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Constructs of Stylistic Production and Reception: Vetting and Extending the Sociocultural Theory of Style

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CONSTRUCTS OF STYLISTIC PRODUCTION AND RECEPTION: VETTING AND

EXTENDING THE SOCIOCULTURAL THEORY OF STYLE

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Title: Constructs of Stylistic Production and Reception: Vetting and Extending the
         Sociocultural Theory of Style

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This study examines Andrea Olinger's (2014) sociocultural theory of style, which posits that style is dynamic, co-constructed, multisemiotic, and ideological. Olinger presents one main impact on stylistic production and reception, "participants' language ideologies." This study examines this impact and other factors, called constructs, that impact the production and reception of writing style. In doing so, this study applies rhetorical terms, concepts, and research from rhetoric-composition and other fields to evaluate and supplement the sociocultural theory of style and its presentation of the definition, production, and reception of style.

Chapter One covers the historical place, demise, and rise of interest in style in rhetoric-composition and also covers Olinger's theory of style, a type of perception created by interacting with texts more than a feature of texts themselves. The chapter ends with research questions on the validity of the sociocultural theory of style, how constructs relate to one another, and the impacts of consciousness and unconsciousness on style.

Chapter Two elucidates the Construct Model of the Sociocultural Theory of Style proposed in this study, offering seven other constructs to supplement Olinger's language ideology construct as factors impacting style.

Chapter Three explains the methods and approach used to investigate the study's research questions, an ethnography of communication-inspired approach using case studies of twenty technical writers in literacy history and discourse-based interview modes.

In Chapter Four, analysis based on document review, forty interviews (two per participant), and coding yield a non-exhaustive list of twenty-eight constructs affecting perceptions of writing style. After abductive analysis, six findings regarding constructs based on audience, personal biography, language ideology, embodiment/materiality, technology, and exigent considerations show the wide-ranging applicability of the sociocultural theory of style.

In Chapter 5, conclusions drawn from the findings argue for style pedagogies built into existing models of writing pedagogy including audience-centered, metacognitive, reading-centered, transfer-based, multimodal, and problem-based models. Recommendations flowing from the conclusions of this study center on the importance of research into reception and unconscious impacts on writing style and the applications of style in extant pedagogical models.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

"I reckon you think you been redeemed." –Hazel Motes, *Wise Blood* by Flannery

O'Connor

Hazel Motes' aggressive rejoinder to a matronly woman, spoken on a bus in the

early to mid 20th century deep South in O'Connor's jarring novel *Wise Blood*, has

provoked my thinking for many years. Motes' taunting, conflicted stance as high priest

and prophet of the Church without Christ and his eventual demise into self-flagellating,

self-blinding husk of a man has occasioned spirited debate both in my own mind and with

others with whom I have discussed this strange character. What was O'Connor, a devout

Catholic, trying to say through this character? Why the dramatic, even melodramatic,

strokes in her style? Why the extremes of degradation and transcendence throughout,

extremes that occasioned the Southern Gothic generic label for her work?

My own upbringing and education undoubtedly play a role in my reception of

O'Connor's text. Raised between North and South by an evangelical minister father from

the North and a Southern mother descended from farmers who scratched an existence

from the hardscrabble Tennessee clay soil, I inherited both working class values and

conservative religious ideals. I valued those ideals to such an extent that I attended a

Southern Baptist college majoring in Biblical languages and English so as to be a Bible

scholar, an informed interpreter of the revelation. I continued this investigation of texts at

the master's level, earning a master's degree in systematic theology and philosophy of

religion from Trinity Evangelical Divinity School in Deerfield, Illinois. I could not leave

a love of literature behind, however, so I pursued this degree while attending graduate school in the English Literature program at DePaul University in Chicago.

O'Connor's work, in both Trinity's evangelical setting and DePaul's Catholic milieu, was viewed as, at minimum, worthwhile to consider and at most, as the greatest expression of Southern Catholic identity in American literature in the 20th century. I read O'Connor's work, not ever as a classroom assignment but on my own time, and I prompted graduate school friends to read her work as well. Our varying interpretations of her work were a constant source of interest to me, almost as much as the works themselves. Among my evangelical friends, I came to see reactions to O'Connor's work, but especially to the character of Hazel Motes in *Wise Blood*, as a litmus test of the ability to identify with the values and beliefs of both author and characters in texts, and by extension, the perspectives and experiences of others on a larger scale. I recall late night discussions with respected, intellectual evangelical friends who saw Motes as a Luciferian archetype, his turn toward medieval monastic practices as an expression of despair, and his death in a watery ditch as a baptism of godless self-will. My Catholic friends, however, saw these same events as expressions of hope and redemption, as Motes working out his salvation through penance.

Ultimately, my journey led me out of religious belief altogether, but my experiences with widely varying reactions to texts based on their styles remained with me. Literary critic Amy Hungerford suggests that O'Connor's dramatic style belies her assumption that form and content interweave to create meaning and impressions, a view on the wane during her time as a writer. Hungerford (2008) cites Richard Wright as a

contemporary who viewed style as "opacity," a view shared by the style manuals of the time.[1] Yet, O'Connor's style was central to her themes. Her style was her point.

The impact of style on meaning, the relation of style to purpose, the relevance of style to reception—these are interesting questions, some of which this study seeks to explore. Why did O'Connor choose the elements of her idiosyncratic style given her purpose? What was operant for her at top of mind as she chose stylistic tropes, schemes, images, and diction? What was in the background of her writing process? What stylistic features provoke specific reactions for readers at conscious and unconscious levels? To look into this rich topic, this study explores writing style from the perspectives of authorial production and readers' reception. The purpose of this study is to vet and possibly extend one particular theory of style, Andrea Olinger's (2016) sociocultural theory of style. Olinger's theory offers a promising lens to explore the questions that this study seeks to address. The anticipated results of this study include building the knowledge base of stylistic researchers as they look at the forces behind stylistic production and reception which may, in turn, support pedagogy. By identifying and analyzing the constructs that impact writers and readers in terms of style, this study seeks a more detailed account of how stylistic aspects of texts get constructed than is currently available, serving the work of rhetoricians and compositionists.

Using a constructivist epistemological lens, this research study employs a qualitative methodology with a case study design along with textual analysis to examine

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[1] To mention the leading style manual of the time, in the third edition (1979) of *The Elements of Style*, E.B. White reflects on his professor William Strunk's approach to style that valorized "cleanliness, accuracy, and brevity" (*xi*), an account of style that informed the first edition of *The Elements of Style* in 1959. Effective style at this time was unobserved and spare. For purposes of comparison, Richard Wright died in 1960, O'Connor in 1964.

the sociocultural theory of style. Style, in Olinger's (2016) sociocultural formulation, is "the *dynamic co-construction of typified indexical meanings (types of people, practices, situations, texts) perceived in a single sign or a cluster of signs and influenced by participants' language ideologies*" (p. 125, italics in original). Stated alternately in my own words, on the side of production, style is a form of socially-embedded expression enacted through and by texts, and on the side of reception, it is a type of socially-embedded perception brought to and evoked by a text. Style is thus primarily a phenomenon rather than a quality. The socially-embedded aspects of writers' and readers' identities, what they bring to texts that affects stylistic perception, are the focus of this study and are called constructs. Qualitative methods are used to capture the constructs, leading to a more thorough understanding of the validity and applicability of the sociocultural theory of style. Participants for this study are a purposeful selection of skilled writers and readers—professional technical writers.

This chapter centers on past and current discussions on definitions and theories of style. It begins with the background and context that shapes this study. Then, I present a problem statement, a statement of purpose, and research questions. The research approach of this study is also included in this chapter, which then concludes with a discussion of the proposed rationale and significance of this research study.

Background and Context

Style in the Classical Rhetorical Tradition

Style has occupied an important, and sometimes central, role in the formulation of rhetorical theory since the classical era when it was immortalized as the third of the five "canons" of rhetoric, along with invention, arrangement, memory, and delivery.

Throughout the history of rhetoric, style has waxed and waned in popularity, though it has usually maintained an important place in rhetorical study and theory-building. In fact, Golden and Corbett (1968) argued that "preoccupation with style brought on the charge, at some time in every age, that rhetoric was more concerned with words than with matter, that it merely produced a lot of sound and fury, signifying nothing" (p. 4). They supported this contention by citing style-focused rhetorics from across the ages: Gorgias' (483-375 BCE) *Encomium on Helen*, Demetrius' (c. 350-C. 280 BCE) *On Style*, Dionysius of Halicarnassus' (c. 70-7 BCE) *De Compositione Verborum*, Longinus' (c. 213-273 CE) *On the Sublime*, and "several of the Renaissance rhetoricians"[2] who "devoted their attention either predominantly or exclusively to style" (p. 4).

Aristotle advanced clarity and appropriateness as the chief virtues of style in Book 3, Part 2 of *Rhetoric*:

> Style to be good must be clear, as is proved by the fact that speech which fails to convey a plain meaning will fail to do just what speech has to do. It must also be appropriate, avoiding both meanness and undue elevation.

So saying, Aristotle saw style as the malleable aspect of language that could be used to illuminate or obfuscate communication. In Book 3 of *Rhetoric*, he catalogued various ways to adorn concepts through stylistic means[3], yet he also depicted style as a meaning-altering and -making aspect of language[4] in places (p. 21).

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[2] They later note Leonard Cox's *The Arte and Crafte of Rhethoryke* (1530), Richard Sherry's *A Treatise of Schemes and Tropes* (1550), and Henry Peacham's *Garden of Eloquence* (1577) in this connection (p. 7).
[3] For instance, he discussed a theory of metaphor as a stylistic device that achieves desired effects if the chosen metaphor is sourced in the "beautiful" and possesses a "sound" or "sense" that appeals to the audience; i.e., the "rosy-fingered" versus the "purple-fingered" dawn (*Rhetoric* 3.2).
[4] To offer just one example, he discusses *ta psykhra*, or "frigidities" in style that violate the principle of clarity and render altered, faulty meanings to audiences. The use of overly tedious or ill-timed epithets falls into this category since the use of poetic diction for everyday activities is both inappropriate and potentially confusing.

Aristotle's definition of style is interesting in its differentiation from his view of rhetoric as a *techne*, as an art or technique of communication "that could be both a coherent system for classifying, studying, and interpreting speeches and a skill for public dialogue" (Keith & Lundberg, 2008, p. 6). Style for Aristotle was both an aspect of *techne* in his cataloguing of tropes and schemes, phrases, metaphors, proofs, and diction as well as *techne* itself at times, the word expressed in a way that both encapsulates and creates its unique meaning.

Roman rhetoricians such as Cicero and Quintilian used *eloquence* as a near synonym for style in many cases, laying out a view of style that persisted until the Renaissance. Cicero contrasted his view of style to other views advanced by sophists, historians, philosophers, and poets of his and earlier times. He catalogued three styles: the plain style used for proofs, the middle style for pleasure, and the vigorous style for persuasion (2010, p. 46). With a focus on verbal communication, Cicero did not develop a strong theory of style but rather focused on the canons of invention[5] and arrangement[6] and on the qualities of the orator.[7]

Quintilian developed the canon of style in a similar way to Cicero since he saw it in essentially the same way, as a matter of eloquence. He devoted two books in *Institutio Oratoria*, Books VIII and IX, to eloquence, specifically focusing on stylistic matters in Book VIII. He favorably cited Cicero's contention that invention and arrangement belong to anyone, but the canon of style requires cultivation and effort to develop (VIII. Pr. 14). Though he develops the canon of style with the common classical focus on tropes and

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[5] His *De inventione* is the chief example of this focus.
[6] His *Partitiones oratoriae* focuses on this canon.
[7] The *Rhetorica* and especially the *Orator* focus on the virtues of the orator.

schemes, which he categorized as "ornaments" (VIII. iii-iv), he does this after a treatise on clarity, which he mostly saw in terms of word choice (VIII. i-ii). Quintilian mostly developed a view of style as "the dress of thought," treating it as a vehicle of clarity and adornment for ideas. He warns about overly focusing on it, suggesting that it can overtake other aims of the rhetorician (VIII. Pr. 23).

In the early centuries of the Common Era in the West, the need for a religious approach to style grew as Christianity became dominant. Style began to matter for purposes of enlightenment rather than just for persuasion, political discourse, or ornament. Augustine is notable in this connection. His approach to style was at once grand, reasoned, and literate, as in the *City of God*, yet also personal, idiosyncratic, and confessional as in *The Confessions*. The *City of God* reads in places much like an Aristotelian treatise with careful definition coupled with subtle arguments derived from stated premises[8]. Yet, at times, Augustine offers bold, personal, evangelistic appeals within the same treatise: "O infatuated men, what is this blindness, or rather madness, that possesses you?" (trans. 1993, p. 37). The *Confessions* read like personal memoir mixed with religious treatise and evince the testimonial quality of religious writing that has persisted within the Christian tradition. In contrast, an analytic, syllogistic style, derived from the classical tradition, is best seen in this era in the style of Thomas Aquinas whose *Summa Theologica* with its deductive arguments, enthymemes, and proofs,

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[8] For instance, Augustine, in one of many places where he seeks to define soul and spirit and their relation to the body, makes fine distinctions using analogical reasoning: "For as those bodies of ours, that have a living soul, though not as yet a quickening spirit, are called soul-informed bodies, and yet are not souls but bodies, so also those bodies are called spiritual—yet God forbid we should therefore suppose them to be spirits and not bodies—which, being quickened by the Spirit, have the substances but not the unwieldiness and corruption of flesh" (Augustine, trans. 1993, pp. 432-433).

demonstrates the style that was the province of churchmen who used it to reason on the revelation.

Style in the Medieval Period through the 19th Century

Throughout the medieval period, these same currents of personal and public rhetoric within the Christian tradition continued to shape rhetorical practices in large swathes of the West. Allegory thrived in this tension between the personal and theological, even while the epistolary genre, prominent from the classical era into the modern era, continued. The *progymnasmata*, introductory exercises in rhetoric that were standard generic and stylistic instruction emerging from the classical era, persisted through the medieval period and into the early modern era. These exercises shaped tastes in style as they inculcated rhetorical expertise, moral virtue, and ethical stance. The *chreia*, for instance, an edificatory genre aimed at provoking emulation of notables from history, had an almost evangelistic purpose, while *invective* sought to abjure actions of others deemed unethical or immoral. Many of these exercises, developed in the classical era, nonetheless saw use and expansion in the medieval period as rhetoricians found use for them in the civil and religious contexts of that era.[9]

Renaissance rhetorician Peter Ramus is notable for his reimagination of the classical educational framework of the Trivium (grammar, dialectic, and rhetoric) by relating it to the canons of rhetoric. He suggested that the canons of invention and arrangement properly belonged to the study of logic, with style and delivery properly belonging to rhetoric alone since they were products of the imagination (Golden &

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[9] One style scholar, Brian Ray (2016), argues that the *progymnasmata* might see use even today even within the context of translingual approaches that centralize theories of language difference such as code-meshing. Fleming (2016) makes a similar argument, though he does not make connections to translanguaging and code-meshing.

Corbett, 1968, p. 7). Thus saying, he imagined a more restricted rhetoric. His construction of style as divorced from reason and a product of imagination relegated style to personal idiosyncrasy. One product may have been a renewal of focus on clarity in communication that, coupled with the emergent scientific vision of thinkers at the time, culminated in the ideas of those like Francis Bacon who advocated for a spare, even mathematical style. Based on a view of style as emerging from imagination and thus as personal, idiosyncratic, and private, and since invention and arrangement were seen as reason-based, the Royal Society and Bacon could advocate for a no-frills, reportish style that could lay claim to objective universality. In tension with this view was the theory of the Renaissance individual, the private genius, and the lively, elegant style emerging in the work of Augustan authors like John Dryden, Jonathan Swift, and Joseph Addison.

Also, style continued to develop in service of religious aims, especially in terms of oratory, as the Protestant pulpit competed with the Roman altar as the centerpiece of the religious service. Rhetoricians at this time needed a rhetoric for expository purposes since the classical rhetorical tradition did not square perfectly with their needs. Aristotle's categorization of the three kinds of persuasive discourse, the deliberative or political, the judicial or forensic, and the epideictic or ceremonial (*Rhetoric*, Bk. 1, Pt. 3), did not include a purpose for expositing sacred texts. During this period, the "great triumvirate of British rhetoricians" in Golden and Corbett's (1968) words (p. 1), Hugh Blair (1718-1800), George Campbell (1719-1796), and Richard Whately (1787-1863), did much of the work of adaptation of the classical emphases of rhetoric to religious and contemporary concerns. Golden and Corbett (1968) argued that eighteenth century rhetoricians responded to the classical tradition of rhetoric in three main ways:

acceptance of that tradition with no alteration needed; the emergence of the elocutionary movement, which sought to distance itself from an over-emphasis on style and turned to a focus on the canon of delivery; and the rise of the belletristic movement, which focused on matters of style, taste, and culture (1968, pp. 6-8). Indeed, the Puritan "plain" style eschewed ornament and instead placed emphasis on delivery, preferring a plain exposition of the revelation.

Hugh Blair, early in Lecture I in the *Lectures on Rhetoric and Belles Lettres*, conceded, "I will not deny that the love of minute elegance, and attention to inferior ornaments of composition, may have engrossed too great a degree of the public regard" (qtd. in Golden & Corbett, 1968, p. 31). In his style-focused Lecture X titled, "Style—Perspicuity and Precision," noting that "It is not easy to give a precise idea of what is meant by style," Blair nonetheless defined style in the following way: "the peculiar manner in which a man expresses his conceptions, by means of language" (qtd. in Golden & Corbett, 1968, p. 66). He carefully distinguished it from language itself since one's words may be "proper and faultless" yet one's style may be nevertheless have "great faults," being "dry, or feeble, or stiff, or affected" (qtd. in Golden & Corbett, 1968, p. 32). Blair connected style most insistently to minds, arguing that it "always has some reference to an author's manner of thinking." He thus saw style as the dress of thought: "style is nothing else than that sort of expression which our thoughts most readily assume" noting that "the qualities of good style may be ranged under two heads, perspicuity and ornament," perspicuity being "the fundamental quality of style" (qtd. in Golden & Corbett, 1968, p. 32). He treated ornament more at the lexical level with a focus on diction and figurative language.

George Campbell's take on style was similar to Blair's, yet he placed a fine point on the *purposes* of rhetoric, which enabled him to carefully parse stylistic considerations as they addressed various parts or faculties of the mind or self. He argued, "All the purposes of speaking are reducible to four; every speech intended to enlighten the understanding, to please the imagination, to move the passions, or to influence the will" (Campbell, 1750, *The Philosophy of Rhetoric*, Bk. 1, Sec. 1). Campbell expanded on devices, diction, content, and syntax issues related to these purposes at great length in Book III: "The discriminatory properties of elocution," in *The Philosophy of Rhetoric*. Campbell's focus on style in its mode of address to different units or parts of the self was built on a faculty psychology model that was common at the time and rose in popularity as the 18th gave way to the 19th century. In this model, the mind, as the device or faculty of the self that perceives truth through reasoned means, calls for a style of address that features carefully defined terms, clear premises, and syllogistic proofs. Other rhetoricians of the era saw the mind/self in much the same way, though Campbell's systematic approach to tailoring style to the faculties of the self or mind was especially thorough, a contention that Golden and Corbett (1968) also make (p. 15).

Richard Whately's approach, though similar to Blair's and Campbell's, was unique in its attempt to address issues of social class, education, and level of rhetorical sophistication in rhetorical decision-making. For instance, he warns about using terms in English derived from Latin to address lower class people since such terms are reserved for the educated elite. Instead, Saxon-derived words are best suited for the lower classes, while French-derived words were seen as suited for sophisticated literate tastes (Whately, 1846, *Elements of Rhetoric*, Bk. 3, Ch. 2. Sec.1) Whately's contentions were built on the

notion of clarity or *perspicuity* as the central value of style, a common enough view among rhetoricians of his and earlier times. His view of style, however, while centralizing this notion, also complicated it, serving as an important antecedent for later views of style that challenged the notion outright. He noted, "Perspicuity is a *relative* quality, and consequently cannot properly be predicated of any work, without a tacit reference to the class of readers or hearers for whom it is designed" (Whately, 1846, *Elements of Rhetoric*, Bk. 3, Ch. 2, Pt. 1). Though his treatment of the topic is inherently classist, he explored how social factors play a role in production/reception of style and he treated perspicacity as a relative and not a static phenomenon, both important contributions.

20th Century Stylistic Theory and Pedagogy

Louis Milic's well-known characterization (1965/2010) of the main currents of stylistic theory and pedagogy up until the 1960s is a cogent summary of the various approaches to stylistic theory and pedagogy until his era and even into an era when rhetoric-composition began to focus on other elements of composing and pedagogy rather than style in the 1980s. In Milic's formulation, rhetorical dualists, those who ascribe to the theory of "ornate form," see style as conscious enactment, as the "dress" of ideas to use Cicero's well-known phrase. In this historically dominant theory behind such pedagogical models as the current-traditional model, content and form are opposed. "Aesthetic monists," on the other hand, see no distinction between meaning and style, between content and form. "Style is the man" in this model, an expression of personal identity in an almost unconscious manner. Finally, Milic described "individualist or psychological monism" which sees no distinction between meaning and form, effectively

making discussions of style irrelevant, or rather, discussions of style are really discussions about theme, form, and authorial intention (Milic, 1965/2010, pp. 141-142).

Each of these theories has important implications for rhetorical theory and pedagogical practice and each theory has seen its day in composition pedagogy. The rhetorical dualists, current-traditional in orientation, have done their work on tropes, schemes, copywork, and imitation. The aesthetic monists, expressivists all, focus on voice and authenticity, while the psychological monists, considerations of generic form and clarity of expression paramount in their minds, focus on audience expectations and authorial purpose. Milic himself argued for a basically dualist approach in part because, on a monistic view, he worried that the composition teacher had little to do. His hope, however, was that a mature, literate style would eventually emerge for the writer. The trained, literate writer, taught in a basically dualist mode, would eventually be able to express personality and nuance through an idiosyncratic style (Milic, 1965/2010, p. 144), thus bridging the monist/dualist divide.

In 1980, John T. Gage, relying heavily on Milic's characterization of stylistic theories as basically monistic or dualistic, nevertheless argued a different way forward in thinking about style. Noting that defining style is a task beset with confusion and false starts since style is at once a linguistic, a rhetorical, and a philosophical concept (Gage, 1980, p. 615), he suggested that varying views of style ultimately return to the issue of how language relates to reality; that is, one's view of style turns "precisely at the point that we consider language as either adequate or inadequate to the task of depicting reality" (p. 616). Style, in its dualistic version, is separate from invention, a form of "manner" or *elocutio*. This, he suggested, is its dominant characterization in the rhetorical

tradition as a whole since it is treated as a separate canon, a step in the composing process. The alternate view, which he characterized in Monroe Beardsley's claim that any change in style is a change in meaning, collapses style into invention. In the former view, style *permits* expression, so one works *in* a style, whereas in the latter view, style *is* expression, so one *has* a style (Gage, 1980, p. 618).

This disjunction becomes actual for the composition instructor in suggesting to students a better or more poignant way to express the meaning aimed at, the "clear" or "plain" style that is valued in the classroom. In doing so, the instructor seems to suggest that there is only one best way to express an idea, thus expressing a monistic view. Language, in this approach, encapsulates and expresses reality. Yet, instructors often also ask for multiple revisions of papers and in doing so suggest that students come closer to their intended meaning, thus expressing a dualistic view. Language here only imperfectly reflects reality. Gage notes that we must "have it both ways" when we teach (1980, p. 618). He sums up by saying,

> What this conflict tells me is that we cannot teach writing in the absence of its relation to thinking and knowing [which] requires acknowledging both sets of assumptions at once . . . a change in style *is* a change in thought—if we consider monistically that ideas and their expression are inseparable—and at the same time a change in style is *not* a change in thought—if we consider dualistically that intention and its expression must be separable or we could never know what we wanted to say until we had already said it. (p. 620)

Gage's perceptive characterization of the multitudinous alternatives of style and their enaction in the classroom was a step forward in both theory and application.

Coming into the present, Brian Ray (2015) sees the various definitions of style throughout history as varying understandings regarding whether style should chiefly be seen as *form* or as *meaning*, or as *both* (p. 7). He sees this disjunction in much the same way that Gage characterized dualistic and monistic theories of style. Ray further develops definitions of style that see it as *eloquence* as seen in much of the classical rhetorical tradition[10] (pp. 10-11); style as *grammar* (pp. 12-13) as seen in the work of rhetorical grammarians like Joseph Williams, Martha Kolln, and Laura Miccicche[11]; style as *voice* (pp. 13-14) as seen in the work of Paul Matsuda, who sees style as a component of voice and likewise in the work of expressivists like Peter Elbow[12] (pp. 13-14); and style as *possibility and risk* (pp. 14-16) as seen in the work of scholars like Mina Shaughnessy[13], Nora Bacon and Kate Ronald, Pamela Annas and Jane Walpole, and Suresh Canagarajah. Rather than arguing for a singular, comprehensive definition, Ray's overview of the main currents in style invites scholars to "see the value in multiple, interlocking definitions of style" since "Each use of style has applications for particular contexts and projects, often reflecting unique theories about language, discourse, and representation" (2015, pp. 16-17). A concept as disperse and complex as style calls for multiple approaches and theories due to its dizzying array of philosophical, rhetorical, and linguistic aspects.

The Decline of Stylistic Theory and Pedagogy

Many rhetoric-composition scholars accept that interest in style and its teaching in the composition classroom was on the wane beginning in the early 1980s or so. The

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[10] Ray (2015) mentions Cicero and Quintilian as exemplars of the classical emphasis on eloquence (p. 10).
[11] This form of stylistic characterization, which Ray brings under Patrick Hartwell's phrase "stylistic grammars," differs from traditional school grammar in its focus on "choice and effect, not merely on correctness" (p. 12).
[12] For Elbow, style precipitates voice rather than merely being a component of it.
[13] For Shaughnessy, an overemphasis on correctness can cramp style and confidence.

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revival of the study of style within rhetoric-composition began, many would argue, with Robert J. Connors' (2000) article, "The Erasure of the Sentence." In that article, Connors (2000) connects the decline of style in rhetoric-composition in the 1980s and 1990s to three philosophical moods or currents active at that time: (1) the rise of "anti-formalism" in writing (p. 110); (2) "anti-automatism" or "anti-behaviorism" which is suspicious of pedagogies such as sentence combining and imitation that act on "non-conscious behavioral structures" that, it is argued, are "inherently demeaning to students" (p. 113); and (3) "anti-empiricism," a "humanist- and theory-based criticism" that sees traditional sentence-level pedagogies as methods without a theory, as the orphan children of pedagogical practices (pp. 116-117). So, related to the rise of anti-formalism in writing, monistic theories began to win the day and Milic's (1965/2010) prescient warning came true. He claimed that if a monistic view of style took hold, it would "vitiate" the teaching of style (p. 145), though to be accurate, even though Milic (1965/2010) is often referred to as a rhetorical dualist, he actually only argued that a dualistic theory of style is necessary to teach the resources of stylistic choice "in the early stages [of instruction in rhetoric-composition], until the maturing of the literary personality has had an opportunity to influence the student's style" (p. 144). Related to "anti-automatism" or "anti-behaviorism," this critique is based in an aesthetic monist framework that sees form and content as one, and as such, under the conscious control of authors. Related to "anti-empiricism," it is indeed true that stylistic pedagogy and theory has been underdeveloped in the recent era, which is apparent in Milic's uncomfortable concession that monistic theories could account for some aspects of style that escaped dualistic theorizing.

Tom Pace (2005) sees the decline of style in somewhat different terms. He points out that as process pedagogy replaced current-traditional pedagogy, which in turn was supplanted by social constructionist and critical pedagogy, at each step "the profession pointed to an emphasis on style as a key sign that a particular pedagogy was deficient" (p. 1). So even as process defenders argued that current-traditional methods focused on "mere style," a similar charge was soon leveled against process pedagogy itself—that it was too interested in an expressivist, personal, private style (p. 1). Elizabeth Rankin (1985/2010) notes that for leading expressivist theorist Peter Elbow, "style is virtually synonymous with voice" (p. 246). Indeed, Elbow's (1994) comments on voice show that while the notion of an "authentic" voice that stands in for the writer's self (presence) is problematic since authors can take many stances, including ironic and imagined stances as in pseudonymous writing, still, writing that expresses something personal of a writer is a sort of *mimesis*, its own "voice" (p. 12). Attention to and expression of this mimetic element is central in expressivist pedagogy. Likewise, in other pedagogies such as process pedagogy, in social constructionist and critical pedagogy style lays in the background, each theory latently advocating a specific view of style while ostensibly focusing on other concerns.

Elizabeth Weiser's (2005) overview of the decline and rise of style offers some interesting insights. Noting many of the causes outlined by others above, she adds that in the 1980s, a shift away from quantitative and empirical methodologies toward qualitative methods, as well as suspicion of cognitive research methods, led to lack of measurement tools in defining stylistic success and therefore interest in teaching style suffered. She also notes that the rising interest in processes, contexts, authors, and audiences in the

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1980s and onward, paired with a lowered interest in the text or product, moved style away from the center of the composition classroom (p. 29).

Paul Butler's (2008) *Out of Style: Reanimating Stylistic Study in Composition and Rhetoric* catalogues many other possible causes of the decline of style, including the "rift" between style and invention (p. 59), the association of stylistic concerns with current-traditional rhetoric in some scholars' work (p. 59), and the "social turn" in rhetoric-composition moving the focus away from the text (p. 19). The proliferation of theories on the demise of style within rhetoric-composition has reached a point where many larger works on style since 2000 feature at least some discussion on the topic, often recapitulating earlier discussion.[14]

The Rise of Style

Connors' (2000) article, "The Erasure of the Sentence," seemed to spark a revival of interest in style as evidenced by the number of books and articles on the topic of style and sentence-level pedagogies in rhetoric-composition that were published after his article. T.R. Johnson and Tom Pace's anthology, *Refiguring Prose Style: Possibilities for Writing Pedagogy* (2005), presents a variety of articles extending Connors' vision and suggesting new directions in theory and pedagogy. Paul Butler's (2008) *Out of Style: Reanimating Stylistic Study in Composition and Rhetoric* develops Connors' historical survey in more detail, looking at the fall and nascent rise of style in rhetoric-composition. The 2010 anthology *Style in Rhetoric and Composition: A Critical Sourcebook*, edited by Paul Butler, presents canonical texts on style going back to the classical era and

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[14] Brian Ray's (2015) sustained, chapters-long overview of the currents of waxing and waning interest in style since the classical era in *Style: An Introduction to History, Theory, Research, and Pedagogy*, would seem to be the last word on the topic, though recent dissertations on style such as Vorhies (2013), Dietz (2017), and the present work feature some discussion on the topic.

proceeding to the modern day. A classroom textbook focusing on style, Chris Holcomb and Jimmie Killingsworth's (2010) *Performing Prose: The Study and Practice of Style in Composition* (2010) hit the market in 2010. Since that time, three other book-length treatments have seen publication including Jeanne Fahnestock's (2011) *Rhetorical Style: The Uses of Language in Persuasion*, the 2013 anthology *The Centrality of Style*, edited by Mike Duncan and Star Medzerian Vanguri, and Brian Ray's (2015) *Style: An Introduction to History, Theory, Research, and Pedagogy*. These works capture, express, and extend the reviving scholarly interest in style while a pending (2019) anthology entitled *Style and the Future of Composition Studies*, edited by Paul Butler, Brian Ray, and Star Medzerian Vanguri, addresses how and where style fits within the larger concerns, research, theory, and practice of rhetoric-composition going forward.

