of TPC course designs and curricula. I am not suggesting that persons in industry take ownership of course designs or curricula; however, I am suggesting that they be consulted on those matters, particularly in courses that directly connect to workplace issues (for example, it would make sense to engage with a technical writer or manager at an environmental consulting firm in designing a course focused on environmental and science writing; it may not make much sense to consult someone in industry on the design of a course on rhetorical theory, unless the course is specifically about workplace rhetoric).

I would also add two suggestions. First, persons consulted in this context may benefit from involvement in smaller-scale elements of an academic course—a single project, for example—prior to weighing in on more macro-level subjects such as course design and curriculum. Second, where possible, an industry advisory board can provide additional resourcing for this purpose (among others). Some programs, such as those offered by the University of Minnesota's Department of Writing Studies, already have an advisory board in place and can offer foundational knowledge for other programs interested in such a possibility.

Programmatic assessment should incorporate input from workplace stakeholders. Similar in concept to the previous two, this implication suggests that the assessment of praxis-based programs in TPC should include workplace stakeholders. These stakeholders may include:

- Persons who are outside the field of TPC but who work with or manage those who do work in the field
- Executives of organizations where TPC professionals work or could work
- Non-profit staff
- Representatives of community organizations

- TPC professionals.

In an optimal situation, workplace professionals included in programmatic assessments would be (a) familiar with the current goals of the program and its orientation to the field and (b) familiar with the set of industries and community needs of which graduates of a specific program would likely need to be aware. For example, if a large number of program graduates end up working for technology companies in the Chicagoland area, there would ideally be a workplace professional on a program assessment committee who was familiar with those industries in and around Chicago.

Instructors should consider the importance of concepts such as organizational culture, organizational climate, and organizational communication in TPC pedagogies and curricula. This is a key implication that ties to patterns 2, 5, and 6 in chapter 4. As I discussed in chapter 2, concepts such as organizational culture, organizational climate, and organizational communication are key in helping to place an organization into the proper context. Training in these concepts potentially offers significant benefits for students who enter the field of TPC.

Research-Focused Graduate Programs

These implications pertain specifically to graduate programs designed to educate future academics in TPC. These are typically Master of Arts or PhD programs designed to educate people in academic writing- and communication-oriented fields, such as TPC, composition, or rhetoric. As of this writing, there are approximately 34 such programs across the United States specifically (Melonçon, 2021). They have different names that include Technical Communication and Rhetoric (Texas Tech University, Utah State

University); Rhetoric, Writing, and American Cultures (Michigan State University); Rhetoric and Scientific & Technical Communication (University of Minnesota); Rhetoric and Composition (Purdue University); and a number of others—but they tend to be research-focused, and a majority of their graduates have pursued academic positions. In this section, I will focus on implications relevant to those types of programs.

Research methods courses should be sure to offer training in workplace-oriented research methods. Research methods courses are typical of research-focused graduate programs in TPC and writing studies. From those methods courses, graduate students gain an understanding of theories and methodologies commonly used in research within the field as well as (in most cases) experience in applying one or more methods to research problems. The methods training that someone has in graduate school often contributes to their later methodological orientation, such as in the research they perform for dissertation and beyond. For this reason, it is extremely important that graduate programs provide research methods training that includes workplace-oriented research methods. That training may be provided in a required foundational methods course; however, for reasons I will explain, it may be preferable to offer a separate seminar that graduate students have the option of taking as part of their master's or PhD program.

