Foreword: Technical and Professional Communication

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Every field of study is a moving target, challenging its members—researchers, practitioners, teachers, and students—to find ways of taking stock of knowledge claims and current practices in order to assess the state of play and imagine what the future might hold for their work. For technical and professional communication, a field aligned historically with the arts and sciences of discourse, keywords are an insightful location for development and analysis because we understand language to be constitutive of our being in the world. Language isn't the only thing that helps construct reality—consider our increasing interest in material matters—but articulating keywords helps us to take a useful snapshot in time of the field's ongoing development. Language is always open to interpretation and reinterpretation, but this quality can be seen as a feature with positive effects. As such, the keywords in this book are meant to invite discussion and debate, raise questions, and aid both reflection and invention, not pin down some absolute sense of central aspects of our professional domain.

This foreword itself functions as a keyword entry for technical and professional communication. We build on the entry for technical communication that Carolyn Rude wrote in 2015 for *Keywords in Writing Studies*. Rude traced the modern history of technical and professional communication, focusing mainly on practice and theory since the 1970s. She considered developments in U.S. culture that have moved the field in various new directions, new rhetorics for understanding what technical and professional communication is and does, growth and expansion of our research agendas, challenges of professional legitimization, expanded capabilities that new technologies have afforded to both technical and professional communicators and users, and more. Understandably for a short piece about an entire field, Rude pitched the discussion at the broadest possible level, tracing general contours and outlining some of the main accents of technical and professional communication as an evolving area of study. We encourage readers of this volume to read or revisit her keyword essay for another valuable starting point, and to think of it as something of a companion piece to our own, for we begin where she left off by considering the nature of change in our current period.

The final paragraph of Rude's essay raises the specter of a field collapsing on itself by expanding outward repeatedly in ways that confound coherence: "But because of considerable changes in practice and the term's divergent meanings, technical communication may become most interesting as an artifact of history" (2015, p. 168). Rude is referencing several consequential realities here—among them, technical and professional communication is a contested term with a wide variety of different theories, models, and emphases; many people produce technical and professional communication, not just technical and professional communicators, including workers in a growing array of affiliated fields; technical and professional communication content can be mutable and parasitic, living inside products, larger systems, and networks that users can configure and reconfigure, affecting the content; and the tools of technical and professional communication can automate certain types of production tasks. Although these realities aren't exactly new, they've become amplified and intensified in recent years, further complicating questions of boundaries, identities, and exclusions. We don't believe the field is in danger of becoming irrelevant or anachronistic, but we agree with Rude that the future depends on articulating and delivering on comprehensible research agendas. Our view is that those research agendas should attend to realities like those listed above. We consider them to be a key facet of the rhetorical contexts for technical and professional communication today.

Context isn't a separate keyword in this collection because discussions of context permeate rhetorical treatments in all of the chapters. But we want to focus on context because many of the realities of our current period are either a product of the growing complexity of sociotechnical structures and processes or a reflection of our growing awareness of complexity in consequential settings. We submit that seeing, understanding, and managing complexity in the contexts of our professional domain should be a defining objective for the field and a (not the) productive path forward for researchers, practitioners, teachers, and students. In the complex contexts we're imagining, it can prove difficult to pin down meaning, determine cause and effect, assign agency, and gauge how power is exercised and negotiated. In addition, such contexts are dynamic and fluid, changing over time, and can produce unintended consequences that become preconditions for future action. Complexity is a characteristic that is interwoven with the technical, the professional, and the communicative, affecting the full spectrum of our concerns.

If disambiguating complex contexts is a complicated and confounding task, the field must still find ways to make sense of them in order to work productively and responsibly in seeking solutions to domain problems. For this keyword entry, we want to offer one view of the field by characterizing the complex contexts that promise to be particularly salient to the future of technical and professional communication. To reiterate, on some level the realities in these contexts have been with us for some time now, but in recent years they've become more intensified and more integrated into the settings of everyday practice, growing complexity but also encouraging us to see complexity that was always there but not really

recognized adequately. Although the aspects we discuss are intertwined in various ways, we separate them for analytic purposes, constructing a set of themes or topics for thinking about the complex contexts of technical and professional communication. In these contexts, the technical, the professional, and the communicative are bound up in interdisciplinarity, ambiguity, mutability, intertextuality, and interconnectivity. The result is a dynamic scene for the production, reception, and circulation of knowledge that's as challenging, interesting, and engaging as any problem-solving landscape.