A variety of articles on style have also been published since 2000, though most of the style scholarship appears in the edited anthologies already noted. Still, articles on style have seen publication even in rhetoric-composition's flagship journals. Sharon Myers' (2003) *College Composition and Communication* piece, "ReMembering the Sentence," invokes Connors' challenge to centralize style again in rhetoric-composition. Frank Farmer's (2005) cheekily-titled "On Style and Other Unremarkable Things," published in *Written Communication*, connects stylistic study in rhetoric-composition to Bakhtinian and Vygotskyian conceptions of dialogue and classroom pedagogy, and Ellen Carillo's (2010), "(Re)Figuring Composition through Stylistic Study" in *Rhetoric Review* argues for placing student study of stylistic forms back into the composition classroom. As these currents swelled within rhetoric-composition, interest in style rose simultaneously in allied fields such as writing center studies (Kavaldo, 2005; Carillo,

2011), second language writing (Canagarajah, 2006; Leonard, 2014), Rhetorical Genre

Studies (Aull, 2015), and corpus linguistics (Biber, 2006b).

With the revived and continuing interest in style since the 1980s, some scholars

have sought to make contributions to a theory of style. In Johnson and Pace's 2005

anthology, *Refiguring Prose Style*, Part IV of the book, "New Definitions of Style,"

features four articles. "Rhetor-fitting: Defining Ethics through Style" by Dion C. Cautrell

deals with the Platonic objection to rhetoric in *Gorgias* by extending Richard Lanham's

(1974) discussion of the ethical dimensions of style in *Style: An Anti-Textbook*. Drew

Loewe's (2005) "Style as a System: Toward a Cybernetic Model of Composition Style"

perceptively relates the traditional triad of writer, audience, and text in a dynamic model

that pictures style in terms of processes and relationships rather than static qualities of

writers, texts, or contexts (p. 241). M. Todd Harper's (2005) "Teaching the Tropics of

Inquiry in the Composition Classroom" moves the discussion around stylistic theorizing

in the direction of critical pedagogy and its contention that "inquiry is tropological, that at

the bottom of discovery is figurative speech" (p. 256). This post-structural move relates

style and invention symbiotically. Like Loewe suggests, Harper's tropological style is

seen in the flux that characterizes texts and interaction with them, in the continually

shifting relations among author, audience, text, and context. One important contribution

that Harper makes is his contention that theorists need to treat style both in terms of

reception and production (p. 258), an important implication of the theory that contexts

and audiences matter as much as authors and their purposes in stylistic theory. T.R.

Johnson's (2005) "Writing with the Ear," following Burke's re-connection of form with

rhetorical strategizing, brings discussions of movement, affect, sensation, and experience

into discussions of stylistic theory. His openness to the "Dionysian/schizoid freedom that style makes available" (p. 282), its mysticism, lyricism, and tonality—all evince a stylistic theory reflecting current understandings of language and self.

Current treatments of style see it in a myriad of ways: style as *invisible* or as *clarity of expression* (the subtext of many textbook and handbook treatments of style[15]); style as *deviation from norms* (Butler's (2008) "inventional style"); Prendergast's (2009) "fighting style"; style as *negotiation of linguistic difference* (Canagarajah's (2006) "negotiation" model); Leonard's (2014) "rhetorical attunement" model; Lu's (1994) "style in the contact zone" model; Irvine's (2001) style as "distinctiveness"; and style as *cultural performance* (Holcomb and Killingsworth, 2013) (see Table 1). These theories have developed in a broadly sociocultural direction, Holcomb and Killingsworth's (2013) performance model likely the best example.

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[15] Richard Lanham's screed against this version of style in 1974's *Style: An Anti-Textbook* was a precursor of the themes in Connor's 2000 article and the subsequent revival of interest in style.

Table 1

Recent Models of Style

Source	Definition/Focus	Characteristics
Handbooks	Style as invisible/clarity of expression	Chief value is clarity/perspicuity; focus on grammatical correctness/form
Butler (2008)	"Inventional" style	Style and meaning are connected
Prendergast (2009)	Style as combat	Style as cultural battleground
Canagarajah (2006)	Style as negotiation of linguistic difference	Style as cross-cultural/group communication tool
Leonard (2014)	Style as rhetorical attunement	Style both contingent and emergent, a site of adaptation and negotiation as much as expression
Lu (1994)	Style in the contact zone	Style as political/linguistic contact point
Irvine (2001)	Style as distinctiveness	Style as elicitor of/detractor from cultural/ideological value
Holcomb and Killingsworth (2013)	Style as cultural performance	Style as performative resource for managing social relationships

However, several contemporary currents within rhetoric-composition and linguistics seem to build upon older theories of style, treating it as solidified, quantifiable, partly it might seem, in order to make it more easily teachable. Ken Hyland's (2005) metalanguage approach to academic writing might be seen in this light—as a way to describe, codify, and teach the linguistic features of texts that academia values. Graff and Birkenstein's (2014) *They Say/I Say*, with its ready-made templates for easy adoption into student writing, proceeds on this same assumption. *This is how you incorporate another's views into your text? This is how you position yourself as agreeing while also partially disagreeing? This is how you position your discussion in contrast to your source?* And so

on. The lesson seems to be that such linguistic convergence yields tones that academics can or are willing to hear. Yet, Andrea Olinger's (2014a) article on the instability of disciplinary styles challenges these notions of consistent disciplinary understandings of appropriate style by showing that notions of appropriate disciplinary styles are deeply embedded and embodied in social webs and personal identity and experience.

Likewise, the WAC/WID movement, with its discipline-specific understandings of what constitutes acceptable style, can easily fall into the trap of reifying stylistic features as disciplinary norms. Olinger's (2014a) work in this connection is again notable. She asks,

What implications does [the instability in stylistic practice within a discipline that she found in her research] have for WID researchers and teachers? I do not mean to suggest that disciplinary writing is completely idiosyncratic and that, as a result, we ought to dispense with any notion of disciplinary style. Rather, I believe that instead of seeing WID as a matter of universal "rules," whether generic or discipline-specific, researchers and teachers should work to understand how situated, embodied, and distinctly individual knowledge permeates disciplinary writing and how that writing comes to be perceived as writing "in the style of the discipline." (p. 473)

To offer an example, Olinger (2014a) shows how that understanding of the conventions of disciplinary writing in the science of ecology can vary between writers and over time.

Even noting the revival of interest in style in mainstream composition scholarship in the last decade or so, a neo-classical orientation to style has also emerged, or persisted, wherein the old and new are wed. For instance, neoclassicists Edward P.J. Corbett and

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Robert J. Connors advanced a new approach to classical rhetorics and pedagogical forms, even as the popularity of style pedagogy within rhetoric-composition as a whole was on the wane. The popularity of Corbett's *Classical Rhetoric for the Modern Student*, originally published in 1965 and currently in its fourth edition (co-written with Connors), and the single volume version of its style-focused Chapter 4 as *Style and Statement* (1999) show that there was and is still a market for the trope- and scheme-based, sentence level, back-to-basics approach to style that had been rejected in some quarters earlier. Sharon Crowley and Debra Hawhee's (2011) *Ancient Rhetorics for Modern Students* features a similar approach and appeals to the same audience. One article in this vein makes the case that imitation should be the basic methodology of all writing classes (Farrin, 2005, pp. 145-146). The continued relevance and success of these pedagogical texts shows that various models of style and pedagogical approaches are in operation in the field of rhetoric-composition.

Two Sociocultural Theories of Style

From a style researcher's point of view, this swelling tide of research and writing is encouraging. Each contemporary scholar brings unique and often subtle contributions to current discussions about style, mostly tending in a sociocultural direction. In such an approach, the influences of social forces on text, author, and audience are included; the indeterminacy of language is centralized; dynamic negotiation between authors and readers within contexts sees treatment; issues of multisemioticity and conflicting interpretations are presented; and issues of the impact of ideology and power are involved in constructions and applications of the theory. Two theorists, Drew Loewe and Andrea Olinger, each build a theory that centralizes the afore-mentioned aspects of sociocultural

theory. In "Style as a System: Toward a Cybernetic Model of Composition Style," Loewe (2005) advances a "cybernetic" model that incorporates writer, text, and audience. Loewe's theory is self-consciously sociocultural in orientation. He notes: "A writer is situated (as is his or her audience) within, and affected by, three major forces: the rhetorical situation, *kairos*, and embodiment" (p. 248).

In reference to "rhetorical situation," Loewe (2005) favorably cites Keith Grant-Davie's (1997) modification of Lloyd Bitzer's well-known three-part formulation of exigence, audience, and constraints by adding in "rhetor." Loewe (2005) switches rhetor to "writer" (p. 248). The rhetorical situation impacts both writer and audience, an insight that Olinger develops as well, and the factors that affect one actually affect both. Loewe and Olinger centralize this aspect of rhetorical theory in its relation to stylistic concerns. With reference to *kairos*, Loewe (2005) sees this as an especially dynamic aspect of stylistic creation and reception since, he argues, "the writer and audience not only consider *kairos* but also help to define and construct that *kairos*—each is affected by and affects the other, in time and space" (p. 249). Further, Loewe compares the concepts of bodies and embodiment to distinguish their effects on stylistic aspects of texts. Drawing on Hayles' (1999) work, he sees the body as referring to "a set of social and discursive practices, a complex of idealized, normative criteria" while "embodiment refers to the actual instantiations of particular individual bodies" (p. 249). These embodiments, stylistic characteristics of texts being one example, are impacted by discourses of race, gender, sexuality, age, class, and so forth, so they must take their place in a well-developed theory of style (p. 249).

Loewe (2005) sees these forces impacting style in terms of "feedforward loops," which are elements of a system adjusted prior to entering a system. These feedforward loops include rhetorical situation, *kairos*, and embodiment but also textual aspects such as diction, format, and genre. These loops impact texts in the conceptual stage. Forces on texts such as feedback from others, intertextuality, and intratextuality, including drafts of the same document, are types of feedback loops impacting style (Loewe, 2005, p. 250). Such loops work in a retrospective manner.

Loewe's approach is valuable in that he relates style to the traditional elements of genre, rhetorical situation, *kairos*, and exigence by showing it as active in a feedforward manner. Another important contribution is his admonition to style theorists to employ a constructivist epistemology to develop better theoretical models of style since such an epistemology can "help us to account for the reciprocal interrelationships among writers, texts, and audience that we describe when we talk about style" (Loewe, 2005, p. 242). Such an approach encourages viewing style as a lively set of constantly changing relationships. Loewe (2005) gives the example of the common discussions around purpose as a way that compositionists can fall into the trap of reifying a concept and then seeking to fix and quantify the ways that texts take their form, writers approach their texts, and readers interact with those same texts. In Loewe's systems language, however, a "system's purpose is a description of how observers relate to [a] system" (p. 242). Even this approach, with its focus on creators and users, may not go far enough since an entire system itself may be "re-purposed" like a railroad cart becoming a coffee table. A somber, pompous, self-aware, high art piece may become a parody of itself to later

readers who see a different purpose in it. A constructivist epistemology allows for and expects these changes.

Olinger's Sociocultural Theory of Style

In the other major sociocultural theory of style on offer in the last ten years, Andrea Olinger (2014b, 2016) explicitly builds on Loewe's work to construct her own theory of style while also incorporating work from linguistic anthropology, sociolinguistics, communication studies, and rhetoric. Her theory addresses problems with theories of style that see it as a product of authors and fixed in language. The problem with this formal approach to writing style, encoded in the myriad handbooks of the rhetoric-composition world, is that it proceeds on a model that has been largely discredited in rhetoric-composition (Prior, 2004, p. 289), and paradoxically, as the anti-formalists argued, it undercuts the writer's agency in relating writing style to context, audience, and personal indexings of meaning. This model treats style as a feature of language alone and, when it was researched, results often conflicted with that paradigm since reaction to style is so idiosyncratic (Tufte, 1971/2010; Loewe, 2005; Olinger 2014). For instance, Tufte (1971/2010) famously found wide-ranging, contradictory, and seemingly inexplicable reactions to the style in Truman Capote's *In Cold Blood*, a fact that conflicts with style if it is viewed as a manifestation of authorial voice that readers can read and interpret accurately. Olinger's interactional model, much like Loewe's, avoids this problem with previous theories of style.

A key contribution Olinger makes is de-centering the author in the matrix of meaning-making, which is unique since sociocultural theories can easily become overly focused on authors just as previous models overly focused on texts. She draws from

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public rhetoric scholars, including Green (2011) and Young (2011, 2014) who argue that "style is not inherent in semiotic form but is shaped by the reading and viewing public" (Olinger, 2016, p. 122). The addition of audience perceptions and expectations as exerting force within stylistic production is a decidedly sociocultural move. Her focus on the importance of looking at reception of style in addition to production moves the theory of style away from only what authors *do* but also to what readers *do with it*. All are "participants" in Olinger's model. In addition, she pioneers some research methodologies that are new to stylistic study such as her inclusion of video recordings in her research as she interviewed participants. Using video recordings, she interprets body language cues as part of her research method.

In an article summarizing and explicating her theory of style, Olinger (2016) defines style as "*the dynamic co-construction of typified indexical meanings (types of people, practices, situations, texts) perceived in a single sign or a cluster of signs and influenced by participants' language ideologies*" (p. 125, italics in original). She specifically calls for study of typified indexical meanings which she defines as semiotic resources indexed to social types, categories, and roles (Olinger, 2016, p.125). These meanings arise in a continually-negotiated space between author, audience, language, and context and they index, at least in part, along a continuum of "*participants' language ideologies.*" Olinger (2014) shows these language ideologies at work in constructing reception of style in her dissertation research (p. 49).

In the same article, Olinger (2016) carefully exposits each part of her theory. In relation to "*typified indexical meanings,*" Olinger states, "Style moves our attention from the language or other semiotic resources to the social meanings associated with their use.

The social meanings connected to these forms are the property of *indexicality.*" An index

"points to aspects of the context and thus acquires meaning from it" (p. 125). These

indexes get generalized and stereotyped in terms of relationships, roles, types of people,

types of texts and contexts and so forth. This social quality of language-in-use re-focuses

stylistic study and theory away from language and text alone to the complex of social

contexts and relationships that encompasses each communicative act.

Related to "*dynamic co-construction of meanings*," Olinger (2016) is careful to

make an important distinction:

> I purposefully define style as "the dynamic co-construction of . . . meanings," not
>
> as "the dynamic, co-constructed . . . meanings" themselves. That is, I marry style
>
> with "co-construction"—a fluid act—and not with "meanings"—staid, concrete,
>
> and artifactual. I thereby emphasize style as an action, activity, or process. (p.
>
> 126)

This is a central element in Olinger's theory. The constantly shifting nature of stylistic

reception and characterization is a strength of the theory since earlier research on style

has shown that there is no solid center of universally agreed-upon representations of

stylistic meaning. In Olinger's (2016) words, "Dynamic co-construction of meanings

thus highlights not only that style is the performance of identity (or alignment with

particular typified indexical meanings) but also that style's meanings are constantly

jostling one another and being reshaped" (p. 126). Olinger's concept of style as

performance draws on earlier work by Holcomb and Killingsworth (2010) but adds the

involvement and dynamism of co-construction to the performance of identity through

stylistic means to construct this part of her theory.

Moving forward, Olinger's (2016) discusses the "*influence of participants'*

language ideologies." She notes that these ideologies sometimes unconsciously drive and

sometimes overtly influence co-constructions of meaning in relation to style (p. 126).

Drawing on the work of linguistic anthropologist Paul Kroskrity (2010), Olinger (2016)

develops her own characterization of language ideology as follows: "Language ideologies

shape the choices that composers and speakers make when they select semiotic forms and

when they and readers and interlocutors perceive indexical meanings in those forms" (p.

126). She notes that language ideologies can impact co-construction in many ways; for

example, one committed to standard language ideology might focus on deviation from

standards and apply judgments and characterizations of others on that basis. Olinger

(2016) also notes that the impact of language ideology is such that it may surface in

subtle ways, including metalinguistic and metapragmatic manifestations of implicit

beliefs and attitudes (p. 127).

Finally, Olinger (2016) details the phrase, "*a single sign or a cluster of signs*."

She describes two aspects of this claim. First, "stylistic meanings are perceived and

performed through any kind of sign, not simply through language" (p. 127). She notes the

sociolinguistic concept of *bricolage* in this connection: the elements of style are drawn

from and reassembled with the available semiotic material. She also notes the many

aspects of style co-occurring with language, which scholars in public rhetoric have

explicated (Young, 2011, 2014; Brummett, 2008). Noting the multisemioticity of stylistic

signs, Olinger hopes to avoid problems with earlier theories that focus on language alone.

Second, "stylistic meanings can be perceived in a single sign, like a word or particular

intonation, or a cluster of co-occurring signs, like a word or stretch of utterances in a

particular intonation or bundle of semiotic resources" (p. 127) and this construction may even be strung together with other constructions to build notions of a writer's or work's "style." Yet, any such characterization must be provisional since any single sign or cluster or signs might not have the same typified indexical meanings for all (p. 127). All totalizing characterizations of style commit the error of oversimplification due to the multisemiotic nature of signs.

All told, Olinger's (2014, 2016) sociocultural theory of style features an updated awareness of current scholarship within rhetoric-composition and other fields and offers promise as a way to connect the virtues of other theories with new research and theory. The sociocultural theory of style avoids problems with seeing style as a product of only the conscious and formal aspects of style, the mistakes of rhetorical dualism, while also avoiding problems with psychological monism that sees style as only personal, as only expressive of an author's intention and purpose. The sociocultural theory of style also avoids problems with aesthetic monism that sublimates content and form, making style an immaterial discussion subservient to an author's control. Olinger relates many newer concepts and terms in her theory of style including the multisemiotic aspects of texts and contexts, the participation of readers, and co-construction of typified indexical meanings. Whatever else Olinger's sociocultural theory of style might accomplish, her determination to update discussions of style within rhetoric-composition with the findings from both within and outside of rhetoric-composition has provided a potentially fruitful area of research and discussion for years to come.

An Adequate Theory of Style

To examine a theory, as this research study seeks to do, considerations of the quality and adequacy of a theory are paramount. To be considered adequate, let alone comprehensive, a theory of style needs (1) to meet criteria for the applicability of a theory and (2) to enjoy adequate evidential support from a variety of research studies utilizing various methodologies. Related to meeting criteria for the applicability of a theory, in the mid-1980s, Elizabeth Rankin provided important criteria for a theory of style, though she did not advance a theory of style herself. Her underappreciated work has seen little critical interaction, and style theorists since have ignored it.[16] Yet, her ideas are a worthwhile place to begin in critiquing the comprehensiveness and relevance of a theory of style. Rankin's (1985/2010) three criteria include the following: "*1. A new theory of style would offer a broad yet workable definition of style*"; "*2. A new theory of style would take into account the wide range of psychological operations that go into the making of stylistic decisions*"; and "*3. A new theory of style would be grounded in sound and consistent philosophical/epistemological assumptions about the nature of language and reality*" (p. 247, italics in original). Related to her first criterion, an adequate theory should be "specific enough to distinguish stylistic considerations from other concerns of the writing process, such as content and formal matters." Yet, it should be "broad and inclusive enough to account for overlap between style and invention . . . or stylistic decisions and audience adaptive techniques" (p. 247). Related to her second criterion on the "psychological operations" behind stylistic decisions, Rankin is concerned with the "conscious, rational decisions" that authors make in terms of style as well as the "murkier

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[16] For instance, neither Loewe (2005) nor Olinger (20116) mention Rankin's criteria for a stylistic theory in their own stylistic theory building.

matter of the formation of stores of unconscious 'stylistic options'" (p. 247). Finally, Rankin gestures toward the more contextualized, constructed nature of linguistic theories emerging in her era as a better foundation for stylistic theorizing by favorably citing John T. Gage's (1980) suggestion of the concept of "rhetorical community" as a starting point for a philosophy of style (p. 248).

Though not explicitly addressing Rankin's criteria, Olinger's theory seems to address Rankin's concerns effectively. Related to Rankin's first criterion, Olinger's theory seems fairly broad since it focuses on audiences, authors, and contexts, while also considering multisemiotic aspects of texts and at least one construct for how typified indexical meanings get created: "participants' language ideologies." In this regard, Olinger's theory needs further expansion since she offers only one construct for how typified indexical meanings, or personal representations of stylistic choices, get constructed. On Rankin's second criterion related to understanding psychological operations related to style, Olinger seems focused most specifically on authors' and audiences' conscious stylistic choices and representations. She cites perception of signs as a central part of her theory and seems to suggest that these perceptions are conscious for the most part, though in her dissertation research, her videotaping of participants and exegesis of their actions suggests that she is also interested in the unconscious forces at work in their stylistic decision-making. Her theory may need more specification on this point.

Finally, Olinger's theory fares well on Rankin's (1985/2010) third criterion related to "sound and consistent philosophical/epistemological assumptions about the nature of language and reality" (p. 247). Indeed, Olinger builds her stylistic theory around

current theories of language that see it as co-constructed, contextual, multisemiotic, embodied, and ideologically charged. The multisemiotic nature of linguistic signs that is a centerpiece of her theory draws heavily from theorists such as Mikhail Bahktin. In *Discourse of the Novel*, for instance, he puts forward one of his most succinct statements about the dialogic interaction between words, contexts, and agents, a passage worth quoting in full:

> Directed toward its object, a word enters a dialogically agitated and tense environment of alien words, evaluations and accents, is woven into their complex interrelationships, merges with some, recoils from others, intersects with yet a third group: and all this may in an essential manner shape the word, may leave a trace in all its semantic layers, may complicate its expression and influence its entire stylistic profile. . . . The living utterance, having taken meaning and shape at a particular historical moment in a socially specific environment, cannot fail to brush up against thousands of living dialogic threads, woven by socio-ideological consciousness around the given object of the utterance; it cannot fail to become an active participant in social dialogue. (Bahktin, 1981, pp. 276–77)

This passage seems to presage each aspect of Olinger's theory (typification of indexed meanings, multisemioticity, the full participation of author and audience, the influence of context and language itself) except for her construct of participants' language ideologies, which is an aspect of linguistic theory that has seen more development in recent decades. Just one example is a recent dissertation on style by L. K. Lisabeth (2017) which discusses the "white linguistic habitus" of academic prose encoded by handbooks such as

The Elements of Style. The ideological nature of language is a standard part of linguistic philosophy in the current era.

Regarding multisemioticity, current scholarly work in areas as diverse as multimodal composition[17], neo-expressivism[18], New Media[19], and embodied discourses[20], among others, have shown the power of a composition pedagogy that makes use of and centralizes a myriad of multisemiotic resources. Olinger's theory explicitly addresses multisemioticity in ways explored below. Overall, the advancements in style theory offered by Loewe and Olinger are worth further deliberation and vetting since they proceed on credible theories of language and valuable knowledge from other fields. I focus on Olinger's theory mainly because of the need to validate and extend one aspect of her theory, which I think is especially promising—the identification of constructs such as language ideology that impact stylistic production and reception. On Rankin's criteria of current, well-supported philosophical grounding for theory, Olinger's theory stands strong.

Finally, related to the criteria of adequate evidential support from a variety of research studies utilizing various methodologies, Olinger's theory being a newer theory, currently has limited evidential support. In her dissertation research, Olinger herself did literacy-history and discourse-based interviews with twenty participants in twelve academic fields, though not every participant took part in each part of her research design. Some interviews she recorded and videotaped when permitted (Olinger, 2014, pp.

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[17] Shipka's (2011) book, *Toward a Composition Made Whole*, is a representative example of this approach.
[18] Hawk's (2007) book, *A Counter-History of Composition: Toward Methodologies of Complexity*, pictures a composition pedagogy that uses many semiotic materials over time and distance.
[19] Gifford Brooke's (2014) article, "New Media Pedagogy," lays out an array of semiotic materials available to students in the information age.
[20] Payne's (2000), *Bodily Discourses*, shows the role of embodiment in semiotic participation with the act of writing about abuse and eating disorders.

61-62). This qualitative research, along with textual analysis she undertook with the texts provided by her participants, is the only research currently supporting Olinger's theory directly.

Problem Statement

Olinger's contributions lay out an ambitious plan of inquiry for style researchers whose attention heretofore has focused on authors and contexts. Two main areas of research are needed to further examine and refine her theory. First, more development is needed in the theory of the multitudinous forces at work as writers and readers approach style. Her research, valuable as it is, does not explain comprehensively why authors chose *this* word, *that* phrase, *this* image, *that* metaphor—and how readers approach those same constructions. On this point, Olinger (2016) offers one construct: "participants' language ideologies" (p. 125). Other possible constructs are currently unresearched in rhetoric-composition. This research study examines Olinger's "language ideologies" construct as well as constructs that shape communication emerging from other fields such as social psychology, interactional sociolinguistics, applied linguistics, rhetoric, and communication. Research in those fields has advanced constructs that affect communication such as *appropriateness* (Veselý, 2015; Krupka and Weber, 2013), *familiarity/distance* (Tannen, 1994; Holcomb & Killingsworth, 2010), *kairos* (Loewe, 2005); *codemeshing/identity representation* (Zhao, 2014)*, and *genre* (Heller & Morek, 2015). These constructs, among others, in addition to Olinger's (2016) "language ideologies" construct, ground this research study.

Second, to ground style pedagogies on a firmer theoretical basis, a clearer picture of the elements of stylistic production and reception, whether conscious or unconscious,

needs to emerge. Neither Olinger nor other theorists have explored this area to any significant degree, though Olinger did make a significant contribution to style research methodology in this direction when she looked at body language and paralinguistic cues with the writers she researched by videotaping and exegeting the often unconscious aspects of the production processes of writers. However, adding further support to the theory and the total picture of what is known about the felt and latent aspects of roles, positionings, and identities that impinge on stylistic production and reception would be a significant contribution to the field. To address this issue, one goal of this study is to examine the constructs researched in this study in terms of conscious and/or unconscious instantiations of language use. In other words, when an author creates or characterizes a particular instance of linguistic style, to what extent is that author conscious of the choices made? For instance, to what extent do considerations of *genre* play a role in stylistic creation and representation as opposed to *appropriateness* or *topic*? Are there consistent findings related to how style is consciously approached among writers? The answer to that question could have important implications for compositionists.

Finally, a note on the term, "construct," one of the key terms in this research study. Olinger does not use this term, nor does any other style theorist for that matter. I employ this term for a few reasons. First, a term is needed to identify forces that more or less impact writers and readers in the act of sending and receiving the language and messages of writing. Research and theory may cohere around such a term, offering new expanses for study and theorizing. The lack of such a term reduces the depth with which style scholars can look at the motivational forces, both conscious and unconscious, that affect style. The term "force" seems vague and Star Wars-esque, and it implies lack of

agency. "Index" is a technical term within Olinger's (2016) theory that "points to aspects of the context and thus acquires meaning from it" (p. 125), so that term is taken and cannot be re-purposed. "Construct" is employed since it implies that the construct in question is only that, a *construct*, not a feature of fixed, immutable reality. So for instance, *appropriateness* may be a construct at work that impacts a chosen stylistic diction for a writer creating a letter requesting a raise. *Appropriateness* in this sense is an agreed-upon code that has been socially constructed and may be variously interpreted by both employer and employee. It is truly a "construct." For these reasons, the term construct is employed and applied in this study.

Statement of Purpose and Research Questions

The purpose of this research study is to explore the constructs that impact writing style and represent them as conscious and unconscious. Olinger's sociocultural theory of style offers new ways to understand the dynamic relationships among writer, text, audience, genre, and context. Currently, except in broad outline, little is known about how these relationships intertwine and interact. Armed with a deeper knowledge of the forces impacting writing style, researchers, teachers, and writers themselves can understand better how style is created and received.

To explore this area, the following research questions are addressed:

1. What descriptive power does a sociocultural theory of style bring to the production and reception of written style?

2. What constructs are operant as writers and audiences approach the task of encoding and decoding literary style?

o How do these constructs relate to one another in terms of priority,

symbiotic relation, and negotiation?

3. How do the constructs under examination relate to one another in terms of

conscious and unconscious use by writers and audiences?

Research Approach

To answer the above questions, using an ethnography of communication-inspired approach, I conducted case studies of a purposefully-selected population of educated, professional technical writers by using literacy history interviews, discourse-based interviews on two texts I provided, transcription and coding of the interviews for the constructs under consideration in the study, and reporting of findings. I also provided each participant an opportunity to read and comment on the study in order to co-construct the meanings and applications of the data. Finally, I discuss and evaluate the findings of the study and draw conclusions and make recommendations. Of course, as a researcher and reader in the study, I am also a participant, so I examine and offer my own impressions, assumptions, constructions, and positionality in the reporting of the study.

Assumptions

Based on my experience and training in both literature and theology as well as my coursework in rhetoric-composition, I make three primary assumptions in this study. First, a poststructural theory of language is more descriptive than structuralist theories of language for grounding theories of language-in-use such as theories of style since such theories better describe the social construction of language as well as the impulses that drive its production and reception. Second, I assume that style is dynamic and fluid, encoding, reacting to, conflating, and challenging identities that writers and audiences

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both consciously and latently enact. It is seen best metaphorically as a living body rather than as a cadaver whose inarticulate features might be tabulated, logged, and fully described. This seems a failing of earlier approaches to style, often linguistic in orientation, that characterized texts in fixed terms. One notable example is Walker Gibson's (1966) "Style Machine" that categorized style as "tough," "sweet" and "stuffy." This reduction of textual features to three basic archetypal styles overlooks the differences inherent in discrete units of text that lie beneath the chosen unit of analysis of the researcher while also ignoring the myriad ways that writers and readers approach texts, all while characterizing terms such as "tough," "sweet," and "stuffy" as universally agreed-upon descriptors for the literary qualities of texts. Style researchers have largely rejected such an approach to texts, preferring to see texts not as static artifacts but as sites of activity—as "artifacts in action" (Prior, Hengst, Roozen, & Shipka, 2006, p. 761; Olinger, 2016, p. 2). I too hold this view. Finally, I apply a constructivist approach in this study. Constructivist approaches are inductive and are committed to several key ideas: that individuals form their own mental representations of reality; that individual perspectives matter; that the values, orientation, and approach of the researcher are part of any research study and should be reflected on and communicated; and that the researcher should use participants' views and contributions to build the major themes and findings of the study (Creswell, 2016, p. 42).

Rationale and Significance

This study is needed since, as Butler (2008) noted, the loss of interest in style within rhetoric-composition in the 1970s until around 2000 created gaps in scholarly knowledge of stylistic production and reception (p. 13). The *whys* of stylistic production

are little theorized and researched, making this study valuable for style scholars within rhetoric-composition. Identification and research on constructs impacting production and reception of literary style is needed in rhetoric-composition to offer clarification on which theoretical approach(es) to style reflect best how these processes occur. Currently, much knowledge about how stylistic decisions are made and how roles and positions are assumed in texts is spread across various fields. Bringing those findings into rhetoric-composition and relating them to current theory on style is a valuable contribution to current style scholarship in rhetoric-composition.

Also, building more scholarly awareness in relation to unconscious and conscious constructs impinging on production and reception of literary style is a needed area of study. The constructs researched in this study are explored in terms of conscious and unconscious instantiations of linguistic choice and involvement by authors and readers, keeping in mind, in Rankin's (1985/2010) words, that there is no "clear line of demarcation between conscious and unconscious choices" (p. 247). In many ways, the various approaches to style can be viewed as versions of the "conscious/unconscious" dichotomy that has formed the backdrop for much scholarly discussion on style. Knowledge of the types of metacognitively-aware forces and considerations as well as the subconsciously-active forces at work within a writer's process resulting in stylistic choices can offer benefit for compositionists since "it would provide some means of distinguishing when such operations are *acquired*, when they are *learned*, and if/when they might be effectively taught" (Rankin, 1985/2010, p. 247, italics in original). In my estimation, the *acquired/learned* disjunction is at the heart of controversies surrounding stylistic pedagogy, so offering some clarity on this issue can help the field ascertain

pedagogical approaches for style that recognize what is latent and active as students encode and decode writing.

Finally, this study advances stylistic research with new methods. To this point, an ethnography of communication study of this type on writers' and readers' approaches to style has not been undertaken and, given the direction that stylistic theory with rhetoric-composition has charted going forward, such approaches to research will need to be implemented in rhetoric-composition research in stylistics to vet, nuance, and extend theory. In communication, applied linguistics, and linguistic anthropology as well as other areas, such research methods have offered corroboration of sociocultural assumptions about communication, discourse, and language, though these methods have not been used in rhetoric-composition in relation to style. This study is thus at least partially an effort to extend the methodological range with which rhetoric-composition's stylistic theories are explored.