The research methods of which I speak here are not necessarily specific to workplace-oriented research. However, research methods that we use in TPC must very often be adapted to workplace-oriented research, particularly workplace studies that are highly immersive—meaning that the researcher is present within one or more work contexts (i.e., "on-site" research). Methods that are frequently used in workplace-oriented scholarship include interviews, surveys, and rhetorical analyses of workplace communications; specifically in immersive workplace research, methods include interviews, ethnographies, and participant observer methods. There are specific moves and considerations that workplace researchers often must make in order to successfully conduct much of this kind of work, particularly in immersive studies. For example, the researcher will almost certainly need to gain management approval in order to observe or interview people within work contexts. In doing so, the researcher must be very specific and circumspect in presenting the case for the work. A great deal of time and energy will need to be expended in making the case and answering potential questions from management. Non-disclosure agreements (NDAs) may need to be signed. The time will need to be scheduled, and the researcher will need to organize that time into their schedule. What's more, management (or individual participants) can withdraw approval at any time for reasons such as time or resource demands of employees, concerns about intellectual property, or questions of benefit to the organization. If and when that approval to conduct or document such immersive research is rescinded, the researcher may have little if any recourse despite the fact that a significant amount of data collection may have already taken place. That lattermost risk became the basis for a methods professor that I know to have said that they advise their graduate students not to conduct immersive workplace research. That makes sense. However, workplace research is undoubtedly necessary in TPC, and the only way that work will be done is when TPC researchers actually do it. In that sense, it is not so much that the needed methods aren't being taught; it's that considerations and practices needed to gain access and successfully perform workplace studies aren't being taught specifically.

For illustration, Dorothy Winsor, some of whose work was discussed in more detail in chapter 3, is a good example of someone who was able to successfully conduct immersive workplace research. Yet it could be argued, for all the success and value of her work, that her position at the time gave her certain advantages. For example, she had advance connections to the engineering field (a field where much of her best known work was conducted) and had a great deal of support at the time from her institution and other sources that helped facilitate her work. She saw it through longitudinally, which spoke to her dedication and skill in that work; yet she also had a strong foundation for conducting it.

In order to facilitate successful workplace research, particularly for immersive empirical studies, I suggest that researchers:

- Ensure that contingencies and protection of participants are clearly delineated in IRB documentation (perhaps even beyond what the IRB may require);
- Develop a consent form that includes a clear description of research intent and activities;
- If needed, develop a standalone research description for decision-makers and management to help address questions or concerns that they may have;
- Ensure that requested access to documents and artifacts is specific, limited in scope, and very clear in the description of intended purpose;

- Ensure that concerns about intellectual property and proprietary trade or product information are addressed early on (e.g., a written assurance that confidential/proprietary information will not be requested or written about will be very helpful);
- Identify an employee who can liase with key members of the organization, particularly decision-makers and management, and help provide research access; and
- Where possible, ensure that decision-makers are informed of possible benefits to their organization, wider benefits to the research community, and long-term benefits to interdisciplinary stakeholders.

There are three potential limitations to this implication. One is that, because it is difficult to address every theoretical and methodological nuance that would be helpful to each of a program's graduate students, the tendency of many foundational (and typically required) methods courses is both to survey a broad group of approaches and to generalize the methods training in such a way that graduate students are (supposed to be) able to apply pieces of that training to their own work. For example, a foundational methods course will likely include discussion of ethnography as an empirical research method. One student with an interest in studying environmental writing may elect to study communication in environmental movement meetings ethnographically. Another student who wants to study social media in the fast food industry may decide to conduct an ethnography of an organization that creates social media campaigns for fast food restaurants. These are very different research foci, yet both can easily (and with insightful results) incorporate ethnography as a method.

The second limitation to this implication is that not every scholar will end up performing workplace-oriented research (nor will everyone wish to do so). Therefore, especially in foundational methods courses, dedicating an entire class session to workplace-oriented research may not always be feasible; instead, instructors may prefer to subsume the topic within a larger discussion—for example, as part of a broad discussion about research questions or the kinds of research that TPC scholars have performed over time.