In terms of interdisciplinarity, technical and professional communicators, by definition and by their increasingly expanding roles in a variety of settings, invariably function at the nexus of multiple fields, and so we must thrive on and even nurture any and all approaches that add value to integrative work. Technical and professional communicators have long been responsible for learning the fundamentals of other disciplines, but our endeavors now require a much richer and much more diverse set of practices and perspectives. Consider a single keyword in this volume: *Documentation* by David Farkas (we will reference this hallmark area throughout the rest of our foreword, but we could have selected any keyword entry as an example, for all of them have evolved in complex ways with time). We can trace the transformation of this term from an almost incidental offshoot of the primary activity, computer programming, into the wide variety and range of activities encompassed in the term today. Early UNIX documentation, both print and online, was written primarily by two UNIX programmers in the late 1960s at the direction of their manager. Today, documentation encompasses concerns from genre, social media, intercultural communication, ethics, social justice, editing, and plain language, to name just some of the other relevant keywords. This array of related areas, many disciplines in their own right, may seem daunting and too much to contemplate or reasonably consider applying. But navigating these areas, and bringing them to bear on specific problems in complex contexts, is a strength and major contribution of our field. Our field is a connective tissue that assembles aspects from many other disciplines into a coherent, working whole for users of technical and professional communication.

A second reality that characterizes the state of contemporary technical and professional communication is a growing appreciation for the complexity of the concept of ambiguity. Historically, eliminating ambiguity in written language has been discussed as one key strategy for achieving clarity, which often serves as a measure of excellence for our information products. In writing documentation, for example, we have encouraged technical and professional communicators to prefer the active voice ("Attach part A to part B") to passive voice ("Part A is attached to part B") because the active voice signals agency more directly and clearly: The human or nonhuman entity performing or experiencing the action is in the subject position of the sentence. In other words, in the passive version of the sentence, is part B already attached to part A, or does the user need to attach it? In many situations, preferring the active voice continues to be useful advice for

helping to reduce ambiguity in technical and professional communication. How-ever, the field has also come to understand that ambiguity is actually a property of language (and of technology) that cannot be eliminated or controlled completely on the production side of the equation. Consider a sentence we use with our students to make this point in a basic way: "I decided on the boat." Although the grammatical pattern of this sentence is a very simple one—subject-verb-direct object—there are at least two possible meanings one can draw from the very same words in the very same sequence. In order for a technical or professional communicator to encourage the appropriate interpretation in a specific situation, they will need to craft additional content that guides meaning making in the right direction. The point is that language always includes a surplus of meaning and that we should invent and emphasize strategies for contending with this surplus. We would add, also, that a benefit of the technology-as-text metaphor is that it can attune us to ambiguity in the design of technical systems (researchers in affiliated fields such as human-computer interaction account for such am-biguity in work in the area of "interpretive flexibility"). Because ambiguity is a property of language and technology and not just a problem to be solved, we're left wondering if the field might come to think of it as a positive resource to be leveraged in complex contexts. Exploring this topic could open a useful avenue for future research.

In addition to the paradigmatic nature of ambiguity, mutability brings syn-tagmatic complexity to technical and professional communication. The post-structuralist turn in communication in general has moved beyond the simple sender-receiver model towards a more textured and open-ended (albeit less sta-ble) system in which meaning remains in constant flux. In one way of thinking, technical and professional communication would not be possible without the slippage of signification that allows a specific person to insert themselves, for ex-ample, into a sentence in a user manual or screenshot in online help to be trans-lated into the working interface. Although research in areas such as contextual theory and design thinking has shown that the meaning of a sentence in a piece of documentation can shift around based on the complex, often messy contexts in which particular users work, we're beginning to see the mutability of content itself as a consequential affordance in technical and professional communication environments. Users of instructional videos on various streaming services can rate a video and search by user ratings, recontextualize a video by embedding its code in another website, add notes to help others interpret the instructions and navigate the video, filter notes to see only those added by other users, leave comments, add or suggest tags, post responses, see websites that link to a vid-eo, and flag inappropriate material. The ability to produce, use, and reinterpret metadata contributes to the construction of meaning as an active, collaborative process. This process is doubly collaborative in user-generated systems such as Wikimedia, where online help is under constant revision, positioning users as au-thors and editors of crowd-sourced documentation. If technical and professional

communication seems more fraught with uncertainty than it was in the past, that recognition also tells us that meaning making was never really that simple in the first place.