CHAPTER 2

REVIEW OF LITERATURE

Overview

In the first chapter, I noted the rise and fall of stylistic study in rhetoric-composition and explicated the criteria for a successful theory of stylistics within rhetoric-composition. After exegeting Olinger's (2016) sociocultural theory and finding it a promising theory of style, I suggested a gap within the theory related to constructs informing writer's production of style and another gap in terms of the amount and type of research supporting the theory itself. This chapter develops a discussion related to the first gap related to stylistic constructs. To be clear, the constructs identified by Olinger and in this chapter are descriptions of the type of considerations and forces that impinge on a writer's process resulting in specific choices related to the "signs of cluster of signs" that characterize a writer's style. The third chapter on methods will explore the second gap concerning the amount and type of research needed to explore, ground, modify, and extend Olinger's sociocultural theory of style.

This critical literature review spans literature from a variety of fields that offers insight into communication concepts that affect communicators in communication situations. A goal of this literature review is to bring diverse discussions in rhetoric, composition, linguistics, and communication to bear on the issue of the production and reception of writing style. In relating these disparate concepts, I seek to provide a conceptual framework that informs and shapes this study. I call this framework the "Construct Model of the Sociocultural Theory of Style." Some of the literature that shapes and informs this theory emerges from communication and sociolinguistics,

especially interactional sociolinguistics, which looks mainly at interpersonal, live, dyadic communications. Some of these concepts may impact writing style both in terms of production and reception as the main differences lie in the communication situations (writing versus interpersonal) and in instantiations of language use (written versus verbal). Much has been written about the differences and similarities between oral versus written language[21], but not much is known about how various media affect style[22]. Some of the literature surveyed in this section emerges from other fields like applied linguistics and rhetoric.

In the years during which style took a back seat to other concerns in rhetoric-composition, other fields did important work on how communication is shaped. So possible constructs that shape "typified indexical meanings" might be drawn from those fields. Olinger (2016) herself notes that "cross-disciplinary discussions can inform a research agenda that highlights the co-constructed and dynamic nature of style" (p. 132). Since rhetoric-composition has undertheorized and under researched this area, the field is somewhat uninformed about how and why stylistic decisions and representations are made. Rankin (1985/2010) stresses that "a complete definition of style will recognize that some [stylistic] choices are more indirect than others: they are influenced by social background, by linguistic experience, and by intellectual capacity; by deep psychological factors and momentary situational constraints." She adds, "In short, they are complex and fascinating—a fertile subject for further research" (p. 247). Rankin's exhortation to

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[21] See Ong (1982); Elbow (2014).
[22] Neil Postman's (1985) insight in Chapter 2 of *Amusing Ourselves to Death* that media proceed on epistemologies that are inherent to their mode of delivery and form of signification is a similar concept, though he did not focus on stylistic aspects of language use.

explore this area has not as yet been heeded in any sustained or comprehensive way[23], leading to the present study.

Overviewing this chapter, I explicate the Construct Model of the Sociocultural Theory of Style. Then, I explore its component parts with special attention on the constructs that are the focus of this study. I also explain the use of traditional rhetorical concepts like *kairos*, footing, rhetorical distance, stance, and voice within the model before attending to the issue of consciousness and unconsciousness as it relates to the

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[23] A survey of style-focused dissertations within rhetoric-composition since 2000, the date Butler mentioned as marking revival in interest in the topic of style within rhetoric-composition, shows a steadily-increasing level of scholarly interest in style with large gaps in the theory and particulars of stylistic production and reception still evident. Carpenter's (2000) dissertation is important in its attempt to advance a new theory of style. Carpenter categorized style as solidly within the rhetorical dualist camp since style for him is a function of a writer's available resources, self-aware purposes, and the constraints of the writing context and situation. Carpenter did case studies to support this theory, though his findings ultimately retrenched previous notions of style. Cautrell (2002) intersected the rhetorical canon of style with post-process approaches to writing. His proto-sociocultural approach applied the paralogic rhetoric of Thomas Kent to the teaching of style in the composition classroom, though his theoretical approach did not involve gathering evidence to support his theory. Pace's important dissertation (2003) signaled a newer direction in scholarly research of style in his perceptive critique of critical pedagogies that focus on the social circumstances of linguistic acts and not those acts themselves. He compared this to the over-emphasis on style rather than rhetorical awareness evident in early modern England. Ultimately, he mapped a way forward with pedagogies such as those espoused by Ann Berthoff and Peter Elbow where writers are encouraged to see style as rhetorical resources used to encode or resist discourses. Butler (2004) surveyed the history of style pedagogy from its "golden age" when the current-traditional model held sway through the process approaches that came after to the eventual demise of style since the 1980s. He complicates the view that stylistic study and teaching only applies within a current-traditional view of style, even as he challenges the notion that style is opposed to invention. He further shows that even though style may have seemed to become invisible it was actually "ubiquitous" in the field, but it had become subsumed under other approaches to writing that had to do with rhetorical analysis, genre theory, theories of race, gender, and class, and all of the concerns of the New Rhetoric that stood in for older discussions about style alone. Medzerian (2010) expanded notions of what counts as style pedagogy by researching how assessment is often a form of implicit style pedagogy. The result is sometimes a conflict between how writing is assessed and how it is taught. Vorhies (2013) approached style instrumentally, as that canon that facilitates cognition. Based on studies of early American spiritual writings, Vorhies argued that style shows that rhetoric is a form of *episteme* rather than mere *techne*. Dietz (2017) argued that the teaching of style can mend fractures that have occurred historically between the teaching of poetics and rhetoric and that compositionists should recover the use of not only poetics but visual rhetoric in the teaching of style. She argued for altered assessment practices in some cases and creative approaches to the teaching of style beyond customary disciplinary limits. Adding Olinger's (2014) dissertation to this synopsis, it is evident that the work of style scholars has not sustained itself in any one area but has examined issues of theory, pedagogy, definition, history, and assessment.

constructs operant in the model. Finally, I discuss the issue of salience and its impact on readers' and writers' relation to textual style.

The Construct Model of the Sociocultural Theory of Style

Introduction

Explicating and relating the constructs that affect stylistic production and reception is the central aim of this literature review. Olinger's (2016) definition of style in mind, "the *dynamic co-construction of typified indexical meanings (types of people, practices, situations, texts) perceived in a single sign or a cluster of signs and influenced by participants' language ideologies*" (p. 125, italics in original), I offer a model of how the constructs under consideration affect readers and writers, leading to dynamic co-construction of literary style. The model includes terms from rhetorical theory that describe writers' and readers' relationships to one another, words like footing, stance, and voice. By incorporating these terms into the model, I show how style comes into its multitudinous forms, forms that occasion construction of the various perceptions that readers have of writers and their texts and purpose(s), and the constructions of writers in terms of their audience(s) and need(s). The goal of this literature review is the presentation of a model that incorporates rhetorical theory and findings on constructs affecting stylistic and production that reflects and extends Olinger's important work.

Explication of the Model

Seeking to explicate the wide-ranging, conscious and unconscious, and more or less salient forces that impact writers and readers as they approach texts, forces that I am calling constructs in this study, is a monumental task for any theorist of writing style. Though it is a task fraught with perils of omission, reductionism, and mischaracterization

since one cannot hope to capture everything that impacts style, I do not think it a fool's

errand. Valuable work on what occasions and impacts language use has been done and

needs brought to bear on discussions of style within rhetoric-composition if the field is to

build valuably informative theory. The first draft of the Construct Model of the

Sociocultural Theory of Style (see Figure 1; the final draft is viewable in Chapter 5)

shows the constructs discussed in this chapter as they impact writers, readers, and texts.
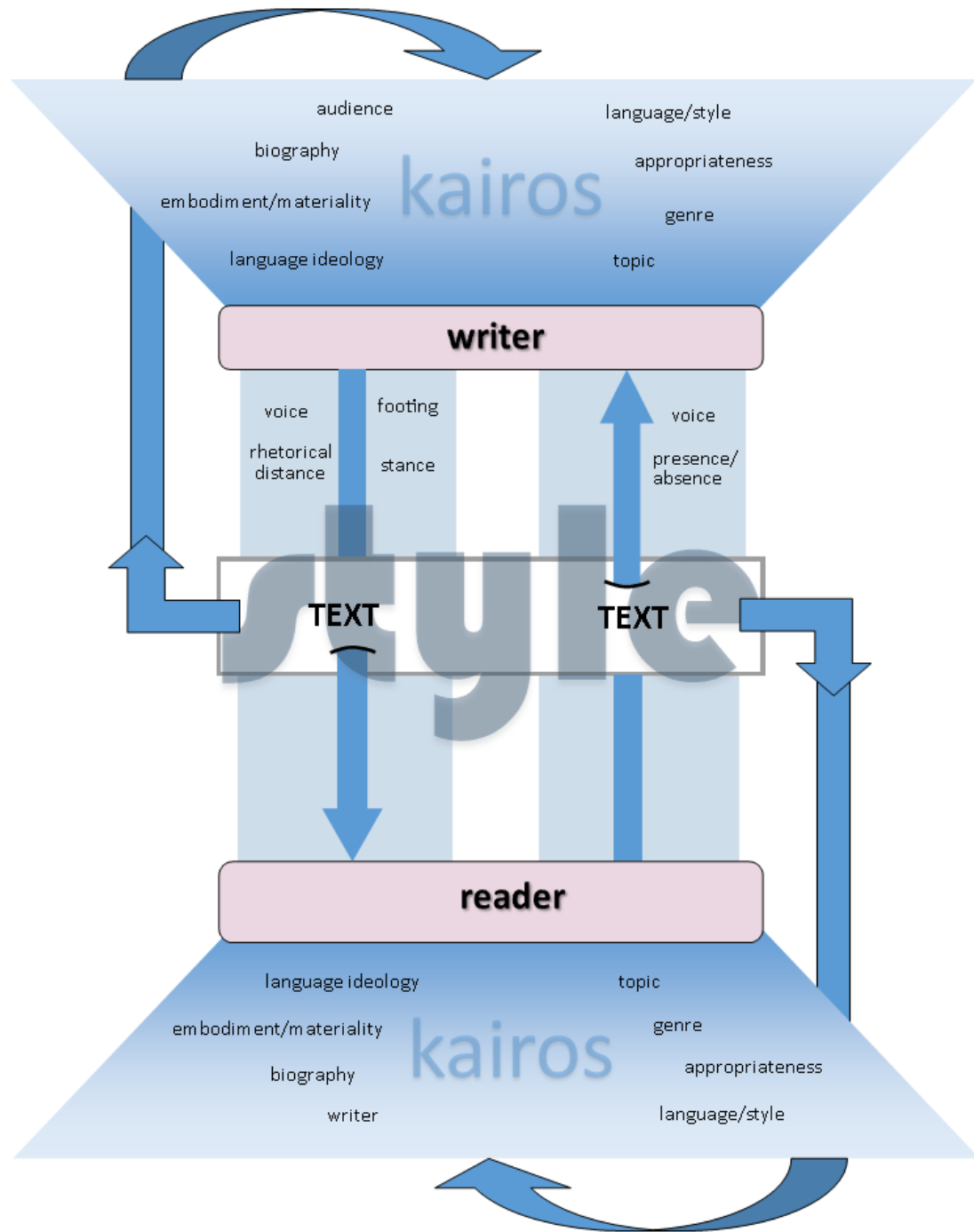
Figure 1. The construct model of the sociocultural theory of style, first draft.

The constructs labeled at the top of the figure are positioned in a funneling

manner to show that they operate in a prevenient manner as writers relate their purposes

to their audiences, and they are ultimately expressed through a writer's stance, footing,

rhetorical distance, and voice as a writer creates the stylistic characteristics of a text. The prevenient aspect of the constructs is similar to Drew Loewe's (2005) term "feedforward loops," elements of a system adjusted prior to entering that system including rhetorical situation, *kairos*, and embodiment but also textual aspects such as diction, format, and genre. In the Construct Model, I alter this concept by keeping its prevenient aspect but I differentiate the various elements within the feedforward loop by calling them constructs and designating the entire feedforward looping process as *kairos*, which I define as the way a specific context calls for a specific type or tone or amount of communication at a specific point in time.

Kairos affects both writers and readers in this model. James L. Kinneavy's (2002) treatment of the history and development of the concept of *kairos* shows that the twin principles of right timing and right measure (p. 60) are dominant throughout its development, though he notes that the term also has ethical, educational, epistemological, and aesthetic dimensions, all of which warrant consideration as one constructs communication. Current scholarship and theoretical interaction with the term centers on the aspect of *kairos* as right moment or right timing. Nelson (2016) emphasizes *kairos* as a method to capitalize on moments of opportunity within classroom writing pedagogy while Drabinski (2017) uses the term to teach criticality and resistance to dominant social narratives. However, Kinneavy's (2002) wider vision of the applicability of the term, both right timing *and* right measure, is more persuasive for several reasons. The term καίρὸς in Classical Greek does indeed feature the notion of right or appropriate measure, as noted in Liddell and Scott's, *A Greek-English Lexicon*, where "due measure, proportion, fitness" is listed as a primary meaning even prior to right timing or moment.

The connection of style to *kairos* is evident in classical authors including Aristotle who treated *kairos* under the heading of style in *Rhetoric*, Book 1. Crowley and Hawhee (2011) claim that the situational propriety that beckons for a specific style, rather than rigid rules, is a central element of understanding style in its classical formulation from the Greek Sophists even to Cicero and Quintilian (pp. 254-254). *Kairos* in the Construct Model is pictured as an organizing term creating a "kairotic funnel" whereby writers and readers connect the various constructs impacting them both preveniently and recursively as they create and characterize style dynamically in their production and interaction with the written text.

Kinneavy's claim that *kairos* has ethical, educational, epistemological, and aesthetic dimensions is of special import in constructing the role of *kairos* within the Construct Model of the Sociocultural Theory of Style. In terms of ethics, Kinneavy (2002) notes that "Plato used the concept of proper measure and right time—the two fundamental components of the concept of *kairos*—to construct the doctrine of virtue as the mean between two extremes" (p. 62). The term was also important in constructing models of justice—the right measure at the right time—in Greek philosophy. Epistemologically, Kinneavy suggests that from early Greek poets like Pindar and Bacchylides, writing poetry in the fifth century BCE, all the way to the Pythagoreans, Gorgias, and Plato, *kairos* carried epistemological weight as a concept for bringing timeless ideas into human contexts within historical time (p. 62). Poets, philosophers, and ideologues of every stripe attempted to relate the timeless to the finite using this concept of appropriateness in both time and measure. The truths relayed by writers could only become effective and active at the crossroads of time and rhetorical measure implied in

the term *kairos*. Educationally, the Greeks famously developed educational models that aimed to connect content and concepts to pupils' developmental levels that carried all the way into the medieval era with the development of the Trivium. The development of the pupil's virtue could only be accomplished at the right developmental moment and only with the right measure and method (Kinneavy, 2002, p. 62). With the connection of *kairos* to aesthetic considerations, style comes to the fore. *Kairos* is evident within the theory of style that emerged classically with the four chief virtues of style: correctness, clarity, appropriateness, and ornament. As T.R. Johnson (2003/2010) notes, both James Kinneavy and Charles Bazerman contend that "*kairos* imbued nearly all early thinking about rhetoric" (p. 351). Johnson (2003/2010) adds,

> Although *kairos* is most often used to refer to rhetorical situations as located in time, the concept clearly has implications of making local decisions within a particular text, how to sequence, arrange, and *time* the specific effects one seeks to achieve, to make them . . . "come alive." (p. 351)

This is the application of *kairos* used in the Construct Model where, like Johnson, I argue that the term should return to prominence in rhetorical theory and find wider application in stylistic theorizing. The evaluative element of *kairos*, adjusting communication to elements of time, context, and exigency, is integral to the Construct Model. The constructs at the top and bottom of the model in the "kairotic funnel" are of various types, evidencing the many aspects of that term. For instance, self-concept and biography can have ethical, educational, and epistemological dimensions while language itself can have aesthetic aspects.

In the Construct Model, the loops from the TEXT back into the kairotic funnel for writers, going up, and for readers, going down, picture that kairotic elements work recursively in addition to preveniently for both writers and readers. In other words, texts as they take form are shaped not only by the constructs in the funnel but also feed into the constructs there recursively as writers and readers create and interact with texts. This aspect of the model reflects the dynamism of Olinger's theory. In addition, STYLE overlaps and runs through the TEXT but also the space between writer and reader and is constantly being shaped and reimagined by both readers and writers, which is a nod toward Olinger's "dynamic co-construction" notion.

My use of *kairos* within the Construct Model differs from its previous use. I relate *kairos* in the model to readers as well as writers, arguing that the constructs that affect writers also affect readers, though differently in some ways. Nonetheless, on the account of style offered in the sociocultural theory of style, it is less seen as a characteristic of texts and more seen as a perceptual characterization in a negotiated space between writers and readers. The theory is as much interested in readers as writers and brings their contributions to notions of style to the fore in a way that has not been true of other stylistic theories. *Kairos* impacts their perceptions as much as writers' constructions, which is why *kairos* is found at the bottom of the model, impacting readers, just as it is located at the top of model, impacting writers.

Looking at the two blue columns running through the TEXT, I locate several rhetorical terms there that bear explanation. Since the reader encounters the *writer* in the style of text, I listed it as a construct in the reader's kairotic funnel, just as the writer encounters the audience by adjusting style, which is why *audience* is in the writer's

kairotic funnel. The writer expresses the constructs in the kairotic funnel through *footing*, *stance*, *rhetorical distance*, and *voice*—all well-known and -defined rhetorical concepts placed on the model's left side with an arrow to show that those concepts root the writer's approach to the audience. The reader experiences the stylistic aspects of a writer's text as *voice* and the writer's *presence or absence*, and those concepts appear on the right side of the model, the reader's side, to show how readers come to characterize writers and their personas in texts. Voice is used for both readers and writers since in my usage of that term, it applies equally to readers and writers, as something that writers encode to address/invoke audiences stylistically and as something that readers encounter, a stylistic emanation of a writer's persona in texts.

Constructs

The constructs affecting style are depicted in the kairotic funnel at the top and bottom of the Construct Model and are depicted as impacting writers and readers both preveniently and recursively. No claim is made here that the constructs presented in the Construct Model are exhaustive in cataloguing of every possible conscious and subconscious source of impact on writers and readers in terms of style. Rather, the constructs in the first draft of the Construct Model represent a starting point in reflection and research on the forces impacting style and include well-known discussions within rhetoric-composition and allied fields on these topics.

Biography. As a starting point in thinking about what impacts style, biography is a construct powerfully affecting both writers and readers. Even as far back as the 1940s, at least one scholar was interested in how personality impacted writing style (Barton, 1946). At that time, personality was considered as mostly fixed and invariable, but more

recent work has shown that the social self arises in a multitude of ways in response to a myriad of variables. Work done in the field of interactional sociolinguistics, specifically in the area of positioning theory, shows the communicating self enacting many variations of the self, often with stylistic variables as a key aspect of one's positioning. Developed initially by Bronwyn Davies and Rom Harré, positioning theory presents "positioning" as the discursive process in which conversational participants subjectively produce selves in joint ways. In conversation, an individual takes up a socially-produced position and constructs other participants in socially-determinate ways as well. These various relations, which Raggatt (2015) calls "I-positions" (p. 779), are undertaken using linguistic resources among other interpersonal resources. Davies and Harré (1990) developed positioning theory in response to problems with the concept of role in interpersonal communication, mainly in terms of the fluidity inherent in the notion of positioning as opposed to the "static, formal, and ritualistic aspects" of role (p. 44). They developed the concept beyond conversational dyads alone by moving it to the level of discourse, which they defined as "an institutionalised use of language and language-like sign systems" (p. 45). Positioning oneself in discourses results in the "discursive production of a diversity of selves" (p. 45).

One theorist of positioning, Nikki Slocum-Bradley (2010), offers a "positioning diamond" as a "trans-disciplinary framework for discourse analysis" (p. 79), and it does indeed suggest lines of inquiry for style researchers, mainly in terms of its description of the dialogic self at play in a matrix of sometimes contradictory social forces, identities, and rights (see Figure 2). Slocum-Bradley's model is helpful in its simplicity, though it is unclear how applicable the concept of "Rights" is in certain communication situations

such as personal or journal writing, and it seems unrepresentative in terms of opposing "Social forces" and "Rights" since individuals can assert rights in convergence with or divergence from social forces.
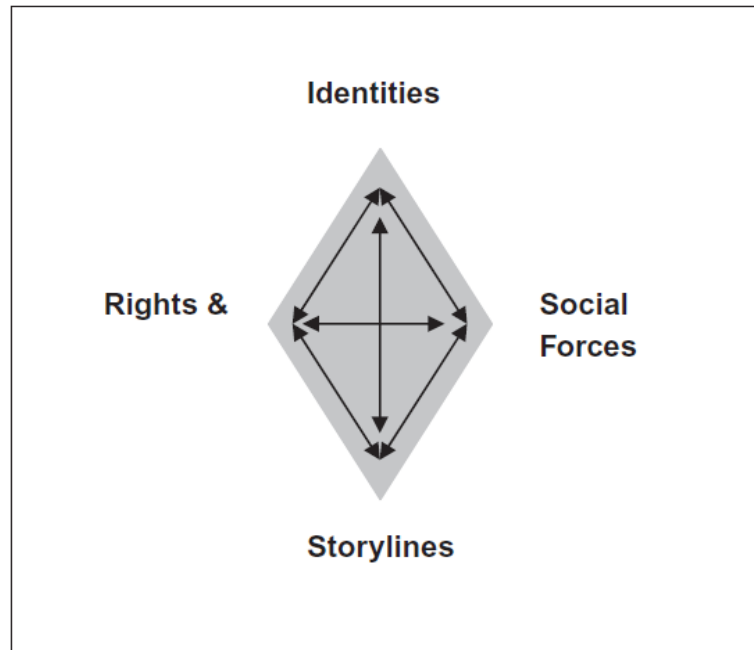
Figure 2. Screenshot of Slocum-Bradley's (2010) "positioning diamond" (p. 92).

Still, Slocum-Bradley's model is interesting for stylistic study in terms of her elucidation of "Storylines" as a means of expressing and modifying one's rights, identities, and social positions. Slocum-Bradley teases out implications of the idea that one's participation and integration with social forces is enacted through discourse. James Paul Gee (2012) expressed this notion effectively in his "Discourse/discourse" dichotomy (p.2), yet Slocum-Bradley adds in the narratological insights of the storied creation of selves and others as a central part in how one's rights and identities are created and enacted. Slocum-Bradley, for instance, depicts anthropomorphosis, categorization, and choice of diction as some ways that language is manipulated stylistically to humanize, dehumanize, and label in- and out-groups (pp. 94-95).

Raggatt (2015) develops this concept with a focus on Bakhtin's "multi-voiced heteroglossia" and a specific focus on linguistic resources that are marshalled as part of taking up "I-positions." He notes that the relation of *self to self* and *self to other* is always dynamic, which is similar to Olinger's "co-construction" concept. Drawing on Bakhtin's (1981, 1984, 1986) work, he avers that the "dialogic self" is caught in a perpetually recursive matrix of self, "semiotic and material resources," and "social resources" (p. 788), an argument that could have been made by Olinger. These semiotic, material, and social resources include such disparate concepts as physical setting, canonical story lines within cultures, and personal ethics (p. 788) (see Figure 3). Raggatt suggests that *self-concept*, *self-esteem*, and *personal biography* constitute an important part of the positioning process in communication (Raggatt, 2015, p. 788).
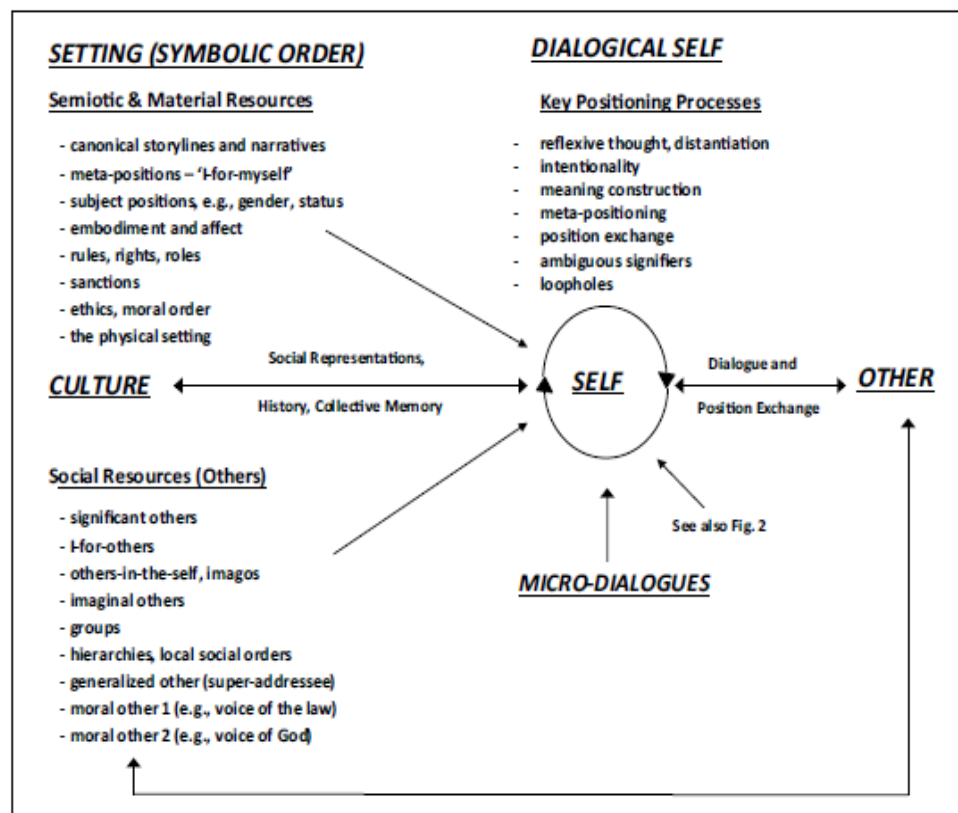
Figure 3. Raggatt's (2015) "positioning processes in a dialogic self" model (p. 788).

Digging deeper into Raggatt's theory, in terms of "Setting," or what he terms "Symbolic order," he lists "Semiotic and Material Resources" from a cross section of discussion and research in a variety of fields. These elements refer to the semiotic materials available to one for social representation from self-aware "I" positioning in relation to social identities and ethical codes all the way to aspects of physical setting and embodiment. In Raggatt's theory, one takes up positions in relation to and through these various, sometimes contradictory factors through "Key positioning processes" that include intentional meaning construction all the way to meta-derived uses of language that offer a myriad of ambiguous, even ironic, positions. These positioning processes, using the semiotic and material resources available, are impacted by "Social resources" that include real and imagined versions of the self and others by which a communicator can assume a seemingly infinite variety of positions.

Positioning theory, valuable as it is, remains underdeveloped in terms of its applicability to writing, as evidenced by the fact that the literature surrounding positioning theory often utilizes constructed narratives, thought experiments, and conversation analyses to examine its own assumptions even in Davies and Harré's (1990) first exposition of its core concepts. Research on how writing style is adapted and manipulated based on aspects of personal biography can contribute to what is known about how personal communication style responds to and expresses those concepts in other communication modes.

Similarly, social identity theory focuses on understanding how one expresses oneself as allied to or individuating from group identities such as in crowd behavior (Reicher, Spears, & Postmes, 1995), adolescent youth behavior (Abrams & Emler, 1992),

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moral rule-making (Stets & Carter, 2011), and the justification of group beliefs (Jost & Kramer, 2002). Communication plays a significant role in convergence and divergence from group identities, according to the mainstream of this research (Bratu, 2013). Development of how writing style is affected by one's commitment to or divergence from social groups is a potentially interesting outcome of this study.

      Appropriateness. Another construct related to how one's chosen social positioning impacts communication is *appropriateness*. The notion that appropriateness impacts style goes back to the classical rhetorical tradition with many classical rhetoricians noting its importance (Aristotle, *On Rhetoric*, 3.2), likely because of its inherent audience focus. Appropriateness has also been a topic of recent research in social psychology, which links it to normative behaviors that come from "shared social norms" (Veselý, 2015; Krupka and Weber, 2013). The powerful effects of appropriateness as a shared social norm are such that it can even overcome low amounts of incentivization such as cash payouts to cheat in a game (Veselý, 2015, p. 195). Interestingly enough, Olinger (2014) found that appropriateness came into play in reception of style in qualitative research for her dissertation (p. 135) though she did not label it as an indexer of stylistic production or reception. Selzer (2004) hinted at appropriateness as a guide to understanding style by suggesting that rather than style being thought of as a static phenomenon, it should be seen "as characteristic of a particular occasion for writing, as something that is as appropriate to reader and subject and genre as it is to a particular author" (p. 289). In the Construct Model of the Sociocultural Theory of Style, appropriateness impacts a writer's style as a kairotic consideration that preveniently and recursively impacts writers.

Language ideology. *Language ideology* is another construct affecting style in the Construct Model. Olinger (2014) notes the importance of language ideology in her explication of the sociocultural theory of style:

> I define style as *the dynamic co-construction of typified indexical meanings (types of people, practices, situations, texts) performed and/or perceived in a single sign or a stretch of co-occurring signs; this process, engaging writers/speakers/producers and readers/interlocutors/receivers, is influenced by participants' language ideologies.*" (p. 45, italics in original)

In her 2016 article, "A Sociocultural Approach to Style," she alters the wording slightly. There, style is "the *dynamic co-construction of typified indexical meanings (types of people, practices, situations, texts) perceived in a single sign or a cluster of signs and influenced by participants' language ideologies*" (p. 45). In both expositions of the theory, "participants' language ideologies" take a central role. In the article, Olinger carefully exegetes each phrase within the theory including the phrase, "participants' language ideologies." She notes that language ideologies emerged as a field of study within linguistic anthropology in the late 1970s, and such ideologies can function both consciously and unconsciously for writers and audiences (Olinger, 2016, p. 126). Language ideology shapes a writer's production of style in the forms of language offered to the writer and impacts reception of style in terms of the indexical meanings that readers attribute to a writer's style. Typified indexical meanings are shaped by, or in Olinger's phrase are "fed by" (2016, p. 129) participants' language ideologies.

Language ideology can take several forms. It can be the representations of author and content that readers construct through style, beliefs about how language works (it can

be perfectly clear or always convoluted and so forth), or beliefs about what is permissible, valued, and endorsed (Olinger, 2014, p. 49). For instance, though it has been challenged as the ideal of effective style by rhetoricians[24], clarity has often been offered as a defining characteristic of effective style, whether in handbooks or in classrooms and boardrooms. A recent fairly large (n=614) study by Campbell, Amare, Kane, Manning, and Naidoo (2017) found that clarity is the number one characteristic of writing desired by United States professionals who are native speakers. This is especially true in relation to word choice and conciseness, in that order. This valuing is a form of language ideology at work. Olinger (2014) offers an example of language ideology at play in her dissertation research. One college student she interviewed mentioned avoiding the passive voice in academic writing since since she believes the active more direct and desired by professors (p. 49). Language ideology even has metalinguistic and metapragmatic dimensions (p. 50) playing out through paralinguistic cues including emphasis, volume, tone, and gesture.

Language/style. *Language* or *style itself* can be a construct affecting stylistic variation. This concept differs from language ideology in important ways. Writers may write just for reasons of eloquence and word play. Lanham (1974/2007) asserts, "A writer may write for her own pleasure, less from zeal to communicate than from love of words. Furthermore, style will influence *what* a writer 'wants' to say" (p. 57). The same might be said of readers. They may pursue or seek to avoid a specific style or linguistic experience in their reading. Jargon, as Lanham notes (1974/2007, p. 105), may serve as a communicative end in itself, a marker of in- and out-groups that can become a "delight"

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[24] Richard Lanham's provocative *Style: An Anti-Textbook* (1974) may be the most well-known screed against clarity as the defining value of good style.

in itself. Terms such as register, code-mixing and –meshing, dialect, diction, and metadiscourse emphasize various aspects of this idea.