The third potential limitation is that workplace-oriented research can, frankly, be difficult to teach. Successful research on different work contexts will require different methods—and likely different nuances among the same methods when applied to different work contexts. This statement is likely valid even at different stages of research: gaining access to a site (when applicable), recruiting participants, scheduling time on-site or off-site effectively, requesting work artifacts when needed and dealing with issues of intellectual property and confidentiality, collecting data through interviews or other means, and analyzing data, among other possible activities. Similarly, the dynamics of interacting with different work contexts—and the people who work in them—can be vastly different. For example, an ethnography may be possible at one organization, but not at another in the same industry; even the success of strategies for contacting and recruiting participants in workplace research are highly contextual. For these reasons—and simply for the fact that many academics do not have a great deal of non-academic workplace background—it is not surprising that many TPC scholars do not engage in workplace-oriented research for long periods of time, or in multiple instances of scholarship, if at all.

Still, with the centrality of workplace-oriented research to TPC as a field (Rosselot-Merritt & Bloch, forthcoming), that research will continue to be important. Graduate students and early-career researchers should not be left to learn workplace-oriented approaches on their own or through mere trial and error. With better and more consistent training, TPC scholars will be better positioned to perform workplace-oriented research; tangible benefits will result both academically and practically.

Programs should ensure that their graduate students have opportunities to engage with workplace professionals. Since TPC has such inherent connections to the workplace both practically and pedagogically, graduate students should be able to interact with workplace professionals whenever possible. This kind of interaction should not be mandatory by any means, yet I believe it should be encouraged and supported for those students who would like to do so. To help facilitate this possibility, program faculty may consider mechanisms, including the following:

- Recruiting from industry advisory boards (discussed in an earlier section)
- Inviting workplace professionals to speak in courses and seminars
- Reaching out to companies that have a prior relationship with the university—such as those that participate in annual career fairs—and asking them about engagement possibilities
- Working with a local/regional STC chapter to identify workplace professionals.

Program faculty themselves should engage with workplace professionals and seek their input in applicable graduate course and seminar designs. This implication suggests that program faculty in research-focused graduate programs should seek out workplace professionals to get insights into how they may design their graduate courses and seminars to more accurately reflect workplace situations relevant to TPC and potential graduate student interests, as well as to identify possible bases for research and future engagement with graduate students themselves. Many of the same mechanisms for these interactions described in the previous implication would apply here as well: working with industry advisory boards, recruiting workplace speakers, reaching out to non-academic workplaces, and working with a local STC chapter to identify workplace professionals.

Conclusion

In this dissertation, four overarching themes have formed a basis for research and discussion of the nature of TPC as a field of workplace practice. These include practical components of TPC's viability in the workplace; the relationship between academic study and workplace application; the importance of extradisciplinary perceptions and how those perceptions can impact TPC professionals; and, finally, what practitioners, teachers, and researchers can do to bolster the field's strength and professional identity in the future. This dissertation has addressed several pieces of an ongoing conversation in TPC scholarship about the meaning and value of TPC as a field of workplace practice. With no intent to oversimplify, I see this dissertation as making research-backed arguments that can be broadly distilled into these points:

- From historical beginnings tracing back to the teaching of engineering communication in the late 19th and early 20th centuries, technical and professional communication has evolved into its own field of workplace practice with applications in a wide range of industries and work contexts calling for a set of core yet variably emphasized competencies.
- From competencies derive TPC’s professional identity in the workplace. From professional identity flows legitimacy, and from legitimacy flows the power of the field.
- For various reasons, the academic iteration of TPC often lacks alignment with the workplace iteration of the field, particularly in terms of scholarship and to a lesser degree in praxis-based pedagogy.
- In order to advance the practical interests of TPC, it is important to understand both internal and extradisciplinary perceptions of the field.
- Extradisciplinary perceptions studied in this research strongly suggest that workplace perceptions of TPC are varied, as is the perception of its affirmative legitimacy.
- Scholars, teachers, and practitioners in TPC can take concrete steps to advance a broader understanding of the field and its value, thereby enhancing its legitimacy and power in work contexts.
- Part of the initiative to advance TPC requires a “desiloed” multidisciplinary approach by scholars and teachers in the field.