In a closely related shift, the texts that technical and professional communicators work with today enact intertextuality, not just philosophically but functionally. While texts have always gestured to, cited, quoted, and echoed other texts, the introduction of hypertext links foreshadowed a fragmentation, circulation, and reassemblage of texts. We can also see precursors of this shift in technologies such as single-sourcing, which separated content from form, enabling technical and professional communicators to produce, for example, online help, reference sheets, and printed manuals from the same document database. Taking this practice to a new level, technical and professional communicators now build texts from pre-existing parts. Like programmers, they work with code and pattern libraries, templates, stock art, and other resources, transforming and combining them in novel ways. Although copy/paste has been with us for decades, building a document with substantial amounts of text (verbal, visual, and aural) from other sources is a relatively new practice. The production of a simple online tutorial might be built on top of a content management system, use a third-party cascading style sheet theme tweaked to conform to the technical or professional communicator's organizational style guide, be augmented with third-party plug-ins to offer features such as feedback forms, include edited and revised versions of text descriptions from the original product specification, and be illustrated with Creative Commons-licensed images of users at computers and icons licensed from The Noun Project. As this example illustrates, the distance from text to text today can easily collapse, no longer an intertextual pointer but now an adoption, an inclusion, an assemblage. Because traditional approaches to plagiarism fail to address this phenomenon in complex contexts, we're really just beginning to grapple with assessing and teaching intertextual practices.

Our final theme or topic, interconnectivity, reflects the reality that complex contexts have many interconnected parts, which interact to produce relationships, dynamics, and effects. We already mentioned that technical and professional communicators work with a variety of interconnected fields and texts, and that meaning making is interconnected with numerous aspects of interpretation, experience, and environment. In addition, however, the interconnections themselves are enmeshed in larger webs of affiliation; these larger webs link the technical, the professional, and the communicative in intricate and consequential ways. The field now understands that our processes and products are not isolated from organizational, social, and political conditions and challenges. In fact, technical and professional communication often finds itself at odds with its own interconnected complexity: balancing expediency with responsibility. The organizational style guide that directs a documentation specialist to tweak their cascading style sheet will also account for industry standards and genre conventions. A user constantly prompted to fix grammatical errors by their word processor may

prioritize surface-level correctness over rhetorical effectiveness. Even "correct-ness" contains unseen assumptions about race, class, work, and more. Likewise, the existence of online help is loaded with powerful issues ranging from intercultural communication (Are non-English speakers relegated to using English-only online help or are localized versions available?) to agency (Are users empowered to work effectively or just quickly?) to pedagogy (Does the online help integrate or separate the why and the how?). Pulling at any strand within the complex weave of technical and professional communication tugs at both macro-level and micro-level concerns and realities.

The rest of the entries in this keyword volume continue to paint the complex picture of technical and professional communication as we know and understand it today. Some entries consider various aspects of interdisciplinarity, ambiguity, mutability, intertextuality, and interconnectivity, at times using alternative terms with a different set of connotations, while others employ additional terms to characterize the growing complexity of sociotechnical structures and processes or our growing awareness of complexity in consequential settings. In acknowledging and characterizing complexity rather than simply trying to solve it, we're advancing what we consider to be one useful stance for addressing future work in technical and professional communication. To repeat ourselves, we submit that seeing, understanding, and managing complexity should be a defining objective and productive path forward for researchers, practitioners, teachers, and students. This volume is a vital source of support and inspiration for this critical enterprise.

■ References

Rude, C. (2015). Technical communication. In P. Heilker & P. Vandenberg (Eds.), *Keywords in writing studies* (pp. 165-168). Utah State University Press. https://doi.org/10.7330/9780874219746.c033