      Audience. The *audience* has seen a great deal of treatment as a force impacting a writer's style in rhetoric-composition and can be seen as a construct affecting style. Walter Ong's (1975) seminal article on the fictional construction of the audience by the author is a notable example of the direction that rhetoric-composition has taken in thinking about audience. Ede and Lunsford (1984) moved the discussion on audience in new directions with their "audience addressed/audience invoked" model in which they note problems with only seeing audiences as addressed. The idea of invoking audiences moved the discussion on audience away from the traditional notion of audience expectations and needs controlling the author's discourse while empowering writers to create styles, use diction, and imagine worlds based on their purposes; however, Ede and Lunsford (1984) note the limitations of this view if it is used in all writing situations since it can disempower readers (p. 165). Audience as a construct can mean audience in both its addressed and invoked aspects.

      Rhetoric-composition is not alone in noting how audiences impact communication, however. Sociolinguists have noticed this connection as well in verbal discourse. According to accommodation theory, "intraspeaker variation arises because speakers are paying attention to who they are addressing or who might be listening to or overhearing them and modify their speech accordingly." They do this for a variety of reasons, face-saving and politeness included (Meyerhoff, 2007, p. 29). Whether in speech or writing, the audience's impact on communicators has been well-researched and – documented in several fields.

The converse of this concept is the notion of the writer as affecting the reader in terms of the reader's expectations of writers and their roles within texts. Expectations of authors may impact reception of texts just as notions of the audience may impact construction of texts. The *writer* is thus located as a construct in the kairotic funnel for readers. Michel Foucalt's (1969/2010) notion of the "author-function" is one of the aspects of this idea. In his formulation, the author takes up a familiar social role in texts that readers expect and respond to in socially-constructed ways. This construction affects their expectations and thus their experiences with and interpretations of texts. Wayne Booth's (1983) "implied author" is a similar idea in which the reader creates the author as a literary, stylized version of a real person; this characterization affects the reader's reception of the author's text (p. 75). Writers and readers meet in texts, which is why the *writer*, in addition to the *audience*, finds a place in the Construct Model.

Genre. *Genre* impacts style in significant ways as well. However, as Zach Lancaster (2013) laments, not much is known about how "genre acts as a superordinate constraint on the array of grammatical choices speakers/writers can make in a given rhetorical context" (p. 196). The fact that writers and readers orient to genre through stylistic means is known, but it is less clear to what degree this orientation occurs in a given genre. For instance, to what extent does genre, whether through attempts to realize, modify, or parody it, play a role in authorial production and readers' reception of style? Does it do any of these things more in some genres than others? The discussion around genre and its relation to style and diction has often emerged from within linguistics[25],

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[25] Biber and Conrad's (2009) *Register, Genre, and Style* is a book-length example of this type of scholarship emerging from linguistics.

though Butler (2007) argued that style was never exiled from composition but insinuated itself in discussions within sub-fields including genre theory (p. 5).

Butler's contention may be accurate, though if style has indeed find interest within genre studies, its impact has been minimal. As just one example shows, the situation has come to such a pass that Australian zoologist and science writer Danielle Clode wrote a clever article (2014) entitled, "This essay mixes styles: Is personal and scholarly," which seeks to provoke discussions around the relation of style to genre within science writing in particular. Clode's metalinguistic, metacognitive argument demonstrates an issue within Rhetorical Genre Studies (RGS)—the relation of style to genre is not as thoroughly discussed or examined as it might be outside of a few discussions of disciplinary style including articles on the genre of research article introductions (Ling, 2014), valued and penalized first-word selection in academic writing (Makkonen-Craig, 2017), and plain style preferences among US business professionals (Campbell et al., 2017)[26]. In fact, in an interview conducted by Rinard and Masiel (2016) with Carolyn Miller, widely-acknowledged founder of RGS, no mention is made of style and its relation to genre either by the interviewers or by Miller herself. Interestingly, on this point Laura Aull (2015) admitted that within RGS research, "linguistic attention [is] often absent." She added that "the social action of genre is always to some degree realized in linguistic action, (a point to which we [RGS theorists and researchers] have been inattentive in keeping our attention on whole-text enactments in contexts)." The editors of *Composition Forum* commented on Aull's claims in an editorial piece looking

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[26] A sampling of recent articles within Rhetorical Genre Studies shows that it is currently focused on areas such as materiality (Reiff, 2011); the socio-emotional wellsprings of generic structures (Kurtyka, 2015); and multimodality and translingualism (Gonzales, 2015; Bawarshi, 2016), among other concerns.

at the thirty-year past, the present, and the future of RGS. They averred that the relation

of genre to style is an area that needs further development and research in order to

understand both topics more clearly (Wiesser, Reiff, & Dryer, 2015).

Drew Loewe (2005) argues that both genre and "other texts" play a significant role in the

creation of style (see Figure 4). Loewe suggests that (1) the writer's orientation to the

text, (2) to the context, which includes the audience, and (3) to self impact stylistic

decision-making. Loewe's theory suggests that "other texts" impact writers' stylistic

choices both in terms of the self and the audience's expectations of the text. The text

finds a place in Loewe's theory as writers seek to converge with and diverge from other

texts. Even within a text, stylistic decisions are made constantly to relate the text to itself

(intratextuality). The writer must deal with these intratextual considerations while

attending to the audience and his or her own purposes.
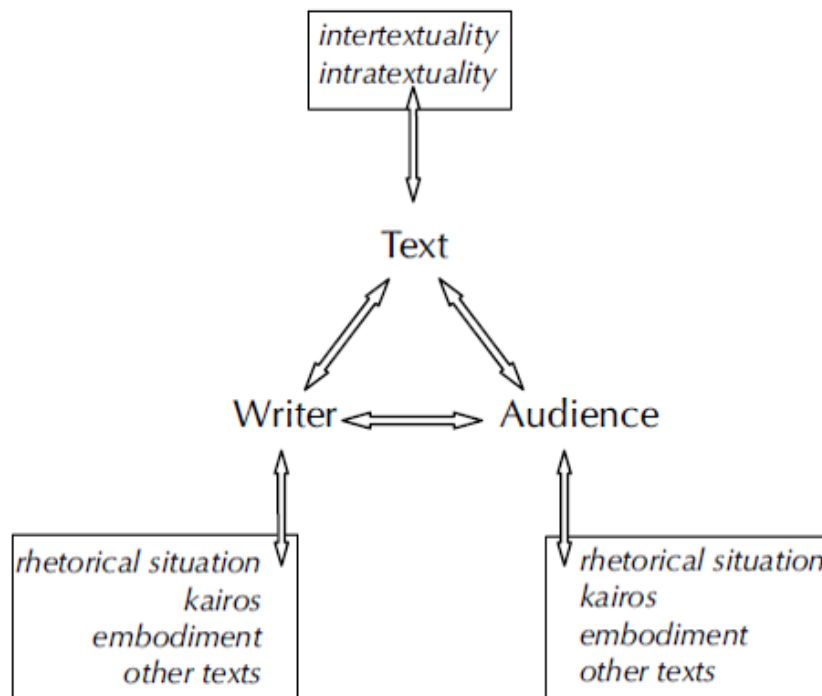
Figure 4. Screenshot of Loewe's (2005) "cybernetic model of prose style" (p. 249).

At the same time, since at least the time of Northrop Frye's (1957) claim that texts do not exist in a vacuum contra the New Critics but instead exist in dialogue with other texts in terms of genres, a claim that he lamented was undeveloped in his time (p. 246), both literary critics and rhetoricians have realized the impact that intertextuality plays in genre construction. The afore-mentioned Carolyn Miller (1984) brought this idea and the notion of genres as sites of social action to rhetoric-composition. Both within texts (intratextuality) and across texts (intertextuality), *genre* is an important construct affecting style for both readers and writers.

Topic. *Topic* is another construct affecting construction and reception of literary style. William Labov's famed research (1966) on stylistic variation in dialect and diction in urban settings showed that formality or informality of style corresponds to a chosen topic or the attention or inattention that a speaker gives to specific language settings and acts. Echoing Labov, Meyerhoff (2007) states, "It seems that when people are getting a bit preachy (about any topic) or when they are talking about 'language' itself, you elicit more careful styles that you do when a person is talking about, say, childhood memories" (p. 36). Sociolinguist John Rickford (2014), reflecting on recent decades of research on the impact of social factors on style, places the impact of topic on style under the heading of *metaphorical* factors impacting style as opposed to *situational* factors such as the differences between interlocutors and contexts. He argues that topic is a significant factor that affects stylistic variation and thus should be coded for as researchers continue their investigations into the sociolinguistic factors affecting communication (p. 601).

Embodiment/materiality. Finally, issues of *embodiment* and *materiality* affect writers and readers as a construct related to style and find a place in the Construct Model.

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In Ellis' (2019) definition: "Embodied cognition is the recognition that much of cognition is shaped by this body we inhabit" (p. 41). Ellis then connects this form of cognition to language explicitly: "Language is the quintessence of distributed cognition. Language is ever situated, either in the moment and the concrete context or by various means of mental extension to reflect prior or imaginary moments" (p. 45). He makes a connection to social and enculturation aspects of embodied cognition and language use (pp. 45-46). Materiality, on the other hand, may be seen as the larger term, speaking to a wide range of experience and being, encompassing the thing-ness of objects, spaces, locales, and milieus.

Recognition of the importance of embodiment and materiality issues is a key contribution by Loewe (2005) to stylistic theory, as discussed above. This same recognition has occurred in other areas as well including sociolinguistics (Raggatt, 2015) and Rhetorical Genre Studies (Reiff, 2011) and across the fields of rhetoric, composition, writing centers, and allied fields. For instance, Pigg (2014) found that writing in networked public spaces, an emplaced, material, and embodied action, allows students to manage social availability and access to resources, though she notes that research on the effects of mobile and technologically-advanced social realities on writing is currently lacking (p. 271). This research follows in a new stream of research into the role of materiality, embodiment, emplacement, and environment, in a variety of settings, genres, modes, and realities. McNely (2014) discusses material space and spiritual writing; Davis and Yancey (2014) examine the effects of materiality on composition and review of multimodal texts; Blewett, Morris, and Rule (2016) examine the effects of material environment on reading and writing. Taylor (2014) discusses the impacts of materiality

on collaborative writing workshop environments. This list of research is not comprehensive but is cited in order to show the widening range of examination of these issues within rhetoric-composition, though accordant focus has not been shown on the issue of the role of materiality and embodiment in relation to stylistic production and reception.

Rhetorical Concepts

In the Construct Model, writers craft language according to the constructs operant as they approach a writing task. The field of rhetoric-composition has used the terms *footing*, *rhetorical distance*, *voice*, and *stance* to indicate something similar to the positioning language used in other fields. Just as sociolinguists and communication theorists have researched ways in which the self relates to others in interpersonal communication through available discourses, much work has been done in rhetoric-composition on how writers relate to audiences. Star Medzerian's (2010) dissertation *From impressions to expectations: Assessment as a form of style pedagogy* features a chapter titled, "Removed from reality: Rhetorical distance as a measure of stylistic effectiveness." In the chapter, she says that rhetorical distance is "typically defined as the perceived metaphorical distance that exists between rhetor and audience" (p. 63). This "distance" is based on strategic choices in terms of the relationship between author and audience and between author and topic. As such, it plays a significant role in the construction of a writer's ethos. Medzerian (2010) also specifies that "like all rhetorical elements, rhetorical distance is determined by genre and purpose" (p. 64).

In defining this term, Medzerian (2010) draws on older work of speech communication scholars David Hunsaker and Craig Smith (1973) who defined rhetorical

distance as a measure of a person's "rhetorical involvement" with his or her own discourse (p. 65). In Sharon Crowley and Debra Hawhee's (2004) *Ancient Rhetorics for Contemporary Students*, an entire section is devoted to this topic under the heading "Voice and Rhetorical Distance." In the Glossary, they define rhetorical distance: "metaphor for the degree of physical and social distance created between a rhetor and an audience by creation of an ethos" (p. 437). They note further, "rhetors can widen or narrow the rhetorical distance between themselves and their audiences by means of stylistic choice" (Crowley & Hawhee, 2004, p. 182). They claim that "The prominent features of style that affect voice and distance are grammatical person, verb tense and voice, word size, qualifiers, and—in written discourse—punctuation" (p. 183). Further, they aver that "Word size seems to affect voice and distance" (Crowley & Hawhee, 2004, 193). The point is that the stylistic features of texts create ethos, a commonplace among writing teachers.

The somewhat parallel concept of "footing" is developed by style scholars Chris Holcomb and Jimmie Killingsworth in their textbook *Performing Prose: The Study and Practice of Style in Composition* (2010). Basing their ideas on the work of communication theorist Erving Goffman's *Forms of Talk*, they describe footing as "the 'alignment' or attitude (which literally means the way a person faces something, a position of the body, a stance) a speaker takes up with respect to his or her listener and the circumstances of their interaction" (p. 7). Bringing this concept into writing, they say,

Footing describes not only social position and distance (superior to subordinate, for instance, or friend to friend), but also emotional distance—that is, how writers

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make their readers feel about their interaction and how they orchestrate their

emotional experiences as they read a text. (p. 7)

They opine that authors and readers construct texts along the axis of interpersonal

distance and *familiarity* and also along the axis of *superiority* and *inferiority* (Holcomb &

Killingsworth, 2010, pp. 32-33), a concept that is derived from Deborah Tannen's (1994)

work on "framing" where she characterizes gendered discourse as working at poles of

"hierarchy and closeness" (p. 28). They developed a schema to picture these axes in

operation with and against each other (see Figure 5).

Superior

Distant ← → Familiar
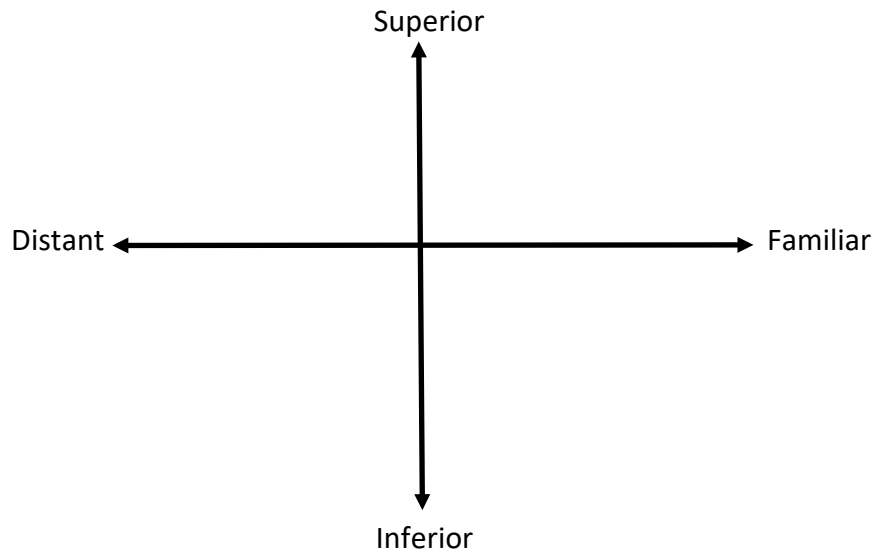
Inferior

Figure 5. Recreation of Holcomb and Killingsworth's (2010) revision of Tannen's gender

and discourse model (p.33).

Vertically on the spectrum, they ask writers to consider whether they feel superior, equal,

or inferior to their intended audience, and horizontally, whether the writer feels close or

distant to their intended audience. They cite business communication as an example of

formal discourse that operates at different levels of *distance* and *familiarity* depending on

the complex relationships of superiors and subordinates (pp. 32-33). They describe stylistic footing as the "performative repertoire [of] stylistic resources to hit the right mark" on the x- and y-axes of hierarchy and closeness (p. 33). Specific features of texts can relate the audience to the writer in dramatically different ways.

Though she does not make it part of her model, Tannen (1994) depicts other continua that impact social relationships such as *similarity* versus *distance* and *symmetry* versus *asymmetry* (p. 27). Of course, we might add other elements, especially having to do with cross-cultural communication such as *openness* versus *privacy* and *orality* versus *literacy*. These aspects all impact stylistic footings that writers take up in texts. For instance, a native writer might prefer to use narrative for a hortatory purpose, which might invoke a formal stance in an indigenous rhetoric, but it might be seen as informal and personal in a Western literate culture.

What Tannen (1994) and Holcomb and Killingsworth (2010) describe is aspects of presence, or voice, of authors in texts. Though helpful, readings of *distance* and *familiarity* and *superiority* and *inferiority* alone yield only part of the picture of how authors and readers index meanings in texts. The concept of voice can help with understanding the *how* of authors' production and readers' reception of texts. Since the "social turn" in rhetoric-composition, the social aspects of voice have received much attention, such that "tensions between voice as a feature of the individual or a reflection of the social are significant" (Hanauer, 2015, p. 69). This need not be an intractable problem if voice is considered as offering "a provisional, linguistically-directed performance of identity at a given time and place and within a specific social and cultural context" (Hanauer, 2015, p. 69). Voice is what authors enact and what readers encounter.

Thus, its creation is relevant to this study in that it shows how authors are relatively present or absent in texts. This axis, *presence* and *absence*, may also be an axis to consider along which style is enacted to create voice. The picture of presence or absence alone seems reductive though, since for instance, a personal memoir may rate as highly present on the *presence/absence* axis, but it may be indexed along a particular linguistic ideological axis as well based on what counts for self-reflective, confessional, autobiographical writing in a given culture. An environmentalist's screed against fracking may move on an axis between the *present* and the *absent* (an impersonal, evidential, coldly reasoning voice) yet also index meaning for authors and readers through *appropriateness* and *genre*. The various stylistic constructs at work in a single piece of writing offer a dizzying variety of options.

Conscious and Unconscious Factors in Style

Building an understanding of how the constructs affecting stylistic production and reception relate to one another is an important aspect of this research study, and placing those constructs in relation to one another in the context of conscious awareness or unconscious expression is especially paramount. Milic (1971) asserted that "no stylistic analysis can properly take place" until the conscious and unconscious aspects of a writer's process are known (p. 77). He termed the conscious aspects of a writer's style "rhetorical choices," and he used the term "stylistic options" to describe those aspects that impact style unconsciously. He argued that unconscious "stylistic options" are larger in number and more impactful for writers than conscious "rhetorical choices" (p. 85). Building knowledge about what conscious and unconscious constructs are at work as

readers and writers approach style has important implications in supporting and complicating theory and shaping pedagogical practice.

On the issue of theory, a theory that does not account for the implicit attitudes, identity factors, and community values and norms that shape stylistic reception and production is a reductionist theory since it valorizes the conscious aspects of style to the exclusion of implicit factors deriving from identity and social roles, contexts, and norms. Likewise, theories that collapse stylistic reception and production into expressions of identity and attitudes alone rather than understanding the malleability and conscious play within style lose the conscious elements of style and render sentence-level pedagogies and rhetorical practice irrelevant. Olinger's theory has promise as a theory that encompasses both ends of this continuum.

Much like Milic, Rankin (1985/2010) argued that knowledge of the conscious and unconscious aspects of style has important implications for pedagogy: "Is it enough to concentrate on those aspects of style [in the classroom] that are most accessible to conscious control—or are there ways of reaching and shaping the less conscious processes too?" (p. 248). Clarity on which and where stylistic features are *acquired* and where and when they are *learned* (Rankin, 1985/2010, p. 247) could offer guidance to pedagogy by showing what constructs are live and salient for writers as they encounter specific writing tasks and as they write to different purposes and audiences. For instance, if it is known that a student writing a business letter tends to focus on genre and appropriateness as they seek to enact the style of business writing, teachers could focus on those aspects of the writing task by asking students to reflect on their perceptions of

what is appropriate and inappropriate in terms of diction, topic selection, detail, and appeals while also covering the rhetorical and formal aspects of the business letter genre.

Psycholinguists and second language researchers Ronald Leow, Ellen Johnson, and German Zarate-Sandez (2010) urge researchers to carefully define terms such as awareness, consciousness, and unconsciousness in their research programs. They note the conflation of the terms *consciousness* with *awareness* in much second language acquisition (SLA) research. Arguing that Tomlin and Villa (1994)'s definition of awareness is virtually synonymous with consciousness, they suggest that it underlies much SLA research: "a particular state of mind in which an individual has undergone a specific subjective experience of some cognitive content or external stimulus" (Leow, Johnson, & Zarate-Sandez, 2010, p. 62). This is the definition of consciousness in operation in this study since it captures elements of consciousness relevant to this study including the notion of subjective experience, internal cognition, and external stimulus. As a dearth of internal cognitive experience given any type or set of external stimuli, unconsciousness is the absence or lack of these factors.

One challenge in researching issues of consciousness is that, while conscious aspects of style are researchable using the typical research methods employed in rhetoric-composition such as interviews, think-aloud protocols, and so forth, implicit attitudes and the role that unconscious, identity-driven factors play in terms of stylistic reception and production are very hard to identify and research. Techniques for this study have not yet even been devised in stylistic research, though other fields have developed some methods in this area. Greene and Carpenter (2011) note that "Current social psychological research has devoted substantial attention to the concept of implicit attitudes, evaluations

that may occur outside of conscious awareness, and without control or intention from the individual (e.g., Nosek, 2007)" (p. 117). Indeed, research has been done that shows the impact of narratives on implicit attitudes (Dal Cin, Gibson, Zanna, Shumate, & Fong, 2007) and self-reporting versus implicit attitudes in accessing media (Payne & Dal Cin, 2015), though the techniques used typically involve reaction time studies, retinal scans, and comparative designs that look at actions versus self-descriptions.

Greene and Carpenter (2011) suggest that research on implicit attitudes will necessarily require the development of advanced research techniques (p. 117). They have researched implicit attitudes cleverly by combining explicit and implicit techniques within interviews and written narratives. For instance, they asked research participants to identify their favorite characters from film clips and found that these individuals incorporated aspects of those characters into their own written self-descriptions, asked for later. Greene and Carpenter (2011) also note that reaction time studies and brain imaging have been used in researching implicit attitudes toward literary texts (pp. 117-118).

A limited amount of research on implicit attitudes affecting style has been done in rhetoric-composition. Olinger (2016b) analyzed nonverbal aspects of discussions she had with writers on their texts as a way to explore latent aspects of those writers' processes. This multimodal analysis of embodied factors such as gestures and paralinguistic cues from a person's speech compared to written text exposes the action/description dichotomy that other research methods on implicit attitudes exposes. This advance in researching style is important, but the fact that no other research of this type can be cited in this connection shows that further development of methods geared toward

identification and measurement of the impact of implicit and explicit factors affecting readers and writers is needed.

This study addresses some of this lack by bringing more methods to bear on stylistic study. A distinction regarding methods for researching implicit and explicit awareness is important to make at this juncture, however. Leow, Johnson, and Zarate-Sandez (2010) helpfully distinguish between methods focusing on *construction* or *reconstruction* of mental processes as a way to investigate implicit and explicit awareness. A construction-aimed method may look at awareness in the moment or act of creation or testing (i.e., eye tracking, reaction time studies, live reporting) whereas reconstruction methods are reflective, after-the-fact methods (i.e., questionnaires, embedded word recall/questioning, interviews, grammaticality judgment tasks, recognition and memory tests, cued recalls) (p. 67). This study incorporates both *construction* and *reconstruction* methods.

Finally, developing research on the conscious and unconscious aspects of style is important in my estimation since it can offer insight into the processes at work in production and reception of style, which in turn may support pedagogy. Rankin (1985/2010) asks, "Is it enough to concentrate on those aspects of style that are most accessible to conscious control—or are there ways of reaching and shaping the less conscious processes too?" (p. 248). Many of the historic controversies around the teaching of style seem to come down to this issue of what can be taught, what should be taught, and how style is imbibed, reproduced, and altered. Donald Murray's well-known "read to write" approach suggests something known about much stylistically-interesting

writing—it often derives from and can reflect the reading that an author is doing[27]. This is the basic lesson of imitation—the writer's use of language begins to mirror the models put in place for imitation. However, much sentence-level pedagogy operates under dualistic assumptions that facility with style is achieved through conscious learning processes that expose the parts of compositions to analysis and ultimately integration into students' compositions. Clarifying when, where, why, how, and to what extent style proceeds on implicit or explicit factors for writers and readers will help in augmenting the methods for use in style pedagogy.

The Importance of Salience

An important way to analyze and present the findings of this study in terms of the impact of conscious and subconscious constructs on issues of production and reception is by ordering those items in terms of salience, a standard term used in sociolinguistics for the identity, whether personal or group, "activated and oriented to by the immediate context of [an] interaction" for a communicator in a communication situation (Meyerhoff, 2007, p. 71). According to social identity theory, communicators test boundaries and enact identities in communication situations through a complicated set of verbal and paralinguistic cues that show convergence and divergence from/with groups and chosen identities. Communicators often enact these identities with linguistic and other social cues that they take to be salient for invoking a chosen identity and stance.

The notions of *attunement* and *accommodation* are central concepts within sociolinguistics that relate speakers, contexts, and audiences through the lens of salience.

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[27] One current first year composition textbook, for instance, Jean Wyrick's (2017) *Steps to Writing Well*, features a chapter entitled, "The Reading-Writing Connection," and invites fledgling college writers to become readers since, as the chapter's first line states, "It's hardly surprising that good readers often become good writers themselves" (p. 183).

Noted sociolinguist Howard Giles brought these ideas to awareness within sociolinguistics when he complicated Labov's findings on the effects of topic on style by suggesting that speakers actually orient to the most salient aspects of any communication context in constructing their communication style (Christian, Gadfield, Giles, & Taylor, 1976, p. 281) rather than just topic or any other single factor. The idea that no one construct affecting communication is always most dominant but is instead context- and person-dependent is a valuable insight for this study. By relating the constructs in the study in terms of salience, the study of style within rhetoric-composition can begin to construct a finer-grained understanding of style and its impulses.

Sociolinguist Peter Kortmann Rácz (2013) has contributed to clarifying the idea of salience within sociolinguistics by distinguishing between two types: cognitive and social: "Cognitive salience is the objective property of linguistic variation that makes it noticeable to the speaker. Social salience is the whole bundle of the variation along with the attitudes, cultural stereotypes, and social values associated with it" (p. 1). For purposes of research, a researcher might ask communicators about aspects of cognitive salience as well as the socially salient attitudes, stereotypes, values, and roles that the cognitively salient linguistic variation aims at. Looking at salience in this way is useful for exploring conscious aspects of stylistic variation in writing since it sees salience both in terms of linguistic choice (i.e., style) and social settings and roles, and it attempts to link the two. This dovetails effectively with seeing writing as social performance. The identification of what specific style markers emerge from and trigger for writers and readers in a way that shows their relationships and ordering would be an important area of advancement for rhetoric-composition in relation to style.

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Conclusion

The Construct Model of the Sociocultural Theory of Style offers a way to relate the sociocultural theory of style to traditional terms within rhetoric-composition (*kairos*, footing, voice, rhetorical distance, etc.), integrating past and present discussions on style into a model that reflects current understandings of style as co-constructed and dynamic rather than a fixed feature of texts. In this model, writers, readers, texts, language, and contexts all find treatment rather than the traditional focus on writers, texts, and language alone. The eight constructs under consideration in this study (*biography*, *appropriateness*, *language ideology*, *language/style*, *genre*, *audience*, *topic*, and *embodiment/materiality*) are drawn from current and ongoing discussions in rhetoric-composition and allied fields. Though they do not represent all that is discussed in scholarship related to implicit and explicit forces that affect language use, they do represent a relevant cross-section of important discussions on issues related prominently to stylistic variation. My hope is that the Construct Model relates these various terms and discussions in a way that honors and faithfully reflects these ideas within an emergent theory of style. The validity of the model can only be ascertained through research and critical reflection to which this discussion now turns.

CHAPTER 3

RESEARCH METHODS

Introduction

The purpose of this research study is to explore the constructs that impact

production and reception of writing style. Olinger's sociocultural theory of style depicts

writer, text, audience, genre, and context as dynamically related. Yet currently, except in

broad outline, little is known about how these relationships intertwine and interact.

Armed with a deeper knowledge of the forces impacting writing style, researchers,

teachers, and writers themselves can understand better how style is created and received.

The Construct Model of the Sociocultural Theory of Style is an attempt to relate the core

concepts of the sociocultural theory of style to one another, connect the theory to terms

and concepts within rhetoric-composition related to production and reception of style,

and expand on the theory itself by developing the constructs that impact the production

and reception of style.

To explore this model, the following research questions are addressed:

1. What descriptive power does a sociocultural theory of style bring to the

   production and reception of written style?

2. What constructs are operant as writers and audiences approach the task of

   encoding and decoding literary style?

   o How do these constructs relate to one another in terms of priority,

     symbiotic relation, and negotiation?

3. How do the constructs under examination relate to one another in terms of

   conscious and unconscious use by writers and audiences?

In this chapter, I explain and support the methods I used to answer these questions. I reiterate the research questions and then detail the research sample of this study, outline the study's research design, survey data collection methods, cover ethical considerations that this research study raises, comment on my position as researcher in this study, comment on issues of trustworthiness, note limitations, and summarize key points from this chapter.

Research Design Rationale

This study employs a qualitative methodology for several key reasons. Remler and Van Ryzin (2015) note that much social science research investigates "intangible constructs such as perceptions, emotions, and attitudes—constructs that are essentially qualitative in lived experience" (p. 83). As a type of "lived experience," perceptions of style from the perspectives of authors (production) and readers (reception) call for this approach. Also, as Olinger argues (2014), the methods of qualitative research are created with a recognition that "human behavior that seems uniform is actually a complex and perspectival human construction" (p. 58). This is especially true of a theory of style that recognizes and centralizes the qualitative aspect of the creation and reception of style. Olinger's theory, if descriptive, will effectively account for change, contradiction, and an array of seemingly conflicting accounts of style. A qualitative methodology can capture and express these contradictions without imposing an external order upon them. In fact, if the sociocultural theory of style is sound, the researcher may even expect to find change in the representation of style by the same person with the same document over a period of time since the person is essentially different selves of the same person.

Qualitative research also fits this research study since it is "particularly useful and well-suited to discovering important variables and relationships, to generating theory and models, particularly uncovering possible causes and causal mechanisms" (Remler & Van Ryzin, 2015, p. 60). The search for constructs affecting stylistic production and reception is the search for what qualitative research is geared to find. In comparison to quantitative research that often seeks to isolate single causes and measure their effects across a spectrum of individuals, groups, situations, or iterations, qualitative research "often aims to come up with a unique configuration of diverse influences or causes at work in a particular setting (Ragin, 2008)" (Remler & Van Ryzin, 2015, p. 62). The result is an "ideographic explanation" that arranges and prioritizes the factors that affect particular behavior or phenomena (Remler & Van Ryzin, 2015, p. 62). Since creation of a better understanding of the constructs of literary style and their relationships is the goal of this study, this research tradition fits this study well.

Within the broad scope of qualitative methods, there are many schools of thought (ethnography, grounded theory, hermeneutics, narratology, phenomenology, semiotics) and methodologies (case studies, focus groups, participant observation, interviews). This research study, based on a social constructionist model, employs an ethnography of communication-inspired approach using case studies. With each case study, interviews and document review are implemented. Developed by linguistic anthropologist Dell Hymes, the ethnography of communication approach aims at language use and understandings "conventionally associated with sociocultural events and activities typical of particular sociocultural groups and contexts" (Hall, 2012, p. 229). One such group, or what Bishop (1999) calls in this context, a "convened culture" (p. 3), is writers and

readers, and their construction of and responses to the idiosyncratic qualities of specific written texts are the centerpiece of this study. This approach fits this study in the way it sees communication as representative of social contexts and constitutive of many social realities—a viewpoint in line with Olinger's sociocultural theory.