This summary of key, generalized points leads us to the inevitable question for TPC scholars like the kind who will primarily be reading this dissertation: “Where do we go from here?”, or perhaps, given scholars’ relative ability to determine their research agendas, “Where *can* we go from here?”

The shortest answer to that question is that all of us in the field of TPC should take steps to bolster the field and its relevance to workplace practice. This is obviously true for practitioners, who depend on that relevance for gainful employment, but it’s also true for scholars and teachers, whose careers exist in large part because TPC has broad application outside non-academic spaces. This is the part of the dissertation where I risk sounding overly prescriptive or perhaps even arrogant. I don’t mean to. Even after being out of industry for 4 1/2 years as of this writing, I find that my currency with workplace-relevant themes starts to wane rather easily if I don’t engage with non-academic workplaces in some way, or at the very least with people who engage with those workplaces. Fortunately, my PhD program and the metropolitan region where I live as of January 2021 provide opportunities for that kind of engagement. Yet it is not always easy to do. It takes time, and the busy life of the academy necessitates a very conscious effort to make that happen.

The work I have done in this project leads to frank feelings of concern, hopefulness, curiosity, and excitement. I am concerned because I see many challenges for TPC in the workplace. I am hopeful because I know that many of these challenges can be addressed (or can start to be addressed in some way). I am curious because I am genuinely interested in seeing what we all—academics, practitioners, and extradisciplinary stakeholders—might accomplish for our mutual benefit going forward. And I am excited because I am passionate about this field and the vast potential that I believe it has.

One well informed scholar I know has said that technical and professional communication as a collective field draws its strength from workplace application. (That is a paraphrase, but it aptly captures the idea.) Though there are a few dozen academics who may debate that point (and more than a few dozen practitioners who would agree), it is important for us as scholars to consider that most TPC programs are intended for future practitioners, not for academic researchers. We need academic researchers in the field, and their interests, their work, and their scholarly dispositions should be welcomed and celebrated; by no means should academic TPC be completely beholden to its practical iteration. At the same time, there is no doubt that our ability to work in this field is in many ways predicated on its practical application and success. As a matter of utility, our moves toward engagement with the practical part of the field should thus be more than rhetorical or ceremonial; to the extent we can, we should consider how our work can be applied in workplace settings, seek opportunities to meet and converse with practitioners and other workplace professionals, and ensure that our students in praxis-based programs can learn needed competencies and social sensitivities while having solid opportunities to engage with practical issues and workplace professionals. I believe that these are all things that scholars in different institutional contexts—research institutions, teaching and liberal arts institutions, technical and community colleges—can do within the set of priorities defined by their institutions and units.

I have no basis for suggesting that technical writing will ever have the industry utilization of a field like electrical engineering, or the relatively consistent identity of a field like law or accounting. That kind of stability in role definition is not TPC's station, and in some ways (as I discussed in chapter 1) that may be to practitioners' benefit. Yet, as academics, we have an opportunity to work in a field that has theoretical, practical, and pedagogical value, as well as an upward trajectory for workplace careers and thus praxis-based programs in the field. The more we can engage with practitioners, the more we can learn about workplace phenomena, perform research relevant to those phenomena, and apply that research in ways that bolster our pedagogy. Those engagements benefit practitioners, too, and give scholars the opportunity to influence workplace practice in important ways.

The research I have discussed in this dissertation is but one example of how an academic researcher can explore a topic (extradisciplinary perceptions of TPC and workplace communication) important to the field's practical iteration (in this case, to perceptions of professional identity and legitimacy). Other studies are needed to gather data from which scholars may glean insights into TPC practice, workplace phenomena, and opportunities to bring academic and practical conversations in the field together. This goal, though somewhat ambitious in principle and not always successful in past attempts, is one I believe in strongly. Whether it is realistic or merely visionary is something only time and valiant effort will demonstrate.

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Appendix A: Job Titles used in Exclusion Criteria for Prospective Participants[a]

Technical writer Information developer Content developer Technical communicator Technical documentation specialist Technical author Communications manager	Documentation manager Publications manager Publications specialist Information designer Technical editor Documentation writer

[a]See Baehr, 2015

Appendix B: Questions from Semi-Structured Interviews

Work and Educational Background

1. What is your name, position, and company?
   Alternative question: What is the type of position and organization (or industry) in which you work?
2. Tell me about your educational background.
3. What work do you do in your current position?

Questions about Formal Communications and Associated Processes

4. How does your organization handle professional communication with internal stakeholders? Examples may include *[mention some examples]*.
5. How does your organization handle professional communication with external stakeholders such as customers? Examples may include *[mention some examples]*.
6. How do you feel about how formal communications are handled in your organization? Are the existing processes effective?

   Depending on the answer to the question, engage the interviewee in discussions about positive or negative aspects of formal communication processes within his or her organization. If necessary, reassure the interviewee that responses are held in confidence and no personally identifiable information will be shared.

Questions about Technical Communication

7. When you hear the term "technical communication," what comes to mind?
8. Has your organization employed a technical communicator in the past?
9. Do you feel management would be open to the idea of hiring a technical communicator? Why or why not?
10. Do you now, or have you worked with a technical communicator in the past?

Note: Question 10 was used in phase 3 interviews only.

Appendix C: Verbatim Interview Segments from Participants 21 and 25

From P21:

Of course, taking the personal performance out of this, because there's always ... When you talk, there's always some that just aren't great writers, and might as well do it yourself. Assuming that someone has the capability, what it does is it allows the engineers and the technical people to go off and monitor their processes, and monitor their equipment. And use their big brains to go out and solve big problems, instead of sitting in front of TrackWise for three hours filling out the various grids that are required to route a change control, or typing up in gross detail, this deviation investigation.

You want the engineer in the room to spout off, you want them running the testing on the equipment to collect the data. Have that in bullet point form. Have it on a napkin. Have it in a notebook. Whatever you got to do. Run the reports out of the data historian from the equipment tests you ran. Point to all that, circle, highlight.

Do all that, throw it over the wall, and have someone take that ... Vroom. Generate a nice report that goes through a deviation investigation and says, "Voila. We're good to go." Or write up that change control with all the justification and all the required steps that says, "Voila. Here's the current state. Here's the future state. Here's how we're going to get there in gross detail."

It's the administrative side of making this work. Now, engineers write their own white papers. Engineers write their own best practices. Don't get me wrong. It's the stuff that's more navigation of the IT system than it is ... because they're still going to look at the content before it routes.

There's a ton of value there in that deviation in TrackWise, and that deviation of change control space. Tons of value there. Tons of value there that an engineer's not sitting there [messing] around with graphics in a training module.

You're going to come down there and the engineer's going to say, "Okay, this is how you have to set this thing up. And you got to do it in this sequence. And this is what you got to be careful for, or you're going to break something." And learning and development experts come down, they write all that stuff down. They make all their notes.

Then they go back and they spend all the time crafting up these pretty training modules, and this foolproof standard operating procedure. And then it gets routed from review to the expert, and they review it, and they mark it up. Versus them spending countless hours screwing around with word processing programs and PowerPoint, trying to make this graphic where you push the button and something collides in off the screen.

They're the experts. They have technical communication capability. They're savvy with the software. That's what they get paid to do. And it's an extraordinary value when you can count on someone to do that well. If it's going to come back to you four times and it's still not going to be right, then if at that point, you sigh and you say, "I could have already had this done four times."

The other thing to consider is ... and then you've also got a respect for people element there, too. Because you could say, "Forget the technical writers. Hey, engineer, you're going to do it all. You're going to figure out what's going on, and maybe you're going to log in at night, but you're going to write that deviation."