This study, however, is "inspired" by an ethnology of communication approach and is not an ethnographic study in itself. I am not a "participant-observer" in that I am not embedded in the workplace and am not working directly with technical writers, the chosen participant pool of this study, as a technical writer myself. So the "ethnographic" terminology I employ in this study might confuse the reader since my purpose is not a more accurate or wide-ranging understanding of the literate practices of technical writers as a group. I am not seeking a fuller description of technical writers as stylists. Rather, my goal is to generalize from findings of the participant pool of technical writers in this study to the larger population of readers and writers since the sociocultural theory of style speaks to this wider range of style as a phenomenon. In this ethnographically-inspired design, I examine the production and reception of writing style among technical writers, a "convened culture" (Walsh, 2004, p. 233) of readers/writers, to see if and to what extent the sociocultural theory of style pictures their reading/writing perceptions in relation to style.

I chose technical writers in part because of the communication values and practices that cohere around that profession as a whole, values and practices that are easier to identify and isolate than some other communities of readers and writers that one could name. I describe the literate practices and values of modern business and technical writing in its corporate and organizational milieu later in this study (see this discussion in

Chapter 5) and compare this characterization to how technical writers read and construct writing style in this study. I use this model to comment on the applicability of the sociocultural theory of style.

Finally, since this study begins with a theory in mind, it necessitates a methodological approach that accounts for that pre-existing theory. In a grounded theory approach, the researcher lets the data suggest the theory rather than using data to prove an *a priori* theory (Glaser & Strauss, 1967). An ethnography of communication approach, on the other hand, does not militate against holding a theory in mind as one approaches data collection. Moss (1992) suggests that an ethnographic researcher in composition should consider and embrace the theoretical perspective brought into the study by the researcher, it being impossible to deny having a theoretical orientation, while also seeking the open-mindedness and flexibility with data and data collection that are hallmarks of good research practices (pp. 157-158).

The design of ethnographic research is of particular importance to ensure reliability and validity. Wendy Bishop was a strong proponent and practitioner of ethnographic approaches in writing research, and her comments on ethnographic research and data analysis seem particularly apropos and are worth quoting at length:

> Ethnographic inquiry can be misapplied and misconceived. Too often, research using a single ethnographic technique (case study, life history interviewing, participant observation, and so on) is claimed as ethnography, resulting in what Ray Rist called "blitzkrieg ethnography." To avoid misapplication, ethnographic data analysis must derive its reliability and validity from a fully developed scheme of data collection, data reduction, data display, and conclusion

drawing/verification which takes place recursively, with steps being repeated and refined until conclusions may safely be presented. Additionally, data is collected by more than one method (interviews, direct observation, artifacts) in order to assure triangulation, verification from multiple sources, while research reports rely on the "thick description" described and utilized by Geertz. (Bishop, 1999, p. 13)

Following Bishop's injunction to triangulate data sources, this study uses case studies where interviews and document review are implemented, followed by analysis and presentation of findings. Triangulation is critical in this approach since analysis is to be "rich in the context of the case or setting in which the case presents itself" (Bloomberg & Volpe, 2016, p. 46). Case studies look at "bounded social phenomena" through extensive engagement with participants using document review, observation, and interviews, and member checks, among other methods (Bloomberg & Volpe, 2016, p. 46). I employ member checks to cast study participants as equal participants with me as the researcher (Adriansen & Madsen, 2014; Bell, 2013). I discuss each of the elements related to this study's research design below.

Overview of Research Design

With the approval of Indiana University of Pennsylvania's Institutional Review Board (IRB), I studied a population of technical writers through a qualitative methodology of case studies. Brian Ray (2015) calls for a research program in stylistic research that asks "to what extent writers' own attitudes and behaviors confirm, contradict, or question our current theories and pedagogies [of style]" (p. 154). Indeed, we must go to the writers themselves to ground our theories. Remler and Van Ryzin

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(2015) note that since case studies are often small-n studies, the research participants

must be chosen for careful reasons, one of which may be for reasons of "theoretically

interesting variation" (p. 63). In this method of choice, the researcher selects participants

to represent the various aspects of the research questions under examination. In this

study, I chose to interview technical writers as a distinct group. Their idiosyncratic

approach to writing style, which I discuss in Chapter 5, evidenced a deep well of

understandings, ideals, and practices related to writing style from which to draw

discussion and conclusions. One of my dissertation committee members, Dr. Gian

Pagnucci, himself a former technical writer, suggested this group of writers to study on

the topic of writing style, a trenchant suggestion since I found in technical writers a group

of writers with clear and definite practices and ideas related to writing style.

Research Sample

The participants in this study were identified through convenience sampling with

a personal acquaintance (one participant), through snowball sampling as the news of the

study spread to some extent among professional technical writers (two participants), and

through their participation (seventeen participants) in the Academic Special Interest

Group (SIG) in the Society for Technical Communication (STC), an organization and

sub-group to which I belong. The Society for Technical Communication is the largest

organization in the field of English-language professional communication, offering

educational opportunities, networking opportunities both online and at regional and

national conferences, and certification. In addition, the STC offers "special interest

groups" in a variety of areas, one of which is the "Academic" special interest group. All

participants were selectively sampled by the fact that they hold a minimum bachelor's

degree, often in the humanities. Such individuals have familiarity with writing and its conventions and often have a fairly rich metacognitive awareness of their own writing process. Given the long discussions and thorough interaction needed to grasp the impacts of the various constructs on the construction of style among the writers and the fact that I conducted two interviews per participant, I aimed for a lower number of participants, ultimately ending with an N of twenty participants. For purposes of comparison, in her dissertation, Olinger (2014) worked with twenty participants (pp. 61-62) in her research on academic writing styles. Some of her participants only participated in small parts of her study, however. She had eight focal groups with 18 primary and secondary participants representing the various academic disciplines she researched (p. 64).

Warren (2002) notes that in ethnographic studies, participants may be chosen for a variety of reasons, their access to information, their membership in a targeted population, or their "communicative competence," among other reasons (p. 88). Such is the case in this study where participants are chosen for their already-demonstrated writing skill and awareness. The aim in identifying this participant population is to limit readings of style that are constructed due to inaccurate reading rather than the constructs under investigation. Another aim is to capture a variety of demographic difference in participants including differences in age, gender, role, experience, organizational/business type, and region of the United States and world, as much as is possible with a research sample of twenty participants.

In Table 2, I list the participants' names, each writer's current professional role, the type of writing each person specializes in, the writer's experience level in that genre or mode of writing, and how I met each person. See the bottom of the table for

abbreviation conventions. In recruitment of participants, the need to attend at least two

recorded interviews, review written samples I provided, and the offer to communicate in

writing in response to my analysis of their texts and interviews (member checks) was

communicated. Writing participants were also notified of benefits that might accrue

through participation in this study including dialogue on their writing style with a

professional style researcher and monetary compensation for their time, which consisted

of a $25 Visa gift card for each of the two interviews (see Appendix A: Informed Consent

Form for Research Participants).

Table 2

List of Research Participants

Participant	Profession/Current Role(s)	Education/Professional Experience	How We Met
Jim Wilson*	Department Head of Technical Publications at a mid-size manufacturing facility in the Midwest	BA, journalism; twenty-seven years in TC	Met through a mutual acquaintance, a part-time faculty member at the institution where I teach
Sue Ann Hartmann*	Senior Technical Writer for a large academic hospital system in the Midwest	BA in communications-journalism; technical communication business owner for nineteen years; occasional faculty member teaching writing; twenty-three years in TC	Discussion forum of STC Academic SIG

Participant	Profession/Current Role(s)	Education/Professional Experience	How We Met
McKenzie Williams*	Analyst; professional writer and researcher in a consulting firm for the aerospace industry in the eastern US	BA in English: Writing and Rhetoric; master's degree in professional writing and rhetoric from a university in the eastern US; two and one-half years in TC	Discussion forum of STC Academic SIG
Eva Miranda	Technical Writer in the software industry in the western US	BA in technical communication at a university in the western US; one year in TC	Discussion forum of STC Academic SIG
Phyllis Walsh*	Freelance technical writer in the southeastern US	BSBA from a university in the southeastern US; CPTC; 40+ years in TC	Discussion forum of STC Academic SIG
William Loy Pearce	Quality Manager in the energy industry in the southwestern US	BS in industrial technology; MS in quality and engineering management student; thirteen tears in TC	Discussion forum of STC Academic SIG
Cynthia Vann*	Technical Communicator at an architecture, engineering, and construction consulting firm in the Midwest	BS in education from a private Midwestern college; nine years in TC	Discussion forum of STC Academic SIG
Marcy Sager*	Technical Writer/Business Analyst at a software manufacturer in the Midwest	BS in linguistics; MS in linguistics; twenty-three years in TC	Discussion forum of STC Academic SIG
Dina Lopez	Graduate Assistant for the Texas Tech K-12 Unit; MS candidate in Technical Communication at Texas Tech University	BA in Spanish and French; ARGO Data Research Corporation Technical Writer intern	Discussion forum of STC Academic SIG

Participant	Profession/Current Role(s)	Education/Professional Experience	How We Met
Vincent Tomaino	DWSRF Branch Head, Division of Water Infrastructure, Department of Environmental Quality, North Carolina	BS in physics; MS in meteorology; twenty-six years in environmental engineering	Heard about the study from a friend; volunteered via email
Amruta Ranade	Senior Technical Writer at a startup firm in the eastern US	BA in electronics engineering; MS in technical communication from a Midwestern university; eight years in TC	Discussion forum of STC Academic SIG
Amira Patel*	Senior Analyst I/ Documentation Editor at a healthcare software company in the eastern US	BA in English, ESL; MS in professional writing from a university in the Midwest; two years in TC	Heard about the study from a friend; volunteered via email
Nick Peterman*	Technical Writer II in engineering technical writing at a company in the American South	BA in English Literature; MA in English in technical and professional writing; eight years in TC	Discussion forum of STC Academic SIG
Marsha Patterson*	Technical Writer at a startup software company in a metropolitan area in the eastern US	BS in engineering; MS in technical communication from a university in the eastern US; four years in TC	Discussion forum of STC Academic SIG
Kelly Smith	Senior Technical Writer at a manufacturer in the upper Midwest	BA in English; MS in information technology; MS in technical communication management student; twenty years in TC	Discussion forum of STC Academic SIG
Ashley Fields	Senior Technical Writer at a manufacturing facility in the southern US	Bachelor's degrees in English/creative writing and TESL; CPTC; five years in TC	Discussion forum of STC Academic SIG

Participant	Profession/Current Role(s)	Education/Professional Experience	How We Met
Deborah Hemstreet	English Editor and Writer to the Administration for an Israeli medical journal	LPN; BA in special education; MS in technical communication from a British university; 30 years in TC	Discussion forum of STC Academic SIG
Jerry Grohovsky	Technical writer and technical communication business owner	BA in journalism and mass communication; 40+ years in TC	Discussion forum of STC Academic SIG
Susan Davis*	Technical Editor in the aerospace industry in the western US	Bachelor's in English literature from a university in the western US; MS in communication from a university in the eastern US; twenty-three years in TC	Discussion forum of STC Academic SIG
Paula Robertson	Technical Editor in the curriculum publishing field; formerly Freelance Technical Editor, Writer, Designer in the southwestern US	BA in fine arts; STC Associate Fellow; twenty-three years in TC	Discussion forum of STC Academic SIG

*indicates a pseudonym

**BA, Bachelor of Arts; BS, Bachelor of Science; MS, Master of Science; BSBA, Bachelor of Science in Business Administration; CPTC, Certified Professional Technical Communicator; ESL, English as a Second Language; LPN, Licensed Practical Nurse; SIG, Special Interest Group; STC, Society for Technical Communication; TC, Technical Communication; TESL, Teaching English as a Second Language; US, United States

Interviews

I conducted two interviews with each participant using two interview approaches: "literacy history" and "discourse-based" interviews, the same ones used by Olinger

(2014) in her dissertation on academic writing style. For all interviews, I used sound technology to capture the interview with the permission of the interviewee. Specifically, I used the ACR Pro cell phone app to record calls and then exported the phone calls to the Otter transcription app from which I exported the text files to my email where I downloaded each file and began the process of transcribing each interview using a transcription pedal.

The literacy history interview is important in order to understand each participant's experiences with language, reading, and writing (Vieira, 2016; Brandt, 2001; Barton & Hamilton, 1998). See Appendix C: Literacy History Interview Questions for the types of questions asked in this interview. This interview established background knowledge of each writer's literacy history and general approach to writing style in the workplace. This interview type is geared toward ascertaining aspects of each writer's identity, history, and circumstances that impinge on their creation and reception of writing style. The constructs especially under consideration in this interview included *biography*, *language ideology*, and *embodiment/materiality*.

To examine constructs such as *audience*, *genre*, *language/style*, *appropriateness*, *topic*, and *embodiment/materiality*, I needed an interview mode that focused on the textual level. Discourse-based interviewing excels at centering discussion around texts. Table 3 shows the constructs most under consideration in the two interviewing modes. Some constructs such as *language ideology* and *embodiment/materiality* embed themselves in almost any discussion of writing and thus are under consideration in each interview mode. One might argue that much the same could be said for any of the other constructs as well. For instance, a writer does not leave ideas of *appropriateness* and

genre behind when talking about writing in general (literacy history) or in particular (discourse-based). However, the questions I asked reflected focus on the various constructs noted below in each interview as a matter of degree or emphasis. My concern ultimately was adequate coverage of the various constructs over the course of the two-interview sequence given the documents I chose to review and the questions I raised.

Table 3

Interview Modes and Constructs

Literacy history interview	Discourse-based interview
biography	
language ideology	language ideology
	audience
embodiment/materiality	embodiment/materiality
	genre
	language/style
	appropriateness
	topic

At the end of the literacy history interview, I asked each participant to agree to the planned second, discourse-based interview for which I provided the texts to review.

In the initial planning stages of this study, I hoped to review documents created by the participants themselves, but even with my offer to sign non-disclosure agreements and offer full rights of editing and revision to the participant for whatever documents would be used in the study, no one that I contacted over a three-month period in the summer of 2018 would agree to provide documents to me or participate in the study. One potential participant notified me that this was the real sticking point to participation in the study. Due to workplace prohibitions related to sharing documents, requirements very familiar to technical writers, potential participants demurred when offered the chance to

participate in the study. This fact forced me to re-design the study to offer documents for the participants to review rather than gathering participant-created documents.

This design does not allow for the same dynamism and fresh, personal writer's perspective in the discourse-based interview yet, on reflection, it did position each participant as a reader (rather than a writer) of the provided texts, which is apropos for a study looking at Olinger's sociocultural theory since it covers both production and reception of writing style. Research on readers' approaches to style has already been undertaken in applied linguistics (Egbert, 2014), yet not with this particular method or design, so I felt this design was warranted. However, even though the participants in the study are positioned mainly as readers and not writers, I felt I could elicit responses on each writer's approach to specific sentence- and word-level decisions given the "What would you do with this sentence?" approach of discourse-based interviewing, thus capturing responses to the texts from participants as writers as well as readers.

Since there was a time gap between interviews, I was often able to transcribe the first interview in the interim, allowing for a "reconstruction" aspect in the study design, in Leow, Johnson, and Zarate-Sandez's terms (2010). Some participants enunciated unique perspectives, and I was able to tailor the questions in the discourse-based interview given those responses as the findings in Chapter 4 show where I asked questions of some participants and not others.

Discourse-based interviewing, developed by Odell, Goswami, & Herrington (1983) explores conscious and sometimes latent aspects of writers' relations to texts. In Prior's (2004) formulation, the researcher "(1) present[s] one or more alternatives for some passage(s) of a text to the writer (or possibly someone else), (2) asking if she would

accept the alternative(s), and (3) asking her to explain why or why not" (p. 189). This

method is tailor-made for stylistic study in its fitness for looking at linguistic deviation

and dialogue on why changes are made or not made. Questions related to the constructs

under investigation elucidate the *what* and *why* that are the focus of stylistic investigation

in this study. Warren (2002) notes that in qualitative interviewing, the purpose is to

derive interpretations rather than facts or absolutes (p. 83). This reminder is pertinent

since as interviewer/reader/researcher, my own participation can be viewed as a weakness

of the research design if unaccounted for, though in an ethnography of communication-

inspired approach, the researcher is assured a place since the aim is not to access a pure

perception of the reader or writer, but rather for the perceptions of all participants to be

shared, making for richer qualitative accounting of perspectives.

In the discourse-based interview, I employed two texts. The first is an owner's

manual/instructional document from the Thule Sweden corporation for a product called

the Thule Stacker 830, a detachable rack that holds canoes and kayaks atop a vehicle (see

Appendix D). The second document I employed is a governmental report from the

Federal Aviation Administration's Office of Aerospace Medicine. That document details

findings and trends from a decade-long study on the cannabinoid concentrations found in

blood and tissue extracted postmortem from pilots involved in aviation fatalities (see

Appendix E).

These two documents were chosen for a couple reasons. First, in regard to the

Thule Stacker 830 instructions, an instructional document is a standard technical writing

genre and thus, even if some of the technical writers I interviewed worked mostly with

other genres, I could be assured that they were familiar with this genre and its style, thus

grounding our conversation in their experience as a technical communicator. Also, the fact of its having been produced by a Swedish company and offering translation within the document into English, French, and Spanish, the document afforded opportunity to discuss issues of international audiences, translation, and presentation of languages that allowed me to drill down to issues of language ideology. Further, the document features a mix of customary practices in writing instructional documents in an American setting such as verbal imperatives for steps and presentation of warranty, use, and limitation sections familiar to most technical writers. Yet, at the same time, the document violates category distinctions between notes, cautions, dangers, and warnings, all standard fare in technical documentation, that would concern most technical writers familiar with the litigious American market, a fact compounded by the observation that the document provides no clear safety warnings on the use of the product and confuses a warning with a product caution on page five. These facts, coupled with my own familiarity with the product since I own it personally, gave me ample assurance that I would be able to sustain meaningful and specific dialogue with professional writers on it.

I chose the FAA report for different reasons. Mainly, I chose it as a site of discussion because of its unfamiliarity in genre to many technical writers. The document is written in a standard IMRAD form familiar to academic writers and researchers, so I felt its genre would provoke discussion on issues of *audience*, *appropriateness*, *language/style*, *genre*, and *topic*, partly due to its separation in genre, style, and tone from technical documentation. With these two documents, I was able to examine every construct in the study that I theorized in Chapter 2, which is ultimately the main reason I

chose them. I conducted all of the interviews for this study in the summer and fall of 2018.

Analytic Memos

After interviewing and the transcription of those interviews was complete, I wrote analytic memos. In this analytic memo stage, I followed Saldana's (2016) advice on analytic memo writing methodology:

> The purposes of analytic memo writing are to document and reflect on: your coding processes and coding choices; how the process of inquiry is taking shape; and the emergent patterns, categories, and sub-categories, themes, and concepts in your data—all possibly leading toward theory. (p. 41)

The process of analytic memo writing resulted in forty memos, one for each interview for each participant. I wrote reflections in each memo at least twice: once after I had transcribed each interview and once after first cycle coding of each interview. My goal was to create a bank where I could deposit my reflections on each interview throughout the research and analysis phases of the study. After I had transcribed each interview, I listened to it again while I recorded reflections in the memo. I wanted to hear the interview with all of its tonal nuance and conversational flow on full display in order to ground my comments rather than reading the transcript to create those thoughts and impressions. Also, separating out the times and locations where I went back to each analytic memo allowed me to capture ideas and impressions from various places within the study and gave me a site to examine and compare my own growing impressions of each participant's ideas. I found this a valuable method for capturing the qualitative emphases of each interview.

I felt it was important to capture these qualitative aspects of the interviews since Olinger's own research has made strides in this direction. In my view, she made a significant contribution to style research methodology in her dissertation (Olinger, 2014b) by videotaping some of her participant interviews and then offering and interpreting still images from selected portions in order to analyze nonverbal and paralinguistic aspects of writers' discussions surrounding style, including what she terms "gestural representations of style metaphors" (p. 83). Though I did not video-record participants in this study and exegete their actions, I still sought to capture and reflect on paralinguistic and other nonverbal aspects of the interviews by drilling down to a level of analysis that captures those elements by writing analytic memos in a manner that recognizes and is sensitive to qualitative aspects of each participant's responses.

First Cycle Coding

I faced challenges immediately when embarking on the coding process for this study since I had to assume a specific orientation to the data since the sociocultural theory of style is an emergent theory with a unique approach to texts, one that is less focused on texts themselves rather than representations and perceptions of those texts. Coding in this mode is fraught with challenges given the set of research methods currently available for stylistic research. For instance, discourse-based interviewing, for all of its virtues, can easily treat the text as an artifact and the conversation surrounding it as unaffected by the norms of social interaction with its expectations of convergence, turntaking, and social positioning. But style in a sociocultural model is seen not in terms of its textual or linguistic properties alone but mainly in terms of the writer's and reader's

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self-in-becoming, a cipher by which all participants create, express, modify, and nuance various social positionings.

This study, reflecting the theory that inspires it, focuses on the writer/reader whose perceptions are of more interest in the study than the text itself. In this connection, Olinger (2014b), when discussing her own dissertation research methods, noted, "I had to remind myself . . . that my study was not a linguistic analysis of disciplinary styles (e.g., Biber, 2006; Hyland, 2004) but an investigation of writers' *understandings* of style" (p. 77, italics in original). The promise of this form of analysis is the uncovering of an emic perspective that aligns the researcher more closely to the mindset, orientation, values, and goals of participants. As such, in my identification, classification, and representation of the codes in the study, I attempted to use descriptive codes for participants' considerations, thoughts, reflections, ideas, contentions, and perceptions rather than linguistic categories and terms. Thus, I coded for "concision" rather than "sentence of less than ten words," for example.

I coded all interviews using *NVivo 12* coding software. In the first cycle, I used descriptive coding in which the researcher uses a simple word or phrase to capture the phenomena observed in interviews (Saldana, 2013, pp. 87-91). I built on this pre-existent list of codes identified in Chapter 2 by being open to coding for new constructs affecting writing style. In this dissertation, I italicize the constructs discussed in this study as a means to clarify to the reader where I am referring to the code under consideration *as a code* rather than *as a topic of discussion in some other context*. For instance, I italicize *co-construction* when I refer to it as a coded item in this study but not when discussing Olinger's use of that term in her theory.

After identifying new codes that did not easily fit into my pre-existent eight codes, I went back and re-coded previously coded interviews where I had not coded for the new code, attempting to ensure that I had coded each previous interview accurately for all of the first cycle codes. For instance, this happened with the code of *technology*, which I had not coded for initially. During our first interview, Amira Patel introduced me to DITA data structuring and informed me of its widespread impact in technical writing. After that interview, I researched DITA and attended a DITA webinar through the Society for Technical Communication on November 13, 2018 (Pryatz-Nadworny, 2018), where I learned about how DITA data structuring affects the style of technical documentation today (see the discussion about DITA in Chapter 4). Having learned of technology's impact on technical writing style as I coded Patel's interview, I added the code for *technology* and re-coded all previous interviews for the new code.

This same process happened with several codes, resulting in a beneficial, iterative process that, though time-consuming, familiarized me deeply with the interviews and codes in the study. Other emergent codes during first cycle coding included *accuracy*, *clarity*, *concision*, *correctness*, *fluency*, *simplicity*, *tone*, *purpose*, *time-deadline*, *time-shelf life*, *legal/regulatory considerations*, *cost*, *co-construction*, *audience invoked*, *purpose*, *international/translation considerations*, *reader's state of mind*, *writer*, and *safety*. See Appendix F: Codebook for descriptions of each code, which I exported from *NVivo 12* when coding was complete. The initial list of eight constructs had expanded significantly, though I followed Creswell & Poth's (2018) admonition to practice "lean coding" wherein I coded for a new code only when it became apparent that not to do so would constrict the descriptive power of the codes within the study. I began with eight

codes, a little more than Creswell & Poth's (2018) recommended five to six to begin a study (p. 190), and I ended with twenty-eight codes, within the range of Creswell & Poth's (2018) recommended twenty-five to thirty for a single qualitative study (p. 190). Figure 6 shows the expansion of codes from before and after first cycle coding.

Before first cycle coding	After first cycle coding
*audience**	*audience* *accuracy legal/regulatory considerations*
*genre** ⇨	*demographic factors* *clarity* *cost*
*biography**	*biography* *concision* *co-construction*
*language ideology** ⇨	*language ideology* *correctness audience invoked*
*language/style**	*language/style* *international/translation considerations*
*topic** ⇨	*genre* *fluency* *simplicity* *writer*
*embodiment/materiality**	*topic* *reader's state of mind* *tone* *purpose*
*appropriateness** ⇨	*embodiment/materiality* *safety* *time-deadline*
	appropriateness *time-shelf life* *technology*

*one of the original eight constructs theorized in Chapter 2

Figure 6. First cycle coding, before and after.

Themeing the Data

After identifying the final list of codes, I began the process of "themeing" the data, using Saldana's (2013) term. A "theme" is an "*outcome* of coding, categorization, and analytic reflection" in Saldana's terms (p. 175, italics in original). Creswell and Poth

(2018) define themes as "broad units of information that consist of several codes aggregated to form a common idea" (p. 194). This process of themeing (which involved some second cycle coding as I explain below) crystallized the list of twenty-eight codes I had identified through first cycle coding to the six findings of this study. Saldana (2013) depicts heuristic methods for the researcher to categorize qualitative data by identifying relationships among codes, including superordinate and subordinate relationships, taxonomic relationships, hierarchical relationships, overlapping relationships, sequentially-ordered and concurrent relationships, domino effect relationships, and network relationships (pp. 250-252). I employed a mix of these methods.

I began themeing by reviewing the analytic memos I had constructed for each interview comparing those with a frequency list of codes in *NVivo*, looking for relationships among the codes. Both Creswell and Poth (2018, p. 186) and Saldana (2013, p. 252) recommend reviewing analytic memos as an important source of reflection as one makes analytic decisions about codes. When looking at specific codes, I pulled up the memos for the interviews where that code was featured as an item of discussion (see Table 3). So I reviewed the first interview memo for each participant when considering *biography*, for instance.

In the process of themeing the data, I wanted to think "abductively" in Brinkmann's (2014) terms, meaning I wanted to think about the data in the study in inductive ways but also through unique frames of references, applying heuristics that provoked insights and connections not readily apparent in typical reasoning modes (p. 724). In an abductive mode, the reasoner allows for the slipperiness of the data and the sometimes contradictory, misaligned, and confusing aspects of the data that can leak

outside the confines the researcher might impose. Bloomberg and Volpe (2016) suggest

that an abductive mode positions the researcher as a "bricoleur or craftsperson" (p. 191),

a fitting metaphor for the qualitative researcher.

I began by looking for superordinate and subordinate relationships, one of

Saldana's (2013) heuristics (p. 250), among the codes in order to reduce the codes into a

smaller number of themes. Under *audience addressed*, I grouped *demographic factors*,

reader's state of mind, *international/translation considerations*, *safety*, and

legal/regulatory considerations (I discuss this grouping in Finding 1). These five sub-

codes seemed to fit mostly clearly under the *audience addressed* code, especially in terms

of *demographic factors*, *reader's state of mind*, and *safety*. *International/translation*

considerations and *legal/regulatory considerations* could be taken in several ways,

however—as expressions of corporate needs and concerns rather than pure audience

considerations. No doubt, in some cases companies seek to communicate with wider

markets and navigate litigious environments. To adjudicate this hunch, I reviewed the

codes in second cycle coding using "focused coding" (Saldana, 2013, pp. 213-217) for

international/translation considerations and *legal/regulatory considerations*. As an area

of focus, I looked at "audience versus corporate orientation" and found an audience

orientation more dominant for the technical writers in the study, thus prompting me to

move these two constructs as sub-codes under *audience addressed*.

I also placed *genre* under *audience addressed* in a connection that I had not

anticipated. However, through some focused coding looking at the question of whether

genre stood alone as a construct or whether it embedded itself in discussions of audience

mainly, an observation I had made in analytic memos, I determined it to be a sub-code of *audience addressed*. I explain the relationship between *genre* and *audience* in Finding 1.

I identified another superordinate/subordinate relationship in the data set and brought *appropriateness*, *accuracy*, *clarity*, *concision*, *fluency*, *tone*, *correctness*, and *simplicity* as subordinate codes under a new superordinate code I call *Writing ideals* to reflect their key quality as mental representations of values that inform writing style. In turn, I located *Writing ideals* as a subordinate code under the superordinate code of *Language ideology*. Also, I located *language/style*, one of the original eight constructs theorized in the study, under *language ideology* since *language/style* never appeared as an independent construct such as when an author self-consciously plays with language and style for a fun or dramatic purpose, but rather I found it always tied to an ideological purpose in ways I discuss in Finding 3.

I identified another subordinate and superordinate relationship based in exigent, local factors implicit in the acts of writing and reception. Codes like *topic*, *purpose*, *time-deadline*, *time-shelf life*, *co-construction*, and *cost* I brought under a new heading called *Exigent factors* (Finding 6). These factors came up in the study as local, context-dependent considerations, prompting me to group them together. I encountered difficulty with the *purpose* code, questioning whether I should bring it under *Writing ideals* or *Exigent factors*, ultimately deciding on the latter after a round of focused coding where I asked whether purpose was a general consideration or whether writers tended to link it to local, specific conditions. That round of coding revealed the latter to be true in the preponderance of cases, prompting me to locate *purpose* under *Exigent factors*.

A word on the subordinate/superordinate language used for codes. My usage of those terms is not meant to imply hierarchy in terms of importance, value, degree, or presence. Rather, I use those terms for grouping purposes to "theme" a wide range of disparate data. With a subordinate/superordinate grouping, I sought to characterize the most salient qualities of related codes and by doing so I identified Finding 1 (on *audience*), Finding 3 (on *language ideology*), and Finding 6 (on *exigent factors*).

I arrived at the other findings in the study through other adbuctive forms of reasoning, in a few cases noting overlapping relationships, another of Saldana's (2013) heuristic reasoning modes. In overlapping relationships, "Some categories share particular features with others while retaining their unique properties" (p. 251). I noted this especially with the *audience invoked* construct which I treat along with *audience addressed* in Finding 1. The overlap between those two codes is too significant to treat *audience invoked* separately. Also, with the *writer*, a code that affects the reception of texts, I noted an overlap with *purpose*, so I treat that discussion under *purpose*, though, as I discuss in Finding 6 related to *Exigent factors* under *purpose*, I did not see the *writer* as always relating to *purpose*, its overlap present but not insistent enough for me to categorize it as a subordinate construct under *Exigent factors*, though it gets treated in that section. I explain my reasoning in more detail in Finding 6.

The only other heuristic I applied to the data at this stage of analysis is taxonomic reasoning. According to Saldana (2013), in taxonomic categorization, "Categories and their subcategories are grouped but without any inferred hierarchy; each category seems to have equal weight" (p. 251). I found *biography* to play such an important part in stylistic perception and production that I present it as a finding on its own (Finding 2).

Yet, issues of *embodiment/materiality* seem as pervasive, in ways that both came to

awareness on my part but also in ways I no doubt missed, provoking me to identify a

finding related to *embodiment/materiality* as well (Finding 5). *Technology* has become no

less ubiquitous as a construct affecting technical writing style as *biography* and

embodiment/materiality, prompting me to identify it as a discrete finding as well (Finding

4). I considered whether *technology* is itself a sub-code of *embodiment/materiality*, but I

decided against that categorization due to reasons I present later in the study. All told, I

identified three taxonomic relationships, each waxing and waning in relevance for any

single event of reading or writing but not existing in any direct relationship to one

another. See Figure 7 for the final list of themed codes.

After first cycle coding	Final list of themed codes
	• audience addressed (Finding 1)
	o demographic factors
	o reader's state of mind
audience addressed* accuracy	o international/translation considerations
genre* clarity cost	o safety
legal/regulatory considerations	o legal/regulatory considerations
biography* simplicity	o audience invoked
concision co-construction	o genre
	• biography (Finding 2)
	• embodiment/materiality (Finding 5)
language ideology* correctness	• exigent considerations (Finding 6)
language/style* tone	o topic
	o purpose
international/translation considerations	o time-deadline
topic* audience invoked	o time-shelf life
fluency safety	o co-construction
embodiment/materiality* purpose	o cost
	• language ideology (Finding 4)
appropriateness* time-deadline	o language/style
technology reader's state of mind	o writing ideals
	▪ accuracy
time-shelf life writer	▪ appropriateness
	▪ clarity
demographic factors	▪ concision
	▪ correctness
	▪ fluency
	▪ simplicity
	▪ tone
	• technology (Finding 5)
	• writer (discussed in Finding 6)

*one of the original eight constructs theorized in Chapter 2

Figure 7. Final list of themed codes.

Member Checks

As a final step in the research process, I offered the nearly-final dissertation draft to each participant in order to gather each person's reflection on their own contribution to the data in the study. I did this for a couple of reasons: first, to avoid "psychologizing" each participant in ways that I have not shared with that person, which constitutes the participant as a site of study. Many researchers have questioned such research relationships wherein the participant is cast in such a role and instead call for democratized research relationships where power distance is lessened and both researcher and participant(s) are cast as equal participants and co-constructors of knowledge (Adriansen & Madsen, 2014; Bell, 2013). Second, I use this design to offer an opportunity to co-construct the contribution of each participant since this is a central aspect of Olinger's sociocultural theory of style. My own analysis is only a part of this study, not necessarily more or less valuable, accurate, insightful, or suggestive to readers than the perspectives of the research participants themselves.

Consequently, I offer each participant's reflections in unedited form and make no attempt to reconcile their views with my own or challenge them. In the weeks before submitting the final draft of this dissertation, I emailed each participant and offered the chance to respond in any way they chose, or not (see Appendix G: Member Check Email). In the email, I noted that all comments under a line I had drawn in the email would be copied and pasted into an Appendix in the dissertation. See Appendix H: Participants' Responses (Member Checks). The only changes I made in the dissertation itself pertained to factual information that I had either recorded or transcribed incorrectly as pointed out by each participant.

Research Timeline

      See Figure 8 for a graphic of the research timeline. After second cycle coding, I

began writing Chapter 4 on the study findings after which I completed Chapter 5.

1. Participant recruitment	2. Literacy history interview	3. Literacy history interview transcription	4. Analytic Memo creation
5. Discourse-based interview	6. Discourse-based interview transcription	7. Analytic Memo revisited	8. First cycle coding
9. Analytic Memo revisited	10. Second cycle coding	11. Findings identified and final chapters written	12. Member checks

Figure 8. Research timeline.

Research Questions and Data Types

      All told, given the research questions in this study and its design, I was able to

cover each research question with at least two data types, thus allowing for a measure of

triangulation. Ultimately, my goal was a rich, triangulated data set from which a recursive

analysis might draw sound, valid, and reliable conclusions based on my research

questions. Table 4 shows the research questions with the data types addressing each in

the study.

Table 4

Research Questions, Data Collection, and Analysis

Research Question	Data Collected	Analysis
1. What descriptive power does a sociocultural theory of style bring to the production and reception of written style?	Literacy history interviews Discourse-based interviews Member checks	Thematic coding Member checks
2. What constructs are operant as writers and audiences approach the task of encoding and decoding literary style?	Discourse-based interviews	Thematic coding Member checks
o How do these constructs relate to one another in terms of priority, symbiotic relation, and negotiation?		
3. How do the constructs under examination relate to one another in terms of conscious and unconscious use by writers and audiences?	Literacy history interviews Discourse-based interviews Member checks	Thematic coding Member checks

The Researcher

As I conducted this study, I was and am employed as a faculty member at a two-year college in the Upper Midwest. This fact makes the findings of this study very real to me since I work with basic writers, business writers, technical writers, and academic writers in basic writing courses, in the first-year composition two-course sequence, and in technical and business writing courses. This wide range of work with writers, often in the same semester, has shown me the relevance of asking questions of style, both of audiences and writers. Much of what we as writing instructors, or more generally as consumers of writing, are looking for is the right note, the right tone, the apropos or

complicating sound and voice. As a teacher of writing, I think that we often lack understanding of the voices of student writers, or maybe more accurately, of novice writers, as they enact the styles that we teach, which are learned and thus artificial. Thus, I acknowledge that my role as a stylistic researcher might be seen as compromised, since as a teacher I value and validate, and even ward off and to an extent punish, specific linguistic styles. In my estimation, a richer understanding of style and its genesis can benefit teachers in both their teaching and also in their assessment and guidance of student writers, and as such, a deepened understanding of style is a worthy area of exploration and development for rhetoric-composition.

In this research study, I was also a participant through my interaction with the data and my part in producing and analyzing that data, especially in the document review, interview, and analysis phases of this study. Many researchers, especially from a feminist perspective, have challenged the notion and reality of a supposedly value-free, purely observational research design (Cook & Fonow, 1986; Reinharz, 1992). I take this to be a valid contention and, this in mind, I aimed to implement an ethical, open research design in which I acknowledged, reflected on, and reported on my role in the construction, manipulation, and reporting of the data, along with biases and limitations in the analysis and reporting of the research. An ethnography of communication-inspired model provokes the researcher to reflect on and disclose carefully how the knowledge and data in the study was produced. In short, since the knowledge comes from the interactions with other participants and data that are part of the study (Kaplan-Weinger & Ullman, 2015, p. 48), it is incumbent on the researcher to portray the data set compiled in the research study, a task I sought to undertake faithfully in Chapter 4.

Interviews in particular are a good example of this participatory model since they are collaborative and creative communication events that evolve their own rules and data (Ellis & Berger, 2002, p. 851). My goal was an ethically-constructed and -reported interview design wherein I participated fully and actively as a participant, not just as an interviewer seeking to initiate interviewees' responses, but as a means to share the responsibility of discussion rather than placing the onus on the interviewee to divulge and offer insights during the interview. This "reflexive dyadic interviewing" model (Ellis & Berger, 2002, pp. 853-854) informed my shaping of both the literacy history and discourse-based interviews, bringing me as a full participant into this study while also hopefully provoking me to instantiate an ethical approach toward the participants in the study.

Ethical Considerations

A key aspect of ethical research design is informed consent. Another key aspect is control of one's own information and knowledge of all risks incurred through participation in research. To address these issues, I constructed an informed consent form for all research participants using a model informed consent form from IUP's Thesis and Dissertation Manual (rev. 02/19/15) and Olinger's informed consent form for a similar study she undertook in her dissertation research (2014b, Appendix B). This document is provided in Appendix A: Informed Consent Form for Research Participants. The "What is involved" section of this document lays out the expectations of participants. It notes the expectation of two interviews. Also, all participants are notified of the right of their response in writing to my analysis of their contribution to the data in the study (member checks). Finally, I offered compensation to each participant (a couple participants could

not receive compensation due to workplace or organizational policies or did not want to receive compensation) of a $25 Visa gift card for each interview as a token of appreciation and recognition of the valuable time and insight that the participants offered within the study.

I also included a section entitled "Publication and identifiability" to clarify rights to the data created in the study and to offer the option of reducing identifiability by using pseudonyms for participants. I also noted precautions I have taken in regard to data security. Later in the document, I asked for permission/preferences related to each of these elements: preference related to usage of each participant's name and organization or business name(s) and the permission to quote and paraphrase each participant directly.

Another key aspect of the research design related to ethics has to do with how participants are treated and how their voices and the data derived from each person are represented. To design this aspect of the study ethically, I provided participants the opportunity to read my analysis of their part in the study and to respond to it in writing, which I present unedited in the study (see Appendix H). With this design, I assured each participant an equal platform to be heard in this study as the researcher. Finally, I respected each participant's voice by making no attempt to reconcile conflicting interpretations. I feel no need to have the "last word" and am content to leave it to the reader to evaluate my research design, findings, analysis, and conclusions as well as all participant views and construct their own interpretations.

Issues of Trustworthiness

This study builds a rich data set from a small-n of participants, which offers both strengths and limitations. Since triangulation of data and a rich data set is more important

to getting at the actual perceptions of the readers and writers in the study, this design makes sense for this study, but it also invites the pertinent question of the extent of the reliability and validity of this study's findings. Further development of stylistic research will clarify to what extent the findings of this study are trustworthy, valid, reliable, and representative, more so than an initial characterization of them by myself.

The methods of the study themselves also raise issues of trustworthiness since in qualitative research, the ability of the researcher to acknowledge, restrict, bracket, inject, and clarify personal positionality as researcher is a key aspect of the trustworthiness of any study so designed. My hope is that through carefully-chosen samples of participants, well-designed and -executed interviews, strategic triangulation, participant involvement through member checks, carefully-modulated data analysis, democratic offering of the views and voices of all participants, and clear data presentation, this study will meet the standards of research designed in this way. All research can likely be charged with gaps, omissions, oversights, and design flaws, but my hope is that the data especially will be presented here faithfully so that, this researcher's limitations being noted, others will be able to understand, interpret and build on what is here presented.

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Limitations and Delimitations

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As a qualitative study, this research study has some of the limitations inherent in that methodology. In Remler and Van Ryzin's (2015) words, "[Qualitative research] is not good for producing precise measurements of variables, estimating characteristics of a large population, calculating the magnitude of relationships between variables, or providing statistical evidence of a cause-effect relationship" (p. 65). As such, this study is not meant or can serve as a representation of all writers or readers. Further, the research

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methods of this study, while triangulated and reflected on recursively in the data analysis portion of the study, offer a limitation as well since the analysis portions are geared more toward conversation than the perceptions of readers and writers based on texts directly. That is, the research design places a layer of distance between the writers' and readers' direct perception of the stylistic aspects of the texts in the study, the layer of conversation with the researcher, which removes the analysis from its source to a degree. To address this limitation, I supply transcribed conversation to seek to limit the effects of this intervention.

Another limitation arises due to the interviewing model in the study. As noted above, I employed a "reflexive dyadic interviewing" model as depicted by Ellis and Berger (2002, pp. 853-854). As such, I saw myself as a full participant in this study, I did not rely on the interviewee alone to provide the data in the study but participated in a conversational give-and-take wherein I asserted, prompted, questioned, reflected, agreed, disagreed, and practiced all of the typical behaviors of a conversation between equals. Interestingly, only one participant, Vincent Tomaino, questioned this approach. I offer that interview segment below. At this point in our conversation, we were discussing the banners at the top of the steps of the Thule Stacker 830 instructional document:

JO: If you jump down to maybe step nine here, maybe I'll suggest something here. It says step nine, and so this actually just has the nine there at the top left. It doesn't . . . I, I would feel more comfortable if it had like some wording there maybe in a banner across the top that says "Tighten straps", which is what this step is about. They actually do have a banner on step six and on step one, but they didn't carry that through the rest of the

document. So, so maybe on step nine, you know, "Tighten ropes" I mean, and then you can see here. I mean, take a look at those. I mean, I don't know how you feel about that.

VT: I think that having a title for this step in addition to the number, a subject line would be helpful. I think I would find that helpful. I . . . having said this, the fact that you're leading me to say . . . I'm going to say that this is by no means a poorly described . . . I'm gonna step out of the interviewee position and say . . . this is a reasonably well-written technical document that I would have been, that I would be able to, I would expect myself to be able to follow.

JO: Sure

VT: I mean, yeah, I'm a moderately competent mechanic, and you could be leading me into things. Now, they are all things I agree with so far, but the power of suggestion, people's tendency to agree with each other . . .

JO: Now, of course, I understand . . .

VT: [unclear] married to a psychologist. I don't know how that's a thing.

JO: ((chuckles)) I understand that but this . . . and you're exactly right. This is a different type of interviewing where, where I consider myself a conversational participant. So we're, we're, we're kind of equal participants. Like, I'm not relying on you only. I'm just tossing out my ideas, getting your reaction, hearing what you have to say, right? It's not a typical interview. So I, that is a very good point, but I want to make sure you understand I'm not relying on you to provide all of the information in

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the interview. I just kind of want to bounce ideas back and forth with you, that's all.

VT: Okay

Tomaino's percipient comments show a potential flaw in the study design since, in his words, I could lead study participants to make statements they would not have made unprompted due to the conversational pressure of convergence. However, I was willing to take this risk to create a participatory, ethical study design wherein I relied on the experience and frankness of participants to state their real and definite views, a practice I viewed as central to recognizing the agency and will of others. Working with educated, experienced, and thoughtful professionals, I felt this potential flaw would be alleviated, a belief that I think was verified since various participants checked my statements, disagreed at times, offered alternate ideas, and asserted their own views freely, which the presentation of the findings in Chapter 4 will hopefully show.

In terms of delimitations, I did not bring to bear the well-documented and well-researched findings of linguists and the panoply of literary terms used in describing the stylistic features of texts since such a practice would remove the focus from the writers and readers and their perceptions of style in this study to the texts themselves. Rather, I employed terms in use in technical writing and rhetoric-composition to discuss texts.

Conclusion

In this chapter, in the Introduction and Overview section, I clarified why I chose a qualitative design based on an ethnography of communication school of thought and why I chose the triangulated design of case studies, interviews, document review, transcription, coding, and analysis. I discussed my positionality as researcher and the

research design of this study. I clarified how I chose and came to work with the

participants in this study and how I sought to design this research ethically to protect their

rights, identities, preferences, right to be informed, and right to participate fully and have

their voice heard in this study. I also discussed the data analysis aspect of this study as

well as issues of trustworthiness and limitations and delimitations of the study.

CHAPTER 4

FINDINGS

Introduction

The purpose of this study is to vet and possibly extend the sociocultural theory of style by examining the constructs that impact writing style. In Chapter 2, I discussed the main construct affecting style offered by Olinger (2014b) in the sociocultural theory of style, *language ideology*, while theorizing a non-exhaustive list of seven other constructs affecting the production and reception of writing style: *biography*, *appropriateness*, *language/style*, *audience*, *genre*, *topic*, and *embodiment/materiality*. Questions asked in the study elicited responses on each of these constructs, which after coding and analysis, yielded the six major findings I detail below:

1. Technical writers prioritize *audience* above all other constructs consciously affecting their perceptions of writing style, and they think of the *audience* as both addressed and invoked in subtle ways.

2. Personal *biography* has a powerful impact on technical writers' production and reception of writing style.

3. *Language ideology* shapes writing style both consciously and unconsciously, and it impacts technical writers through reflections on dominant language ideology, choices related to language/style, and decisions about language and presentation style based on writing ideals.

4. *Technology* impacts technical writing style in multiple ways.

5. Issues of *embodiment* and *materiality* factor into multiple constructs as technical writers encode and decode writing style.

6. The exigencies of one's specific writing situation foreground various constructs above others in the construction and reception of writing style for technical writers.

Representation of Findings

In this chapter, I define and survey each finding with examples from the participants' interviews. I employ a version of the model for presenting findings proposed in Bloomberg and Volpe (2016, p. 213). In their formulation, findings are first presented individually on a macro level in a tabular format with each key finding stated, an overview of that finding offered, and a brief general overview of representative participant perspectives, among other things (2016, p. 213). I employ a similar format. Also, since "the overall goal [of presenting findings] is to convey the story line" of the research "in an engaging, meaningful, and credible manner" (Bloomberg & Volpe, 2016, p. 212), I supplement the tabular macro-level presentation noted above with a narrative explanation of each finding with quotes and paraphrases from participants with my own summaries and comments. I deleted paralinguistic conversational markers such as mmm hmm, uh, hmm, and the like while also cutting out small verbal markers such as "Right" and "Oh" and "Yes" in many cases except where they are needed. My hope is to present each finding as concisely and as accurately as possible given the space limitations of a single dissertation chapter.

Finding 1

Table 5

Finding 1 Overview and Perspectives

Finding 1

Technical writers prioritize *audience* above all other constructs consciously affecting their perceptions of writing style, and they think of the *audience* as both addressed and invoked in subtle ways.

General Overview

Technical writers centralize audiences when producing/receiving writing style in both addressed and invoked ways. When addressing audiences, they consider issues of demographics, the reader's state of mind, international/translation considerations, safety, and legal/regulatory considerations. They prioritize *audience* over *genre* concerns generally.

Representative Participant Perspectives

My, my top consideration is always the audience. (Marsha Patterson)

So, so audience dictates everything that I do. (Amruta Ranade)

[A]udience, audience all the time, I mean, that is the primary . . . am I reaching my audience? You know, are they using it? Are they finding it usable? (Marcy Sager)

Technical writers centralize *audience* in their construction and reception of style, and they think of audiences in often subtle ways, anticipating their needs, states of mind, safety, and likely reactions to technical documents. In addition to the more traditional aspects of the concept of audience wherein writers address anticipated audiences,

sometimes technical writers show the willingness to "invoke" audiences. Ede and Lunsford's (1984) "audience addressed/audience invoked" model is evident as technical writers sometimes create styles that derive strongly from their own purposes and the exigencies of genres, audience needs, and particular circumstances and contexts. Both concepts of audience (addressed and invoked) are evident in this study while the audience as addressed is more common in typical technical writing practice. I review each of these aspects in turn.

First, technical writers centralize audience as addressed in their approach to writing almost to a fault. One question I asked in the discourse-based interview centered on what each participant felt was top of mind as they encoded their writing style. I asked this question to get a sense of comparison from each writer as to what they were most conscious of as factors affecting technical writing style. Their answers are seen below in Table 6, which is the data summary table model I employ in presenting findings in this chapter. It is modeled on the one offered in Bloomberg and Volpe (2016, Appendix T) as a model for dissertations.

Table 6

Most Impactful Factors Affecting Technical Writing Style

Most Impactful Factors Affecting Technical Writing Style?								
Participant	Audience	Legal/ Regulatory	Technology	Genre	Cost	Globalization	Method of Delivery	Documentation Legacy
1 Sue Ann Hartmann	X							
2 McKenzie Williams	X							

Most Impactful Factors Affecting Technical Writing Style?

	Participant	Audience	Legal/ Regulatory	Technology	Genre	Cost	Globalization	Method of Delivery	Documentation Legacy
3	Phyllis Walsh	X	X						
4	William Loy Pearce		X	X					
5	Cynthia Vann	X							
6	Marcy Sager	X							X
7	Dina Lopez	X							
8	Vincent Tomaino			X					
9	Amruta Ranade	X							
10	Amira Patel	X			X				
11	Nick Peterman					X			
12	Marsha Patterson	X							
13	Ashley Fields	X							
14	Deborah Hemstreet	X	X						
15	Jerry Grohovsky		X				X	X	
Total	15	11	4	2	1	1	1	1	1

I did not ask every participant every question, but rather I consulted a list of possible questions that I had written on the various constructs under consideration which I chose depending on the flow of each interview and the comments of each participant. Out of the twenty participants, I asked this question of fifteen. Eleven out of fifteen participants (73%) responded that audience considerations are paramount in technical communication, though one response on globalization could also be coded as an audience concern bringing that total to 80%. However, in this study, I implement the practice of quoting participants' exact words rather than collapsing them into existing categories unless I explain my reason for doing so.

Examples of the conversations on this issue follow. Marsha Patterson, a technical writer at a startup software company, responded:

JO: Yeah, so, you know, as you're sitting down, you're thinking, you're, you're hashing out kind of your edits and your revision, what is kind of top of mind as, you know, you're kind of encoding a style here. I mean, is it, is it the genre you think that's pushing the most? Or is that the audience? Or is it legal? Or, you know, what kind of considerations are you really . . .

MP: My, my top consideration is always the audience. That's who I always start with, and then the genre, I'm not sure how that would play into it. I mean, I would consider, I start with the audience and then legal stuff.

Patterson's response shows her definite sense of the centrality of the audience. Consistent with most other writers in the study, she did not think genre was nearly as significant a factor as the audience in her writing style.

Amruta Ranade answered in a similar vein:

JO: [W]hat is really kind of pushing you to write in a certain way, do you think?

AR: The audience

JO: Okay, right ((chuckles))

AR: Like let me elaborate. So, especially at work, I write for multiple audiences. So for each document, I need to remember which of those audiences I'm writing for so that I can provide them the information that they need. So all the decisions like how to structure the document, how long it should be, what information to put in, what information to leave

out, all those things are like driven by who's going to read the document. So, so audience dictates everything that I do.

Ranade's thorough response shows just how important audience is to technical writers. As one might expect, technical writers demonstrate a nuanced approach to audience in order to meet the demands of technical communication. Even Ranade's discussion of genre choices ("how to structure the document, how long it should be, what information to put in, what information to leave out") relates back to audience considerations.

Mary Sager, an experienced technical writer with a strong background in linguistics, responded to the question as follows:

> MS: Audience very much so and documentation legacy. It's, we've got a, we, you know, we do have, have a big legacy of stuff, and which I have to say, I am slowly modernizing but, but, you know, you have to kind of, you have to sort of approach that delicately. And then, but audience, audience all the time, I mean, that is the primary, am I reaching my audience? Uh, you know, are they using it? Are they finding it usable?

Sager argues that audience concerns must be the primary concern of technical communicators. She notes the issue of documentation legacy as well, which is more or less significant to writers as it is more or less important at the companies or organizations where they work. A company's "documentation legacy" may be seen as itself a form of audience address as organizations seek to standardize their approach to readers both internal and external. Marcy Sager and Jim Wilson made much of this documentation legacy as well.

All of the writers in the study, whether I asked them the question about the primary

impactor of technical writing style or not, centered their conversations around readers consistently across both interviews and showed an awareness of the audience's impact on their style of writing in subtle ways. For instance, I found that when asked this question about the factors most impacting style, some writers, even if they answered the question with some other construct rather than audience, they would often center their discussion around that other construct on audience anyhow. Phyllis Walsh's following comments are an example:

> PW: I've always worked in regulated industries, banking and insurance and one of the audiences we have to please is Audit. Internal, external, government, from local player to federal and there are certain things they've already said, "You will put this in there." There's a style guide for every one of those parameters.

Walsh focuses not on the style of legal and auditory language itself but on auditory and regulatory considerations *as another audience* for her writing. These considerations led to the recognition that addressing audiences is indeed the central and most compelling construct affecting technical writing style.

Demographic factors. The technical writers in the study took the concept of addressing the audience and developed it in some nuanced ways. Some reflected on the question philosophically by thinking about the needs, preferences, and expectations of various audience demographics. Sue Ann Hartmann described the audience in terms of age, commenting on how younger audiences want to access content. I asked her a different but related question about what she saw as most impactful on technical writing style going forward.

SAH: I think it's going to be a variety. I think you're right. I think generations, not genre. Not genres because I think that when I'm writing for an audience that is more now and, you know, the, you know, I'm, I'm a baby boomer, so you know, but I have given birth to millennials. So I feel like a big part of it is audience, and I think that the challenge and [unclear] But I think the challenge is how to produce communication that, and content that is adequate technically, but still going to be read by this generation that only wants to scan things and, and I'm not saying, I'm not saying it can't be pictures. It has to be words. But whatever we use, and however we go forward, we've got to recognize as I'm sure my parents' generation had to do at some point, we have to recognize that the audience has changed and they're not they're not willing to work for information. They are, they are assessing whether they're going to put an effort forward based . . . and I don't mean to make this sound horrible . . . but I do think that they're assessing whether they're going to put an effort, put forth effort based on how, how many pages they've just been handed you know, and websites, do they have to scroll it or how many click throughs do they have to do, you know. I just think that, I think they too have maturing to do to understand that, you know, they do sometimes have to put forth that effort. But likewise, I think the, the authors have to recognize that they need to get information out as concisely, as visually as, as they can.

Hartmann sees this issue in terms of dual responsibilities on the part of younger audiences and writers both making an effort to meet so that communication can happen—

younger audiences with the recognition of the cognitive effort that technical

documentation often demands and writers in terms of presenting information in ways that

are both accessible and palatable to those same younger audiences. This approach shows

issues of reception as well as production meeting at the contact point of style.

Jerry Grohovsky, a technical communication business owner who also serves on

advisory committees for technical writing programs at two institutions of higher learning

in his area, also related the discussion of audience to the needs of a younger generation of

readers:

> JG: Yes, yeah, we talked about that at advisory meetings at . . . there's a
>
> different generation of users that have been brought up on video games
>
> and so forth, and, and motivating people to read documentation has always
>
> been a, a half, half-century old challenge, and, and I think between where I
>
> came from and what it is now, there's much more visualization, there's
>
> much more stimulation and engagement for people to motivate them to
>
> read, and to become, become engaged, you know, with the documentation.
>
> I think, I think that is, I think that is more common now than it used to be.

Grohovsky's response shows a common thread in how technical writers tend to consider

deeply whether a piece of writing will be read or not and how to entice readers to engage

with content, a consideration that changes as the impacts of technology and society tell

upon the preferences of the anticipated consumers of technical documentation.

Reader's state of mind. Technical writers connect to their audience not just at

the demographic, macro level, but they also try to anticipate readers' states of mind as

they engage technical documentation. Marcy Sager talked about this issue in detail when

we discussed step one from the Thule Stacker 830 instructions. She brought up a potential problem with the order of information:

> MS: Yeah, you know in any case. It's like, "Gee, when should I actually . . ." The other thing is, when should I be learning that? It's like, how far along do I get along this path before I go, "Oh crap, the load bar has . . . my load bar is not 24 inches! It's 20 inches! Oh crap, what do I do now?" You know?

Technical writers consistently consider *when* audiences need information, any confusion, disinterest, or other emotions they may be feeling when encountering technical documentation, as well as issues of visual appeal. In some cases, they reflect on the memorability and "stickiness" of the information they present. Marcy Sager, in an unexpected turn in our discussion, noted how she sometimes uses humor to engage her readers:

> MS: When it's, you know, I don't know, it's, it's kind of fun. I, you know, I've got both, both internal and external audiences for, for what I write. So my stuff tends to get used on the one hand by, internally by support, and by the programmers themselves, and externally by, you know, by our, by our customers, our end user customers, and you know, so if there are a few little Easter eggs drifting around in online help, well, it will maybe help them remember. "Oh, yeah, I saw this really funny explanation of, you know, something that's really arcane but useful." You know, it can help. It can give things a little more glue, a little more stickiness.

Sager noted that she avoids humor when addressing international audiences, however.

After Sager discussed this use of humor with me, I asked some other writers about the use of humor in technical documentation. Those comments were mixed. Kelly Smith noted that she might use more "funny videos" when I asked her about how her writing might change if she had freer rein to encode her own style at work, though she related her comments back to age demographics and the expectations of younger readers affecting content and style. William Loy Pearce was the only other person in the study who noted the use of humor in his workplace writing (Paula Robertson mentioned the use of humor and poignancy in her personal blogging but not in the workplace). Pearce brought up the topic of the uses for humor when we were discussing writing ideals like clarity, conciseness, fluency, and tone: "For me, if they laugh, they're gonna remember it better." The only other participants I asked about humor did not see humor in this light, however. Nick Peterman and Jerry Grohovsky panned the idea and stated that technical communication is not the place for humor. Regardless of whether writers use humor or not, they tie that decision to the audience's state of mind in most cases as a means of "stickiness" to aid memory and comprehension or alternatively not using it because of issues of appropriateness for readers in technical documentation.

Technical writers anticipate readers' states of mind in other ways as well. Some writers (Amruta Ranade, Paula Robertson, Kelly Smith, Nick Peterman) noted the use of audience profiles or "personas" or usability testing to get to the specifics of readers' states of mind, which is a common practice in technical communication. However, I asked a question in the discourse-based interview to provoke discussion on manners of address to the reader specifically. The question, on whether the Thule Stacker 830 instructional document might be improved with an introduction on the first page (the

actual document does not include an introduction), was aimed at eliciting comments on both genre considerations as well as anticipating audience reception of that genre element. Reactions to the question were mixed. Seven participants (Sue Ann Hartmann, William Loy Pearce, Vincent Tomaino, Deborah Hemstreet, Jerry Grohovsky, Susan Davis, Paula Robertson) agreed with including that genre element, though most noted that it would need to be succinct. Three participants (Eva Miranda, Amruta Ranade, Amira Patel) opposed its inclusion, each noting that it would not be read. Eight participants had mixed reactions (Jim Wilson, McKenzie Williams, Marcy Sager, Dina Lopez, Nick Peterman, Marsha Patterson, Kelly Smith, Ashley Fields), variously commenting on such considerations as management of reader expectations, the cost and complexity of the product, and tools and materials needed. One example of conversation on this issue shows the considerations that drove responses on the question. Dina Lopez offered a mixed response:

JO: Well, what if I, what if I did kind of something different here on page one, instead of just kind of jumping into Warnings and Limitations after the Product Registration. I instead, I do a little introduction, and I thank the reader for buying a Thule product, and I say, this will, should probably take you this amount of time to finish this, and you need this level of technical expertise to get it done. You know, in other words, trying to manage their expectations a little bit, do you think that's good, bad, unnecessary?

DL: Good if it's in like a bullet point? If it's like, a, a paragraph kind of form, most people probably go, "Aaah." You know, "You're welcome. Let me

move on." But if I see a bullet point list that says, you know, one line,

thank you for purchasing this product now, kind of expectations, that

difficulty, this level, and so on, then yeah, I think that's useful.

The key point is that the reader's anticipated state of mind guides the writers' reactions rather than pure genre considerations, regardless of how a specific writer answered the question. Some felt readers would want to get right into the process, some thought the reader would appreciate a thank you, and some felt the reader would value some communication of the anticipated time and tools needed to complete the project. Only one person, Kelly Smith, mentioned a pure genre consideration when discussing the possible inclusion of an introduction: "I don't think that's how things are written any more, although it might depend on the kind of product." In practice, technical writers placed audience considerations above genre considerations consistently when looking at actual documents in this study.

Another piece of evidence showing the attunement of technical writers to their audience's anticipated states of mind is the consistent imaginary quoting of readers, as in Lopez' response above ("Aaah. You're welcome. Let me move on"). At least once in our two interviews, eleven participants imagined a response to a text or situation *as if the reader was talking* (Dina Lopez, Sue Ann Hartmann, Eva Miranda, Amruta Ranade, Amira Patel, Phyllis Walsh, Cynthia Vann, Marcy Sager, Marsha Patterson, Deborah Hemstreet, Paula Robertson). For instance, Deborah Hemstreet suggested breaking step nine apart in the Thule Stacker 830 instructional document due to an imagined audience response:

DH: When I do multi-step things, when I used to do multi-step things, I would break them down into components like, like what you said, tightening the rope, fastening the rope, inserting the rope, so that you know, "In this step, I'm only going to do this." "In this step, I'm only going to do this." Just so that I don't try to tighten the rope.

The justification for altering the presentation style of the steps here is a state of mind consideration, a step-by-step mode beneficial for constructing an instructional document.

Technical writers anticipate not only their readers' needs and states of minds but also their emotional reactions in some cases. Eva Miranda considered the reader's state of mind in terms of avoiding confusion, which is a common theme in the study:

EM: So I'm very deliberate, you know, anytime that I'm listing features, I present them with, I preface them with including, you know, this list. So that way, whenever it expands, the user is still oriented, right? And they're not confused, because they're like, "Well, they said that there's this list of these four things, but I see eight things."

In the same way, Phyllis Walsh, in the IT sector, writes to avoid causing confusion for the reader:

PW: And I, I try for minimalism, transparency and, and I write, I've always written for IT procedures. So I'm always writing to make sure if they look at the screen and have I told them to do X, Y won't come popping up when I leave them wondering, "What did I do wrong?" Because when people feel they've done something wrong, they tend to freeze up and stop working.

Technical writers write in this way consistently, becoming the reader so they can communicate effectively with the reader. Their anticipation of readers' states of mind extends to thinking about their needs, their anticipated reactions to texts, and even their emotional reactions.

International and translation considerations. Technical writers show the importance of addressing audience when they consider the effects of writing to international audiences. Amruta Ranade is an example of a writer who works across cultural and linguistic divides, evidencing a subtle understanding not only of language preferences but also style and presentation preferences. I asked her about the approach she uses when addressing international audiences.

> AR: Right, so when I write to my Indian, like colleagues, or say [unclear] audience, I am more polite and more indirect. I'm more descriptive. And like I have to be very detailed, the explanation. Whereas when I write for an American audience, it is very concise; it is very to the point. It is very go-find-this-out-for-yourself-if-you-want-to. Like, this is, like give them pointers, because they are like, in my experience, they want to figure things out for themselves.

Ranade's comments show awareness of the needs of international audiences and her willingness to adjust writing and presentation style to meet their expectations of technical documentation. Kelly Smith talked about this issue in terms of high versus low context culture communication preferences. Dina Lopez discussed this same issue in terms of how she expands communication in the documentation she produces for high context audiences.