And then you got people working collective 14-hour days, and they're exempt resources, so they're not getting paid for anything over the eight. It's a salaried job. They can say, "[Metaphor] off. You're going to do it all," and that's the expectation. And then you're going to have a talent retention problem.

So, there's multiple aspects that have to be weighed when you're considering [crosstalk] bringing in the tech writer to do some very specific focused things that's right in their wheelhouse. It's an added expense to the business, but it carries value on multiple fronts.

From P25:

I would say absolutely, because, and I guess I'll put it this way, there's a strong emphasis now on ... How can I say this, without making it sound too mechanistic? Helping engineers understand human dynamics, and helping organizations understand the way that engineers or technical communicators inhabit their worlds and see their worlds. There's an increasing emphasis on applying things like technical development movements and their associated vocabularies and lexicon, like "agile software development" . . . was an agile development technique, or something like "dev ops", to other practices that aren't just developing software or doing technical work.

How can I make my marketing organization understand this technical process that people use to develop and communicate about software, that allows them to release software so quickly? How can I do that with my marketing team or my legal team or my school? The idea is, I think the more and more managers overseeing this, more and more of the organizational leaders are looking for people who understand the way you can speak a technical language in a way that people familiar with that language understand, but can apply it to people processes or cultural processes, or decision making practices or processes.

I think that really there’s a strong sense in which, from engineering culture and especially from open source engineering culture, you’re getting these really rich examples of the ways that understanding a technical process can actually help you manage people or manage projects in new and interesting ways, and make them more innovative or quicker or whatever. I absolutely think that would be the case, in fact I’m seeing it, people hiring agile trainers for their marketing organization, or a dev ops practitioner to help their IT shop work in a different way. It’s happening increasingly, yeah.

Appendix D: General Chronology of the Fertile Grounds Project

In this appendix, I will delineate key milestones in the “Fertile Grounds” project: the collective term I use for the discussion surrounding TPC as a field of workplace practice, the conceptual practical framework I advanced in chapter 3, and especially the empirical study of extradisciplinary perceptions detailed in chapters 3, 4, and 5. These milestones start with the initial discussion with my advisor, Lee-Ann Kastman Breuch, and conclude with the first full draft of dissertation that I submitted to her.

Academic Term	**Milestone(s)**
Spring 2017	• First discussion with advisor about empirical project (initially planned as a study of TPC professionals *and* non-TPC professionals)
Summer 2017	• Initial IRB approval for the empirical study
Fall 2017	• Start of independent study (with Lee-Ann Kastman Breuch) in which early conceptual framework was developed • Start of first interviews
Spring 2018	• Completion of pilot study interviews (14 in total) • Significant development of pilot study manuscript • Submission of manuscript to *Technical Communication*
Summer 2018	• Completion of large group of summer interviews (18 in total) supported by Graduate Research Partnership Plan (GRPP) Fellowship • Completion of revisions for *Technical Communication*
Spring 2019	• Dissertation prospectus • Refinement of interview questions and research goals oriented toward non-TPC professionals’ perceptions

Academic Term	Milestone(s)
Summer 2019	• Start of writing for first dissertation chapter
Fall 2019	• Advisor review of first chapter and methods chapter
Spring 2020	• Publication of *Technical Communication* article on pilot study conducted Fall 2017 and Spring 2018 • Completion of remaining interviews • Interview transcriptions funded by a Council for Programs in Technical and Scientific Communication (CPTSC) research grant • Initial COVID-19 shelter-in-place orders (with effects on IRB-sanctioned interview conditions)
Summer 2020	• Completion of first- and second-cycle coding of interview data • Completion of findings chapter • Advisor review of findings chapter
Fall 2020	• Start of writing for implications chapter and conclusion
Spring 2021	• Completion of implications chapter and conclusion • Advisor review of first full dissertation draft