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Deborah Hemstreet, who works for an English language Israeli medical journal, answered a question about internationalization in terms of intelligibility and levels of competence in the target language:

> DH: I mean, I think it's primarily and, like, do they, are they going to understand this word, you know. If I need to look it up in the dictionary because I forgot what it means, then for sure they're going to need to look it up in the dictionary. If I have to read the sentence twice, for sure, they're going to read it three or four times.

Eva Miranda mentioned how considerations of translation even drill down into presentation issues like word translation: "In software, anytime we think about, about a name, we think, 'Well, how will that look in German? How big will the button be in a different language?'" In this case, even something as simple as word length can impact word choice.

Regarding translation, I asked about the presentation of three languages in the Thule Stacker 830 document. In that document, the Warnings/Limitations section on page one is presented in English, French and, Spanish in three columns but with different weights and styles of font (see Figure 9).

Figure 9. Screenshot of Thule Stacker 830 warnings/limitations section (p.1).

This methodology of consistent weight and style of font is carried throughout the remaining document, though the languages are stacked (see Figure 10).

- **Thule square and Xsporter load bar and Yakima round load bar.**
  Barre de toit carrée Thule et barre de toit ronde Yakima.
  Barra de carga cuadrada de Thule y barra de carga redonda de Yakima.

- **Loosely attach 60mm carriage bolts (F) and knobs (B) as shown.**
  Les barres at attachez les 60mm boulons et les motettes,comme dans l'embarcation sans les serrer
  Instale el 60mm perno y la perilla de la manera que se muestra en el dibujo sin apretarlos.

Figure 10. Screenshot of Thule Stacker 830 language presentation from step 1 (p.2).

The writers in the study had varied reactions to this presentation. Fourteen participants liked this method (Jim Wilson, Sue Ann Hartmann, McKenzie Williams, Eva Miranda, Phyllis Walsh, Marcy Sager, Dina Lopez, Vincent Tomaino, Amruta Ranade, Amira Patel, Nick Peterman, Deborah Hemstreet, Jerry Grohovsky, Paula Robertson), two thought the document should be offered in each language separately (Cynthia Vann, Marsha Patterson), and two participants (Kelly Smith, Ashley Fields) did not like the presentation since they saw it as cluttered and confusing. Five participants (McKenzie

Williams, William Loy Pearce, Nick Peterman, Kelly Smith, Susan Davis) mentioned the seeming privileging of English as bold and to the left (in Figure 9) and on top (in Figure 10), though one participant claimed it did not privilege English (Amruta Ranade). Finally, a few noted that English is probably the main reading demographic, implying that the privileging is warranted (McKenzie Williams, William Loy Pearce).

The responses above show a mix of concerns with how languages are presented, though those concerns almost always center on audience use and readability with issues such as cost (Nick Peterman, Kelly Smith, Susan Davis) and genre (Deborah Hemstreet, Jerry Grohovsky, Susan Davis, Paula Robertson) only getting a few mentions. The key takeaway is that the participants showed a willingness to alter style and presentation to meet international and translation needs and they considered the text from the perspective of those reading it in various translations and not just in English.

Quality of translation is another concern for a few writers in the study. Paula Robertson brought up this issue. Speaking of her managers, she noted,

> PR: But, you know, and they've asked me, "How do you judge the quality of translation?" I said, "You have a native speaker to read it", and they didn't seem to, they wanted the, a tool, you know. There's just no substitute for a native speaker.
>
> JO: Yeah, so, usability testing. They're not familiar with that concept sounds like.
>
> PR: No, you know, I don't know what kind of crazy path they're going down. But I told them if you don't write it for translation, if you translate this content word for word, it's going to be a miserable failure.

Her comments show that translation factors into stylistic perceptions at the level of quality, meaning technical writers think of translation into a target language with the same matrices of intelligibility and usability that they apply to documents written in their home languages. Robertson later used the term "localization" to refer to this authentic quality in a translation.

The writers in this study showed an awareness of globalization, translation, and the needs of diverse audiences. All of these considerations come under the heading of forms of audience address as writers in the study showed how they think of diverse audiences as having the same needs and states of mind as audiences in their home languages. As such, *international/translation considerations* form a construct that affects stylistic perceptions for the writers in this study.

Safety. Technical writers also consider audience in terms of the safety and well-being of their readers. A number of the comments related to safety arose in the discourse-based interview when discussing the Thule Stacker 830 instructional document. Safety considerations factored prominently in discussions of the order of presentation of information. Amruta Ranade commented on this aspect:

> AR: And this warning thing in the bottom, Do not exceed load whatever-whatever because it will probably harm the product, and then you tell me to avoid sharp edges. Tell me that I'll get hurt first and then let me care about my product.

Marcy Sager mentioned how she reiterates warnings:

> MS: A lot of times with the stuff I do the, the warnings are pretty much, you know, feature you've turned off the power because if you don't turn off the

power, you're screwed. You're gonna fry a board you know, you're going to shock yourself, you're going to do something and that's kind of it, right? But that doesn't mean that, I don't know, repeat that if it's a long document. I might say, "Oh remember," you know, "have you turned off the power? Turn off the power now."

Several participants thought of safety in terms of the actions related to specific steps but also in terms of product use. When discussing the Thule Stacker 830 document, several writers (Jim Wilson, Phyllis Walsh, Cynthia Vann, Marcy Sager, Marsha Patterson, Nick Peterman, William Loy Pearce) talked about the potential of the attached kayak or canoe detaching from the rack and flying off a vehicle while in transit.

In the technical communication field, writers often make distinctions between cautions, dangers, and warnings with different symbols and language attached to each. In the Thule Stacker 830 document, these distinctions are not always observed, which provided an opportunity to get a sense of how important such pre-existing genre considerations are in determining the style of a document on these issues. Step nine features the only Warning in the document, though most technical writers would consider this a Caution since it relates to product failure and not personal harm: "Warning: Do not exceed 150lb. limit of QuickDraw. Inspect rope and ratchet before each use. Do NOT use if damaged. Avoid sharp edges, pinch points, abrasive or hot surfaces" (Appendix D, p. 5).

Susan Davis identified the presentational issues right away and felt that such confusion posed a safety risk to the reader. In this connection, she related,

SD: We're really strict about those, warnings are about people, cautions are about hardware and [unclear] information, yeah. If you want people to pay attention if they see the word or the symbol for warning, they need to know that's dangerous, like personally dangerous, yeah.

I asked a few writers about the general approach that a company like Thule should take in writing an instructional document. Cynthia Vann stated that "a combination of instructional and cautionary" is the appropriate mode for instructional documents. Vann's instructional and cautionary values speak to the ways that technical writers consider an instructional document in terms of its effectiveness in delivering the communication needed to accomplish processes safely and efficiently.

Legal/regulatory considerations. Another aspect of addressing audiences relates to the legal and regulatory considerations that companies and organizations face depending on the markets they are in and the products and/or services they offer. Deborah Hemstreet noted the importance of this fact when we discussed the Guidelines section of the Thule Stacker 830 document which contains some language related to risk:

DH: But you see, this, this, this is the driver here. When I used to work in high tech, that's what they wanted. The only thing they, they, they cared that I spent a lot of time on was the regulatory. Regulatory stuff, I could spend all day on it. But if it was a simple procedure, they would get upset if I wanted, if it took me more time.

Clearly, regulatory and legal matters concern companies, and technical writers as official communicators representing products and services offered by companies feel this concern strongly. Later, Hemstreet added that as a technical writer "you have no choice" but to

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spend time on this issue to make sure risk and regulatory language are thoroughly communicated.

Marsha Patterson noted the non-optional nature of the communication of risk and regulations in much the same terms as Hemstreet. When discussing her process when thinking about a document, she noted:

> MP: I start with the audience, and then legal stuff. I mean, we do have some fine lines with that, like, around, you know, with, like, for example, with number porting, you have to get permission, you have to get certain documents, you have to get, you know, it's, it's regulated by the FCC is the bottom line.

Patterson's comments show how that style is somewhat circumscribed by legal and regulatory considerations at times with companies not able to ignore, reduce, or alter some forms of communication that reside in the legal realm.

Nick Peterman talked about this issue in terms of competing agendas and needs that are part of the total context in which a document is constructed and where it operates.

> NP: . . . in tech writing like you, you sacrifice your way of writing instructions because you know, so and so wants it their way and you go, "Well, alright . . ." You gotta know when, how to choose your battles in the writing game. Like, you know, sometimes marketing does have a say when, you know, maybe patient safety or whoever should have the say, but as long as we're covered from, from all . . . you know, as long as we meet the overall needs, then we kind of approach it from that standpoint.

Peterman notes the different constituencies invested in technical documentation (marketing, legal issues, audience safety, technical writers themselves) and plays those considerations against one another to produce a document that meets both company and audience needs from legal and document effectiveness standpoints.

Some writers in the study (Marcy Sager, Ashley Fields, Marsha Patterson, Jim Wilson, Susan Davis, Nick Peterman) talked about including regulatory or legal language in templates used for various documents, enough so that I asked a question about "boilerplate" of a few writers to see how prevalent the practice of using standardized writing is in the field since this speaks to the style of technical documents as highly managed. Susan Davis' comments are typical of what I found:

> SD: Well, there, yeah, there's plenty of regulatory language. Well, if you're looking at like, I don't know, governing documents that describe how you perform some business or engineering functions, a lot of that [unclear] was on regulatory language. Specifications use a lot of boilerplate. I mean why reinvent the wheel, right?

Davis suggests that some of the items found in the Guidelines of the Thule Stacker 830 document were placed there "so that if they do sue you, you can hold this paper up and say, 'We did tell you.'" The writers in the study, however, seemed sensitive to overtly unnecessary and boilerplated risk language divorced from the actual reading needs of audiences. Susan Davis noted the Guidelines in the Thule document as a place where the reader might "throw it in the trash" due to this kind of language.

Legal and regulatory demands do not affect all the writers in the study in the same way, however. In some cases, a legal reading of company documentation is a step in the

process of completing technical documentation, essentially taking on a role as another audience, which is true in Nick Peterman's workplace: "Yep, we have a group called Regulatory, and they look at everything." Jim Wilson stated much the same as a separate step in the document review process at his workplace.

The technical writers in the study find themselves between the needs of readers, the legal and regulatory demands placed on them by various agencies and legislative bodies, and the financial interests of the companies and organizations where they work. *Legal/regulatory considerations* affect the style of technical documents in various ways, forcing writers to manage these competing considerations and incorporate such language as needed for the protection of audiences and corporate interests.

Audience invoked. Unexpectedly, I found that some writers in the study were willing to invoke their audiences at times. I found this especially as technical writers work with managers or other stakeholders in a document to educate those individuals about the needs of audiences and genres. This usually occurred when writers were in senior roles or were consulting or freelancing. Thus, the "invocation" taking place was often at the managerial or ownership level and not at the level of the end user. Kelly Smith, a Senior Technical Writer, depicts this role of invoking audience well:

> KS: I get to do a lot of different things in my job besides technical writing. I get to work with some of the business people to help them design their websites, for example, because I kind of act as a liaison between the [unclear] develop them and, and the people who they know they need something, but they don't know what. So I try to focus on who their audience is. And it's not always them individually. They might disagree,

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and in fact, have disagreed really strongly with some of my suggestions

about how to write an FAQ, for example, but in the end, they did it my

way. And we're still friends, and we still get along, and she's very happy

with her website now that it's all done. But it's trying to convince people

that well, I know that's how you wrote in school, but that was forty years

ago and things aren't written that way any more, you know, so just trying

to convince people that progress has happened.

In this exchange, Smith shows that her role as a writing professional also has an

educative aspect as she invokes the manager or decision-maker to read a technical

document in new ways. Jerry Grohovsky, a technical communication business owner

who consults with companies and organizations, facilitates this kind of learning as well.

Susan Davis, a Technical Editor, invokes internal audiences by educating engineers and

others she works with on the needs of audiences when encountering technical

documentation.

Sue Ann Hartmann responded to a question on how to address the reader in a

similar mode: "I have to work with my clients to buy into my style." She followed up this

comment with a reflection on her approach to style at a new workplace:

SAH: Sure I had to adapt tone somewhat, depending on the client, but more I

had to bring them around to my way. I know that sounds very selfish, but I

had to bring them onto my way of writing because I really believe after all

these years that I've learned enough to be able to present to them the best,

the best writing style.

These considerations are especially important for Hartmann who works in a health system attached to a university, so she switches between academic and business/technical writing styles, at times educating academic writers she works with on the stylistic demands of business/technical writing. Similarly, Paula Robertson, in the curriculum publishing industry, faces challenges working with educators writing curriculum that she edits for publication:

> PR: What, what I'm trying to do is get these writers who come from education and academia to stop writing like they come from education and academia. Because, because, it, they don't consider their audience. It is, you know, elementary, middle school, or high school and, and it's like, they write the same no matter what. And it's all way too complicated.

Style is a central part of her role as a technical editor. She takes on the role of the end user herself as a means to encode the style called for in the publications that her company produces.

Finally, in an exchange on the FAA report regarding its language, Marcy Sager discussed how writers use language to invoke convergent identities in how that document's style shows competence, membership, and a wish to proceed on the agreed-upon terms of a discipline:

> MS: I don't do medical technical writing, obviously, but, you know, they're using to me, it's like, yeah, this is appropriate jargon. I mean, is it, this is, this is for a technical audience, I would, I would assume from this you know, this is a, they're talking to a technical audience, and they need to

use the technical lingo for a lot of reasons, some of which is to show that

they too are technical.

Sager's comments show that technical writers sometimes use the invocational ability of language to create the reader necessary for a particular document or genre. This type of audience address is not the customary mode for technical writers and seems to emerge most commonly in situations with multiple audiences, in cases where a reader misunderstands the genre and purpose of documents, and in cases where writers need to show linguistic convergence with identified audiences.

Genre and audience. The technical writers in this study consistently related genre to audience needs and depicted it in dynamic terms rather than as staid and fixed. However, a few participants did respond to specifics within documents based purely on genre considerations. For instance, on the aforementioned presentation of the three languages in the Thule Stacker 830 document, some writers reacted by referring to genre standards: Paula Robertson: "That's pretty much how you see it done;" Jerry Grohovsky: "That's common;" Debbie Hemstreet: "Apparently the industry standard is to make the font consistent and different for each language so that the language speaker knows immediately where to go." This, however, was not the norm in the data set. McKenzie Williams argued that genre is integral to style, but she made that point in a way that showed she meant this consideration primarily in terms of audience expectations: "Umm, I would say genre is extremely important when you consider style . . . and that that is deeply intertwined with client expectations because often your client expectations are derived from their experience with a particular genre." This was a consistent finding in the data set: genre and audience are connected.

Eva Miranda commented on *audience* and *genre* considerations when discussing the possible inclusion of an introduction in the Thule Stacker 830 document. She seemed to oppose the writer's understanding of a genre norm to the reader's needs:

> EM: I don't, I don't think anyone would read it. I think it would be helpful, you know, but I don't think that they need it. You know, I think just because if you were to take up an entire page with that, users are looking, you know, when they go to the next page, they're expecting you to tell them how to do something. And so I think to put in the introduction, like a whole page of introduction with safety warnings, would pander more to your expectations of documentation rather than your user's expectations.

Miranda gave priority to users and their needs rather than a genre element, an introduction.

I asked several participants another question on this issue of genre in an effort to get a sense of how strongly considerations of *genre* insinuate themselves in discussions of style. I referred to a piece of camping equipment I had bought that did not include a typical set of instructions but rather included a business card-size piece of paper with a QR code on it directing the end user to a website for the instructions needed to use the product. I asked about this in order to get a sense of how focused the writers in the study were on typical generic practices such as providing written instructions. McKenzie Williams linked the decision to use this genre and form of deliverable as an audience consideration. She saw this as a strategic move on the company's part by thinking about demographic considerations of the type of purchaser and the type of product:

MW: Yeah, people who, you know, the kind of people who are camping are

probably, you know, families, you know, who can watch a video just as

easily as read something; in fact, more easily. Yeah, and they won't mind

getting a laugh out of it because they're about to go on vacation. Yeah,

versus like, you know, your vacuum cleaner, where you're just sort of like,

just tell me . . .

Dina Lopez responded to the same question with a discussion of genre, audience

demographics, the involvement of marketing in the process, and the documentation needs

of a specific product:

DL: Yes, there are times when you just want for things to be a very

straightforward genre, because you're working with something that just

needs lists—one, two, three. There are other times when you don't mind to

have, having something be a little bit more entertaining, as in addition to

how to put the thing together, so I think it just depends on . . . Sometimes,

it depends on your situation. You know, if I'm in a really big hurry, please

don't sit down and try to entertain me. It's not going to go well.

Lopez went on to add marketing and demographic considerations into the discussion on

genre:

DL: You have to put the content together first, and then send it to marketing.

But marketing's gotta work with that content as it's going to accomplish

the mission and vision of the company. If the mission and vision of the

company is to speak to millennials, you know, the sky's the limit. But if

the mission and vision of the company is to reach across age levels, then

they shouldn't do that. They should come to a little bit more of a middle

ground because older people are just not going to care for that. We're not

going to care to be entertained like that.

Lopez was willing to entertain the possibility of using an atypical genre, but only if

audience demographics and the mission and vision of the company allowed.

Looking carefully into how technical writers think of genre and style was an

important part of this study as I designed the study and selected texts to review with

participants. It was a leading factor in my choice of the FAA report as a site of discussion

since that report is written in technical, specialized language in an IMRAD-ish genre that

is not typically used in the technical communication field. I wanted to get a sense of how

technical writers would react to that document since its style is constructed more in

alliance with its genre than with the demands of communication to a wide audience.

To provoke discussion on this issue, I asked a question about the Conclusion of

the FAA report, which is very short, hard to understand, and not very thorough in

reporting the findings of the study it summarizes (see Figure 11). I wanted to see how the

participants in the study would handle those problems, through techniques that might

violate genre but would prioritize the audience (such as bullets, sub-headings,

paragraphing, and so on) or whether they would work strictly within genre confines,

suggesting changes that had more to do with improving the writing and leaving the genre

alone.

CONCLUSION

Marijuana use is rising as more states legalize its use for recreational and medical purposes. In addition, the potency of marijuana has increased over the years. As demonstrated by this study, the aviation industry is not immune to this phenomenon as fatally injured pilots continue to test positive for cannabinoids in postmortem fluids and tissues. The mean and median blood concentrations for the 10-year period reported here are higher than those previously reported for the 1997–2006 period, although it is encouraging that the concentration trend decreased over the most recent 10-year period (2012–2016). Work is ongoing at CAMI to characterize the postmortem pharmacology of marijuana to provide information for educating pilots and the flying public about its effects and negative impact on aviation safety.

Figure 11. Screenshot of the Conclusion of the FAA report (Nelson et al., 2018, p. 14).

Reactions were mixed. Several writers agreed that the conclusion needed significant changes. Sue Ann Hartmann suggested the use of sub-headings, and Cynthia Vann suggested some bullet points to make the findings jump off the page more insistently. Jerry Grohovsky suggested making the conclusion more appealing and less eye-tiring. Amruta Ranade said that changes are needed while also showing awareness that such changes would violate the genre of the report:

> AR: So, when you say genre, in my mind, like the way I have been learning about genre is a set of people or a set of collective expectations about documents. And it's not stagnant, right? It keeps on evolving. So if my audience evolves, the genre has to evolve with them. Like, for example, software documentation I did, that I did two years ago, that's the genre of software documentation, but my audience is evolving so rapidly within the two years that my genre and my [unclear] has to adapt to that change. So if you think about it from that perspective, we stay loyal to genres but we also are mindful and we have to evolve with it.

Ranade's comments showed an active willingness to place genres in their relation to other aims of writing and see them as fluid and needs-based rather than rigidly formal.

Several writers in the study suggested that genre needed to lead considerations of style for the FAA report. Marcy Sager argued for better writing in the conclusion but not any genre changes. Amira Patel had a similar reaction. Other writers (Dina Lopez, Vincent Tomaino, William Loy Pearce) had a strong sense of what should be in a conclusion for this genre. Most of the comments from this perspective, rather than changing the presentation or format of the conclusion, instead focused on the thorny language in the conclusion that is confusing and almost obfuscatory, especially the language in the main finding: "The mean and median blood concentrations for the 10-year period reporter are higher than those previously reported for the 1997-2006 period, although it is encouraging the concentration trend decreased over the most recent 10 year period (2012-2016)" (Nelson et al., 2018, p. 14). Kelly Smith's comments sum up a number of others' responses (Marcy Sager, Ashley Fields, Amira Patel, Deborah Hemstreet, William Loy Pearce, Vincent Tomaino, Susan Davis, McKenzie Williams, Phyllis Walsh, Nick Peterman) to this sentence: "I don't even understand that sentence" and "No, that sentence is totally . . . it looks like it's contradicting itself." Some noted that the "10-year period" at the end of the quote is followed by a parenthetical that identifies a period of less than ten years (2012-2016).

The findings related to genre are indeed mixed with some writers more concerned about genre norms than others. All writers, however, related *genre* to *audience* considerations, even those who opposed changing the conclusion of the FAA report. Their comments centered on fixing the conclusion with more accurate, fluid writing. Others were willing to change the genre with bullets and other design elements to make it more readable. In either case, *genre* took its cues from *audience* in most comments in the

study, which is why I placed it under *audience addressed* as primarily an audience-linked

construct for the participants in this study.

Addressing and invoking audiences is a core construct guiding technical writers in

their production and reception of style. Technical writers develop subtle methods to

address audiences effectively, often taking their place as readers. They consider audience

needs and states of minds thoroughly, adjusting style as a means of addressing their

audiences.

Finding 2

Table 7

Finding 2 Overview and Perspectives

Finding 2

Personal *biography* has a powerful impact on technical writers' production and

reception of writing style.

General Overview

Each writer is different, and the ways they differ impact their production and reception

of writing style. Technical writers emerge from college majors as widely varying as

English and engineering and work in fields as divergent as medical device

manufacturing and curriculum design. Their experiences tell in their styles.

Representative Participant Perspectives

Yeah, I come from about as literate of a household as you can possibly imagine. (McKenzie Williams)

[M]y first technical writing experiences were for the Department of Defense, which is very strict. Rigid guidelines. And that's where I learned. (Ashley Fields)

Since I've been in the master's program, I've been doing a lot of reading for school. So my, my recreational reading has kind of fallen off the radar a bit, but like last year I read 50 books, mostly fiction, some nonfiction, but I do like to read when I have time. (Kelly Smith)

Finding 2 involves the recognition that technical writers do not emerge from just any environment, but their past and present literate lives play an important role in their choice of professional writing as a career. I theorized *biography* as a construct affecting writing style in Chapter 2. To get a sense of whether and to what extent this construct affects technical writers, I asked a series of questions related to the participants' literate lives, both past and present. Finding 2 is a statement of the force of these findings. *Biography* is indeed an important construct affecting technical writing style. The findings on *biography* in one sense are not unexpected since I asked several questions that precipitated discussion on that issue. However, analysis after coding revealed that the effects of *biography* on style constitute a major finding of the study since the data is so insistent that technical writers, people who inhabit positions where literate knowledge and expertise are at a premium, show subtle and nuanced perspectives on texts, language, and contexts.

In addition to the questions I asked on this issue, as I interviewed, transcribed, coded, and analyzed the data set in the study, I also gained an overall sense of a literate, rhetorically-sensitive, and metacognitively-aware set of participants whose experiences both past and present had yielded those qualities. I submit Chapter 4 as a whole as evidence for readers to consider on this point.

Literate household. In the literacy-history interview, I asked participants about their upbringing and whether the homes they grew up in were literate or not. Fourteen of twenty participants (70%) indicated that they had grown up in literate households with four participants (20%) offering a mixed response to that question. Only two participants (10%) stated that they had not grown up in a literate household. I did not define the concept of literate household, instead listening to participants' descriptions of households where literacy, books, reading, and knowledge were valued. Jim Wilson's parents presented education as a value and saw that their children valued it as well:

JW: It wasn't like my parents sat us down to read every day. But all of my
          family of four boys . . . and all of us are readers, we all read the newspaper
          every day and we talk about books we've read, novels and so forth so I'm
          not sure what triggered that. But my folks were always adamant that we
          were all going to get a college degree because my dad and mother didn't.
          That was always something that they emphasized and all four of us did.

Wilson's parents, themselves not college educated, nevertheless laid the foundation of literacy in the home. They set a tone of expected achievement in academics, which paid off in literate, educated children.

Amira Patel, a native of Pakistan whose first language is Urdu, also benefited from the support of parents in achieving strong literacy skills. Her mother strongly supported her education and showed the value of literacy in the home:

> AP: I don't remember like books being available. My mom was, my mom was very involved in our education, mine and my brother's. Like, she would help us do homework, you know, every night and when they were exams—like exams back home were a lot crazier than they are here—in school or high school anyway. So we would spend like so many nights studying for exams, and she would she tutor. She actually tutored at the same [unclear], so there would be other kids coming to our house and we'd be studying with them. So my mom was a big part of our education growing up.

Patel's mother's involvement is another model of home literacy that some participants mentioned in this connection: parents or caregivers actively involved in their children's education. The other participants who reported coming from literate homes talked about these aspects and others, describing the availability of books, a variety of literate experiences, and active reading in their childhood homes.

Language study. Language study is a significant aspect of a literate identity, as the participants in the study evidence. The fact that participants needed to hold at minimum a college degree to be included in the study is a significant factor in the pure number of languages studied in this participant pool, though a number of participants have studied and are currently studying multiple languages, in some cases just for personal enjoyment and enrichment. Languages studied include Spanish (mentioned by

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10 participants), French (9), German (2), English (2), and Latin, Italian, Russian, Sanskrit, Hindi, Mandarin Chinese, Finnish, and Hebrew with one mention each. The total number of languages studied is thirty-one, which is an average of 1.63 languages per participant studied for the nineteen participants whom I asked this question. This is a significant number showing a commitment to and understanding of language of this participant pool as a whole.

 Current readers. Participants in the studies show their literate lives in their current reading as well. I asked all twenty participants if they consider themselves a reader currently. All but one answered in the affirmative (95%), and the one participant (Paula Robertson) who said no stated that she does make some headway occasionally in reading fiction. I asked a follow-up question on the genres read by participants to get a better sense of what each participant meant by identifying as a reader. In most cases, I received enthusiastic responses on genres and specific authors, showing a qualitative, emotional attachment to reading that any committed reader will recognize. Table 8 shows genres noted by participants as favorites:

Table 8

Genres Read by Participants

Participant	Genres Read
Jim Wilson	Westerns, crime novels, suspense, science fiction
Sue Ann Hartmann	fiction, history, historical fiction, biography
McKenzie Williams	historical fiction, nonfiction
Eva Miranda	audiobooks
Phyllis Walsh	*New Yorker*, local paper, literature, science fiction
William Loy Pearce	work-related reading (at least an hour a day), horror
Cynthia Vann	mystery, historical fiction, graphic novels, fiction, poetry, nonfiction; when younger, comics, fantasy, "chick lit"

Participant	Genres Read
Marcy Sager	science fiction, fantasy, history, biography, historical novels, reference, Chinese literature in translation, *New Yorker*
Dina Lopez	Russian literature, comedy, history, Spanish literature
Vincent Tomaino	*Washington Post*, *Atlantic*, *Esquire*, *Rolling Stone*, *The Economist*
Amruta Ranade	biography, audiobooks
Amira Patel	self-help, audiobooks, spirituality
Nick Peterman	*Washington Post*, special interest websites: medium.com/the-magazine; thecut.com
Marsha Patterson	audiobooks, novels, occasional fantasy, nonfiction
Kelly Smith	fiction, nonfiction, bestsellers, scholarly work
Ashley Fields	fiction, fantasy, mystery, thrillers, nonfiction, science, history
Deborah Hemstreet	mystery, suspense, science, fiction, the Bible, fantasy, newspapers
Jerry Grohovsky	history, current event magazines, business magazines, newspapers
Susan Davis	scholarly work, technical publications, literary fiction, science fiction, fantasy, occasional romance novel
Paula Robertson	little headway with self-help books, but reads occasional fiction

The table above shows a group of intelligent, widely-read readers whose interests are hard to characterize as a whole. In other words, it seems unlikely that a person encountering this listing would be able to identify it as the reading preferences of a group of technical writers. Instead, the listing just shows a group of well-rounded readers with active literate lives.

Writing outside of the workplace. I also asked participants if they did any writing outside of the workplace. I did not define this writing to allow participants to define what they meant by such writing. Many participants reported that they did indeed write outside of the workplace (see Table 9).

Table 9

Do You Write Outside of the Workplace?

	Participant	Response
1	Jim Wilson	editing, occasional writing
2	Sue Ann Hartmann	writer's group, blog, started two novels, children's book
3	McKenzie Williams	writes for graduate work; occasional topical articles
4	Eva Miranda	does not write outside the workplace
5	Phyllis Walsh	newsletter; writes at 750words.com daily
6	William Loy Pearce	writes for graduate work; notes
7	Cynthia Vann	writes novels, poetry, short stories; wrote four children's books for church publication
8	Dina Lopez	Writes mostly for graduate work; plans to write up family member's memoirs
9	Vincent Tomaino	personal writing and correspondence
10	Amruta Ranade	technical writing blog
11	Amira Patel	journaling, poetry, editing
12	Nick Peterman	martial arts-related blog
13	Marsha Patterson	writes for nonprofits, favorite quotes log
14	Kelly Smith	magazine articles, published two nonfiction books, paid blogger, self-published fiction
15	Ashley Fields	freelance, creative writing, blog
16	Deborah Hemstreet	daily journal, has written articles, published a book
17	Jerry Grohovsky	LinkedIn articles, presentations
18	Susan Davis	previously belonged to a writer's group
19	Paula Robertson	volunteer newsletter editor for a nonprofit; personal blog

Eighteen of the nineteen participants (95%) mentioned at least one genre they write in outside the workplace. Some have published or are publishing their work. Eva Miranda, the only writer who reported not writing outside of the workplace, noted that she does write lists but that her current life circumstances prevent her from writing outside the workplace. Ultimately, the technical writers in this study show many of the

characteristics of literate, educated people in that they write in a variety of modes and are aware of a wide range of writing genres, both in the workplace and outside it.

　　　　Personal experiences. Several technical writers in the study also noted the effects of their personal experiences and education on their development as technical writers, sometimes distinctly in connection to a learned writing style. Ashley Fields noted her experience writing within the government sector as formative of her own workplace writing style: "[M]y first technical writing experiences were for the Department of Defense, which is very strict. Rigid guidelines. And that's where I learned." When interacting with the FAA report, several writers mentioned past experiences working in government either directly or as a consultant, contractor, or vendor (Ashley Fields, Kelly Smith, Paula Robertson, Vincent Tomaino). That experience impacted their reception of the document's style, as they averred themselves. In addition, a few participants (Vincent Tomaino, Marsha Patterson, Kelly Smith) expressed approval of the Plain Language movement based on their exposure to it in the past or present. Ashley Fields also discussed her background teaching TESOL and the learning theory she learned at that time as important in her current technical writing:

> AF: [W]hen I was taking the TESOL classes, I studied learning styles, how people read, how they interpret information, and I know that consistency is a big thing and being able to understand information that you're taking in, so it's my audience and keeping it consistent so that information is easy for them to explore.

Fields shows that literate experiences, in this case learning experiences, inform her stylistic choice even in a different field.

Also, in a number of cases an individual's background, education, literate history, current role, and expressed interests related to their responses on style. Jim Wilson, for instance, working in a manufacturing environment that produces products that pose significant safety risks for end users, was the most consistently manual- and safety-oriented participant, commenting on it in a variety of responses. He also discussed liability a number of times. Similarly, Marcy Sager was concerned about safety since some of the processes she described in her workplace documentation have to do with electricity and possible personal and product damage. Finally, Paula Robertson, the only art major in the participant pool, was very sensitive to visuals, shapes, fonts, and presentation. She was the only person in the participant pool who noted a shift in font in the Guidelines section of the Thule Stacker 830 document, something I had not noticed even with a great deal of interaction with that document.

The writers in the study also showed the effects of their education on their professional work life. Many of them have earned or are earning advanced degrees and certifications. Table 2 shows the education and work experience of this pool of participants, a significant set of accomplishments showing active, literate, engaged adults who emerge from a wide variety of college majors and workplace experiences to assume positions producing and editing technical documentation.

Finally, the effects of biography are apparent in local, precise, active ways that I delineate under *Exigent factors* in Finding 6. That sub-heading could have been placed here under *biography* just as easily as in that location, but I chose to locate it there to support Finding 6 that relates the impact of factors that arise from the specific, local, contextual needs of business and organizational communication.

The technical writers in this study show many of the characteristics of educated, literate people which dovetails effectively with their roles as professional communicators. The construct of *biography*, theorized in Chapter 2, finds expression in both conscious and unconscious ways in each writer's style. Unconsciously, the total literate experiences of each participant factor into their fund of options for creating and styling technical documents. Consciously, their experiences factor into their writing as learned behaviors wherein styles are inculcated through education and the constant review and creation of workplace documents. Technical writers experience significant benefits based on their personal biographies, training, and interests, and such factors impact their production and reception of writing style.

Finding 3

Table 10 Finding 3 Overview and Perspectives

Finding 3

Language ideology shapes writing style both consciously and unconsciously, and it impacts technical writers through reflections on dominant language ideology, choices related to language/style, and decisions about language and presentation style based on writing ideals.

General Overview

Technical writers, as professional communicators in corporate and organizational contexts, evidence a range of ideals and awareness related to *language ideology* and the use of language/style based on it. They also employ *writing ideals* such as *accuracy*, *appropriateness*, *clarity*, *concision*, *correctness*, *fluency*, *simplicity*, and *tone* to assist them in making decisions about the styles of language and presentation in technical documents.

Representative Participant Perspectives

[The presentation of languages in the Thule Stacker 830 document] does kind of privilege English a little bit. (Susan Davis)

Brevity, brevity, brevity as much as you possibly can. (Marcy Sager)

[T]echnical writing to me does not invoke emotion. (Jerry Grohovsky)

I want to be clear, and I want to be direct because, you know, that's what I get from years of technical writing. That's just kind of ingrained in me now. (Paula Robertson)

Language ideology serves as a powerful indexer of writing style, as Olinger stated in her presentation of the sociocultural theory of style. This is evident in a number of ways since language ideology often escapes the bounds of simple definition and categorization since it embeds itself in nearly every discussion of writing. Below, I show ways that the issue of language ideology made itself apparent in this study.

Dominant language ideology. Issues of dominant language ideology overtly impacted the discussion of the presentation of languages in the Thule Stacker 830 document for several participants as I discussed in Finding 1. In the conversations on that topic, five participants (McKenzie Williams, William Loy Pearce, Nick Peterman, Kelly

Smith, Susan Davis) noted the seeming privileging of English as the first language translated in a favored position. English appears on the left side of the columns where languages are presented simultaneously (see Figure 9 above), and it is presented at the top when the languages are stacked together (see Figure 10 above). William Loy Pearce averred that this favored positioning may exist because English is the language of the primary consumer demographic of the product. Amruta Ranade, however, saw the presentation of languages differently, arguing that it equally presented the languages and did not privilege English. Finally, Marsha Patterson and Deborah Hemstreet both perceptively noted that not all items were translated into every language, though they always appear in English, which implies a significant privileging of English. Overall, the point at issue for this study seems not whether privileging of English occurred in the document but that some of the technical writers in the study brought up the issue at all. The issue of language dominance is live for them as they encounter technical documentation; as such, it shows itself as an indexer of perceptions of style.

Dominant language ideology also powerfully impacts writers like Amruta Ranade who writes to various, sometimes international, audiences (see her comments under *International and translation considerations* in Finding 1 in this chapter). Much the same can be said for every discussion on that topic, which might have been categorized here under *language ideology* just as accurately as under Finding 1 related to the *audience* construct.

Language standardization. Language ideology is powerfully at work in another way as technical writers encode and decode writing style: in efforts to standardize language usage and style. A number of writers discussed "plain English" or the "Plain

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Language Movement" and its impact on their technical writing style. Ashley Fields brought this up from her writing experience in the government sector. Vincent Tomaino mentioned the use of the Securities and Exchange Commission's (1999) *A Plain English Handbook* as an important resource for him as he constructs and responds to workplace documentation. Six writers (Deborah Hemstreet, Marsha Patterson, Kelly Smith, Phyllis Walsh, Paula Robertson, Ashley Fields) reported having worked with Plain Language or at least expressed familiarity with it, though I did not ask this question of every writer. Kelly Smith talked about her use of Plain Language:

> KS: Well, again, most . . . most of what I wrote was internal, but I did try to follow, and I still try to follow Plain Language as much as I can, because I just think it's easier to be more clear and more precise. So I wasn't, I wasn't really told what I had . . . or how I had to write mostly. I was sometimes told what to write but not how. It just depended on what it was.

Smith's response shows that efforts to standardize writing based on writing ideals like plainness and clarity inform some government writing where the Plain Language Initiative germinated and where it continued in legislation like the Plain Writing Act of 2010.

Another important initiative at work within the technical communication field is Simplified Technical English (STE), a language initiative that is less tied to government and more focused on businesses and organizations. Susan Davis discussed the importance of STE style in her workplace as a means to communicate across cultural and linguistic divides:

SD: [I]t really is just kind of a like back to basics kind of approach to public

communication. In the US, it's the aerospace industry's idea, and they

have now an international community involved in this so they took even

the term Plain English and turned it into Simplified Technical English.

((chuckles)) Even the term for it is not plain, but it is an honest attempt to

make things easier to translate. So, I did, it's called STE. I did a STE

certification training and have been playing with it and trying to

implement it myself so that I can help the staff understand better how to

do it . . . because their original approach was this sort of this wholesale

replacement of unapproved words with approved words, words that

approved, you know were approved via the community that keeps the STE

dictionary. And you can't just find and replace words. So yeah, it created a

bit of chaos and teams were very upset about it.

Davis' comments show the relevance of language initiatives in the public and corporate

spheres and how they impact styles for technical writers. These initiatives proceed on

language ideology that values simple, clear, plain, and unadorned communication.

        American corporate communication. Noting the tenor of the comments

related to simplifying language and centralizing concision as a value in technical

documentation, I asked several participants a more philosophical question related to the

ideology that elicits that value within American communication culture. McKenzie

Williams sparked this line of questioning since she was uneasy with a simplistic

characterization of technical writing style:

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JO: [O]ne of the well-known tech writing textbooks, Lannon and Gurak, I mean, it's in what, the 15th, 14th edition, and they, they discuss style in one of the chapters and they say, technical writing style has four kind of pillars, you might call them, and they are clarity, conciseness, fluency, and tone. And so they talk about the plain style, but that's kind of what they mean by that: clarity, conciseness, fluency, and tone. So I don't know, what do you think about that?

MW: Yeah, that's interesting. I have read a little bit about this, and some people push back on that, because it does seem too reductive. I mean . . . it . . . it . . . that kind of discourse makes it seem like the technical communicator is just a transmitter of information.

There is a strong undertone of value here, of technical documentation and its quality and how that speaks to the quality of the writers producing it. Williams' comment prompted me to ask other writers in the study about this issue of the value of technical communication and technical writers by extension. Deborah Hemstreet commented as follows:

JO: I think often, you know, we, this kind of, very, what English has become, an Americanized English is, you know, just get to the point, don't give me any fluff, don't give me any more than I want or need and, you know, dispense with all the niceties and, you know, I'm not hundred percent sure that that is, doesn't make the technical writer into just, into just a transmitter of information. I mean, I mean, how do you think of that?

DH: Well, I don't know, I think sometimes getting to the point is important, I

agree. I get a, you know, like, I hate getting a communication even if it's a

marketing brochure, and I'll read them, and I've got like, four paragraphs

before I finally hit what the product does, you know, and, and, and it's

like, "Oh, come on, just tell me what it does and then give me the other

stuff." But I think it also depends, again, on what the message you're

wanting to convey because sometimes, well, I think most of the time, a

plain yes or no is good, and if that, if it's a yes or no question, you should

give a yes or no answer.

Hemstreet overlooks my seeming minimization of the value of the technical writer ("just

a transmitter of information") but instead relates back to the purpose of technical

communication: clear, concise communication of the information asked for ("give a yes

or no answer"). I found participants consistently working in this tension between the

plain and direct needs of most technical communication and the light in which such

communication casts the technical communicator.

One of the central tensions in characterizing technical writing style is what it

contrasts to, and for several writers in the study that contrast is best depicted by

marketing writing. In order to elicit comments on this issue, I asked a question on the

style of communication that is portrayed in technical communication compared to the

style encoded in other public-facing documentation that a company produces such as

marketing materials. Marsha Patterson, similar to Jerry Grohovsky, opposed the typical

values that inform technical writing to the more creative styles used in marketing writing:

MP: I don't know if [technical writing is] really the place for creative and

expressive writing. I mean it's certainly like our, you know, the, the

overall presentation of it, so whatever, you know, document, it gets put on

with the colors and the headings and the dreaded font that I don't like, you

know, all of that is certainly consistent so I don't know if that helps convey

the corporate message that it's also like, I think the quality of a lot of the

documents will be compromised there if you added a lot of that creativity

and expressiveness.

Patterson's comments are interesting in how she opposes creativity in writing style to the

overall purposes of technical communication, a no-frills style that evokes competence

and forthrightness, which are ideological values that inform corporate communication.

Language/style. I theorized the construct of *language/style* itself in Chapter 2.

Writers sometimes use language itself as a sort of plaything, altering styles in ways that

suit their private, idiosyncratic purposes. Most likely because the purpose of technical

and business communication often centers on informing rather than entertaining or

persuading, the participants in this study did not foreground language itself in their

comments. A careful review of the data set did not reveal a single instance where a writer

used language for a personal, idiosyncratic reason, but rather discussion of language

centered on the *Writing ideals* discussed above and the constructs of *appropriateness* and

topic in addition to *genre* needs and *audience* and *purpose* considerations. Thus, I located

language/style under *language ideology*, though I think it would take a more prominent

place as a construct in creative and personal writing as a foregrounded construct in itself.

Dina Lopez enunciated a place for *language/style* itself within technical

communication as a construct dependent on the larger needs of audiences and

organizations:

JO: So, you know, kind of, how do you mix that? I mean, what is kind of

        leading you as you're sitting there thinking about, okay, this, I need to

        change this to make this, right, in a different style, make it better?

DL: I have to go back to twin pillars of audience and purpose. That is just the .

        . . that's just the foundation that, that it's built, that I build my writing on.

        Who is my audience and what's my purpose? If my audience is, you

        know, is it academics, then it's going to affect the genre. Not academic, is

        it more in the fields? Different genre, different kind of writing. Less

        academic. What's my purpose? That's going to affect the genre as well. Is

        it that, that's just the foundation. First thing that I think of.

Language for technical writers seems always second to *purpose*, *audience*, and *genre*

considerations and is sometimes even prescribed and codified as in the Plain Language

and Simplified Technical English movements and in the use of style guides in the

workplace. The writers in this study, even if they expressed willingness to break the

bounds of expected genres and language as noted under the *Genre and audience*

discussion in Finding 1, always discussed the purposes of breaking those norms, whether

to connect to a specific demographic or to position the company's tone and identity. I do

not belabor this point because the afore-mentioned sections of this chapter show

language/style in this light already as a construct that affects style only downstream of

other constructs. However, Eva Miranda made a comment that crystalized the place of

language/style in the workplace for technical communicators:

EM: I think it's because, you know, like, for me as a technical writer to, even

        when I listen to audio books, if I listen to something that's very

personalized, and the language it, it makes it a little bit harder to change

gears when I come into work.

Miranda's opposition of the personal and professional uses of language, which I

encountered early in the study, gave a clear sense of what was to come on this point:

language/style, for strong reasons related to *language ideology*, takes a back seat as a

construct affecting technical writing style.

Writing ideals. An especially significant way that language ideology expresses

itself is through the ideals that writers aspire to in their writing. When themeing the codes

in the study, I identified *accuracy*, *appropriateness, clarity*, *concision*, *correctness*,

fluency, *simplicity*, and *tone* as subordinate codes under the superordinate code of *Writing*

ideals. One especially important writing ideal in a corporate and organizational setting is

appropriateness, which is one of the eight original constructs theorized in Chapter 2. This

concept is inherently value-laden. Marcy Sager, when discussing the "breezy style" of a

manager in her company, commented,

> MS: It's like, okay, this is, this is too light on the content. A little bit too cutesy.
>
> We just don't need that. So we've been kind of tightening the language up
>
> a little bit as, as, as much as we can get away with it because it's, you
>
> know, it's, we feel pretty strongly that there's there is a point at which it's
>
> inappro-, becomes inappropriate.

She continued in this vein, speaking of her company's founder and his communication

style preferences:

> MS: I think he didn't mind a certain amount [of a light, informal tone and style]
>
> . . . But again, you know, you also have to look at your audience. And

sometimes I get hauled back by my suspenders and you know, somebody who has a little bit more customer contact will say, "[Marcy], that's not appropriate."

Sager's comment shows how that American corporate culture conceives of *appropriateness* in communication as an aspect of company and organizational mission and vision in part, which forms the backdrop for how style gets instantiated in specific cases. Marcy Sager also brought up the topic of *appropriateness* in relation to the FAA report, seeing its style as appropriate for its content and genre:

> MS: I'm not a complete stranger to, you know, sort of, and I don't do, I don't do medical technical writing, obviously, but you know, they're using to me, it's like, yeah, this is appropriate jargon. I mean, is it this is, this is for a technical audience, I would, I would assume from this, you know, this is a, they're talking to a technical audience, and they need to use the technical lingo for a lot of reasons, some of which is to show that they too are technical you know.

These comments on *appropriateness* are the only direct comments on this issue in the data set; however, discussions ostensibly about other stylistic matters, especially related to formal and informal tone and the uses of humor, feature *appropriateness* as a background consideration. It is the core ideal at issue in many of those discussions as the comments by Marcy Sager, William Loy Pearce, and Jerry Grohovsky show (see the discussion under the *Reader's state of mind* sub-section in Finding 1).

A number of other *writing ideals* are active for technical writers as well. Since I teach technical writing as part of my role as an educator, I encounter this version of

language ideology in textbooks frequently, and I discuss these values with students. With this background, I asked a question in the literacy history interview regarding writing ideals in an effort to gauge if and to what extent such ideals impact technical writers as they consider style. I also wished to get a fuller sense of the range of ideals that technical writers consider as they encounter and produce written texts. To that end, I referenced a well-known technical writing textbook by Lannon and Gurak (2018) entitled *Technical Communication*, which is currently in its fourteenth edition. In that text, the authors characterize workplace writing style under the headings of clarity, conciseness, fluency, and tone (pp. 208-228). I asked about these values in the following mode, which is taken from the interview with Amruta Ranade:

> JO: So, well, I'm thinking right now of Lannon and Gurak. They say the four main values of style are clarity, conciseness, fluency, and tone. So I, so I don't know, can you kind of speak to that? Does that sound fair to you in terms, in terms of a technical writing style?

Eighteen of the nineteen participants I asked this question of (95%) agreed with this characterization. However, one participant, McKenzie Williams, saw this description as somewhat reductive and another, Susan Davis, agreed "with reservations":

> SD: That, that is the answer that any engineer would give you ((chuckles)) and they really do believe that's all there is to it. On the face of it, yes, that's true. I am definitely striving to be clear and concise all of the time, and then, you know, things like tone are determined by what kind of document you're writing for your customer [unclear], but there's so much more to communicating effectively, right?

Davis' reaction shows an understanding of the rhetorical demands of specific documents. Eva Miranda objected to the term "fluency" and instead used "flow" to describe the continuity of texts as an ideal so although she did not prefer that term I counted her as favoring this characterization. Kelly Smith averred that "fluency" as a term borrows too much from its association with linguistic competence, though she did value the idea of textual continuity. As with Eva Miranda, I counted her response as favorable.

Ashley Fields disagreed on tone, prompting me to count her as opposed to Lannon and Gurak's overall characterization of *clarity*, *conciseness*, *fluency*, and *tone* as the core writing ideals of technical writing as a whole.

> AF: I would say everything but the tone. And that may have to do with the particular things that I do technical writing about. But I am a very concise writer and very consistent so there's not a lot of variation in my tone, and I tend to keep my sentences very short and direct. So the approach to something is not really something I can, I consider very important or, nor does it affect me very often, I guess.

Still, the consistency of favorable responses shows a strong sense of what technical writing should be with one additional comment to note. Marcy Sager noted the importance of Section 508 compliance on the topic of readability which I take as a form of *clarity*. Compliance of this sort is an important factor for those with visual or other impairments. This consideration prompts her to evaluate fonts, colors, and design carefully as a factor in style.

The writers in the study, in addition to universally supporting the ideals of *clarity*, *conciseness*, *fluency*, and *tone* as important ideals for technical communicators, added

more writing ideals to the list presented including *accuracy*, *correctness,* and *simplicity*, which I added as codes during first cycle coding. *Accuracy* is an important value for technical writers as they need to relate information precisely and in adequate detail for their audience's needs as well as for legal reasons. Amira Patel noted this as part of the editing and review process with designers and subject matter experts checking documents for accuracy. Phyllis Walsh, Sue Ann Hartmann, and William Loy Pearce also noted *accuracy* as a value. The purposes of technical writing, often informing and/or persuading, call for *accuracy* as a core writing ideal.

A few writers used *correctness* to refer to issues of grammar, punctuation, spelling, and mechanics, all of which need consideration in technical documentation. Amira Patel mentioned it as a basic value to show professionalism. McKenzie Williams noted that she might check for correctness alone on some projects if no revision is needed. The technical editors in the study (Susan Davis, Paula Robertson) were especially attuned to this writing ideal, both offering exact, precise grammatical and layout comments on the documents we discussed.

A few writers used the term *simplicity* to describe writing that is not unnecessarily tangled or convoluted but rather relays information with efficiency. Deborah Hemstreet values simple English but strikes a note of caution:

DH: I'm fighting to get, get, get it even into simpler English. Not that I don't

like, I'm not a proponent, per se, of the super dumbing down of language,

which I think is happening a lot. But I do think that the length and

sentence structure could be simpler and ideas can be conveyed more

simply, even using elegant terminology, just by the way you build the

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sentence, and I think that's important when you're communicating with people that don't have English as a first language.

Simplicity may be seen as a near synonym for directness. Jim Wilson discussed the Thule Stacker 830 document's language: "I'm looking at the simplified English and the short sentences. Less than 15 words or whatever the number is, and it seems like it's short and to the point, you know, very direct." Sue Ann Hartmann noted that she reviews her own and others' work for *simplicity*. *Simplicity* is similar to *clarity*, though some of the writers in the study used *simplicity* to express the idea of lack of unnecessary flourishes and directness of address which that term invokes.

Language ideology is indeed active as a construct affecting production and reception of writing style for the technical writers in this study. Olinger's statement on the importance of *language ideology* seems borne out in the findings of this study. Dominant language ideology, *language/style*, and *writing ideals* are all informed and shaped by ideology that is more or less conscious for writers and readers. The communication climate in corporate and organizational contexts shapes much of the ideology that is instantiated in technical communication, constructing *writing ideals* such as *accuracy*, *appropriateness*, *clarity*, *concision*, *correctness*, *fluency*, *simplicity*, and *tone*. In ways that are hard to entirely capture and define, *language ideology* is at work as a powerful indexer of style within technical communication.

Finding 4

Table 11

Finding 4 Overview and Perspectives

Finding 4

Technology powerfully impacts technical writing style in multiple ways.

General Overview

The impact of technology on technical writing style is significant, affecting style

mostly in terms of language, arrangement and categorization, and delivery.

Representative Participant Perspectives

[W]e have been incorporating more gifs, like animated images. . . And like videos and,

YouTube videos, so like presenting the same information in multiple formats because

some people might be visual learners, some might be auditory learners, so like

providing information, the same information to people and letting them choose the

format that suits them. And I think technology makes it very easy because I have like,

if I write a document, I can very easily convert it into a script. I can very easily, if I

capture an image, I can as easily capture an animated image. And so we have all those

tools available. (Amruta Ranade)

You can layer stuff. You can add your alternative text, you know, so that people who

are using screen readers know what you're talking about. You know, certainly stuff has

gotten much easier. (Marcy Sager)

The impact of *technology* on technical writing style is far-reaching, expanding out

to encompass areas as wide-ranging as the language used in such writing to the

categorization and presentation of technical communication in addition to its delivery and use.

Technology: growth and expectations. I begin this discussion with something of a recent history of the growth of technology's impact in the field, as told by the participants in the study, some of whom have worked through this evolution themselves. They noted the impact of *technology* on their writing practices and on the expectations of audiences related to technical documentation. I asked a question in the first interview about what each participant saw as impacting technical writing style going forward. Some responses involved reflection on the presence and effects of technology. Jim Wilson, among the most experienced technical writers in the study, had an interesting, decades-long perspective on the impact of technology in technical communication:

JW: Once we had the technology and we had access to all these AutoCAD images, I think that's when we made that step into heavily, more heavily into illustrations.

JO: Yes, that's interesting, interesting to historians of style about how the technology, the availability of the technology, kind of changed the style.

JW: Definitely, in fact, there are times when we realize perhaps we go back and look at perhaps some of these messages of these graphics are little too subtle and we need to supplement them with a little additional text to make it clear.

Wilson also discussed how that technical writers at his company used to work with an in-house composition and graphics department to produce graphics for technical documentation. Now however, technical writers themselves can easily add high-quality

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graphics, thus prompting them to use more of those same graphics. Marcy Sager mentioned this fact as well. This can occur to such a degree that, as Wilson's comments show, sometimes technical writers find graphics taking over to the detriment of the clarity derived from written language. Deborah Hemstreet noted this same concern:

> DH: Oh, yeah, I mean, sometimes I'll end up thinking more visually than verbally and then I've got to get myself out of the visual and back to the writing. I mean, I enjoy document design, but I can go overboard with it. And I love, I love working with the graphics, but I can go, I can go overboard with it. Just because I can do something doesn't mean I should do something.

Hemstreet's comments show to what degree technology has become pervasive for technical writers since now they are forced to manage its role and presence as part of their technical communication process since in many cases they do not work with in-house graphics departments any longer. Marcy Sager expanded on this same idea, noting the need for technical writers to focus on language as the primary component of communication and, though programs and technologies can supplement that role, they should not take its place.

Kelly Smith discussed the growth of the impact of technology in terms of changing audience expectations:

> KS: [I]f I'm producing a document, you know, back in the 90s, it was all Times New Roman, 12 point, and that's all anybody ever did. Now things have to look modern. They have to have a better layout, more white space, they have to be designed more than in the olden days, you know, because now

everybody's got an iPhone or something and they're used to really good, top-notch, professional design. So if I'm going to do a report, I want it to look as good as any other professional report would look. I don't want it to look like something from 20 years ago.

McKenzie Williams echoed Smith's statements, noting how that modern audiences expect a level of gloss and sophistication from even the simplest technical documents since quality document design and presentation has become the norm rather than the exception.

Deborah Hemstreet wondered about the effects of technology on writing style and communication preferences, which might have been presented as easily under Finding 3 on *language ideology*:

DH: [A]gain, it's, to me, it's the dumbing down of thinking. I think there's a fine line between communicating clearly and, and, and coming to a point where you're encouraging people not to think by spoon feeding information to such a degree. And, and because of the technologies I mean, the XML and the style sheets and the DITA sheets and the standards and somebody has the rules for the simple English and the plain language and they have their set vocabulary and you can only use these words. The technology is allowing us to do it, but in a way we're letting it rule us instead of thinking about what we're doing and how this is going to impact people. And, and I really do think that that some of this is leading to people not thinking like they used to think.

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These comments show the effects of the shift from print to visual media as in some ways possibly threatening attempts at nuanced communication. It may be, however, that the already significant cognitive and experiential demands that technology places on readers create a need for simplified, usable texts for readers. These tensions between accessibility and possibly "dumbing down" communication are felt in technical communication just as they are felt in wider discussions around the meaning of literacy in a technological age.

Technology and delivery. Technical communicators today often face issues of delivery across formats and audience preferences in terms of interfacing with technical documentation. Amruta Ranade's comments show the effects of technology options on how end users access content, thus changing their experience with technical documents:

> AR: I've just been working on this, so this is on the front my mind right now. But we have been incorporating more gifs, like animated images and like videos and, YouTube videos, so like presenting the same information in multiple formats because some people might be visual learners, some might be auditory learners, so like providing information the same information to people and letting them choose the format that suits them. And I think technology makes it very easy because I have like, if I write a document, I can very easily convert it into a script. I can very easily, if I capture an image, I can as easily capture an animated image. And so we have all those tools available. It's up to the company about if they want to use it and if they want to invest in it.

As technology offers readers ways to access content in ways that dovetail with their preferred learning style or way of accessing content, this fact impacts how technical

writers approach the writing and style of those same documents. Ashley Fields talked

about the effects of such change on the task of technical writing itself:

> AF: I think the actual writing of documentation is gonna change. It's gonna be
>
> the programs we use to produce it. I have recently just this year have to
>
> learn how to write HTML and I've never had a class, never had anything
>
> and they were like, "This is what we have, this is what we need, and we
>
> need it by then." So I got a crash course in that and I'm pushing them
>
> towards FrameMaker or a similar program, right. Because people are
>
> accessing the document in so many ways that you can't control with
>
> Adobe PDF or InDesign, which is what I use now. It doesn't auto format
>
> to cell phones or tablets. So I see the HTML programs and things that will
>
> auto format to fit any type of technology kind of taking industry over.
>
> JO: Okay, that's interesting. Okay. Yeah, and nobody has answered the
>
> question that way. That's so, it's, it's kind of, you know, the technology
>
> kind of has some backward causation in terms of how you need to kind of
>
> lay it out so that I mean, because you're considering HTML coding, you
>
> might, you might end up changing how you're going to lay something out,
>
> or what it's going to look like, possibly?
>
> AF: Yes

On a similar note, Amira Patel talked about software that formats content across

platforms, DITA (Darwin Information Typing Architecture), and its broad impact on

technical writing:

AP: What we're actually working on is DITA-based content. So everything is

divided into topics. We have three types of topics. You have your "task

topic" where it's pretty much just instructions. There's no like before and

after, maybe a sentence or two to reference something, but most of it like

is just the instructions, like step one, do this, step two, do this. And then

the second is "concept phase topics" which is, you know, just if you want

to talk about a concept. You want to talk about what you can do with a

certain window or certain feature and that would be paragraph style. . . .

and then the third, third topic type is, we call it "reference topics" which is

just [unclear] information. Like if we need to say, "This guide only

includes XYZ. If you want more information, refer to blah, blah, blah

guide." Or cross-referencing topics within a single guide, things like that.

So, they're just, it's easier, easier to get through.

"Task," "concept," and "reference" are forms of "semantic tagging" (Pryatz-Nadworny,

2018) that affect the content that writers choose to integrate or exclude from technical

documentation. These tags affect its ordering and presentation as well, presenting major

implications for technical writing style. A few other writers (Marcy Sager, Deborah

Hemstreet, Nick Peterman) noted the use of DITA in their technical writing practice

though I did not ask every writer whether they use this technology (Ashley Fields noted

the use of HTML coding as a means to format content across platforms).

The impact of technology on technical writing is such that Sue Ann Hartmann

sounded a note of warning about the impact of technology on technical writers and their

job security. She envisioned a possible future where data structuring tamps style down to a point where human authors may not be needed:

> SAH: But I think there's a tendency to want to automate writing and every
>
> opportunity they have, every opportunity companies have for building an
>
> automated documentation tool, they're going to use it and they're going to
>
> get, and they're going to get to a point where they're going to be able to do
>
> it. I mean, they're already starting in that direction, you know, they've
>
> already made some headway in it. So I don't think we can, can I don't
>
> think we can, we can allow ourselves the, the privilege of thinking that our
>
> jobs can't be taken over by machine because I think they, I think they are
>
> headed that way. But again, going back to what you said where, you
>
> know, we have to look at it for effectiveness, it's really doing the job or is
>
> it just saving money at the, at the expense of not doing a good enough job
>
> and we have to be honest with that effort.

The voicing of this concern shows the felt effects of technology in practice for technical writers themselves, which provokes the need to think about the qualitative aspects of human-produced communication that transcend the capabilities of automated production of communication.

Technology and language. The *Language standardization* and *American corporate language* sub-headings under Finding 3 show some of the technology-specific ways that the style of language moves within the discourse of American technical and business writing. DITA, for example, provokes writers to write within task, frame, and concept modes, hedging communication into those categories for easier transmission

across delivery formats. This finding was unexpected, how that language itself is impacted by technology, and shows the pervasive impact of technology across the spectrum of technical documentation. Not only does technology impact writers in terms of softwares and platforms used to create technical documents but also in terms of its presentation, organization, and word choice.

In sum, *technology* is an important construct affecting technical communication. In one way, it is part of the "dynamic co-construction" process that Olinger advanced, a ubiquitous force that bears more examination in discussions of style. Co-construction thus occurs not only between human actors but also through technology and the stamp it places on writing style. Technology's impact will continue to tell as technical communication evolves to meet the demands of audiences in terms of access, delivery, and presentation.

Finding 5

Table 12

Finding 5 Overview and Perspectives

Finding 5
Issues of *embodiment* and *materiality* factor into multiple constructs as technical writers encode and decode writing style.

General Overview

Embodiment and *materiality*, concepts that represent the embedded, embodied nature of language conceptualization and usage as well as the physical aspects of objects, environments, and cultural milieus, are both evident in this study. Technical writers consider material aspects of technology, audience interaction with texts, the impact of delivery modes on reception, and the impact of materiality on their own writing processes. In addition, they illustrate embodied cognition through metaphors for writing ideals.

Representative Participant Perspectives

And I can see, the thing I like about it is I know when I put these together, I'm standing there trying to put it on my hood, the roof of my car, and I'm looking down at this thing that's laying on the ground, you know what I mean, so they made the instructions, the illustrations very large, so you could see it while you're working. (Jim Wilson)

Yeah, I think this is very clean. Actually, I like it. (Amira Patel)

I don't know, you've probably talked to writers who feel more creative by putting it down with a, with a pen or pencil in hand to a piece of paper, versus doing it from your fingers on a keyboard. (Jerry Grohovsky)

Issues of *embodiment* and *materiality* are present in discussions of writing in ways almost too innumerable to detail. The post-Cartesian realization that language is distributed and embodied has energized theory and research. In what follows, I use the term *materiality* to refer to a wide range of experience and being, encompassing the thing-ness of objects, spaces, and milieus. *Embodiment* refers to the impacts of body and

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physical reality on human cognition and language use. Both *embodiment* and *materiality* are present in each topic that follows, each foregrounded or receding in subtle ways given topic and specific language use.

Technology and materiality. As an example of *materiality* affecting the style of technical writing style, the effects of technology change the ways that technical documentation is produced and communicated. Jim Wilson, a long-time technical writer, depicted this in his comments on the changes he has seen during his time at a manufacturing company:

JW: I was at Jones Manufacturing* when we introduced desktop publishing and when I came to Smith Power* they had just switched over. We were doing it both ways back in the days when we would develop a key line and we would paste it up on boards or you know wax and then a copy and then we would paste it up and burn plates for offset printing. Now, you know, I talk to people about that and they don't even know I'm talking about, but yeah, at that time it seemed pretty cool, spending all that time and pasting all those little words, making things fit, and then desktop publishing came along and it was revolutionary. I mean, in a short time all that old equipment and all those methods went away even though the terminology, you know, key line, and God, half the terms you would use in desktop publishing go back to the days of linotype but it changed overnight. Now, we use a software called Quicksilver. It was one of the early ones and we're still using it here, and it allows us to embed an image right into the

document so we spend a fair amount of time adding callouts and numbers

and so forth.

*indicates a pseudonym

Wilson shows how that the manual and technical circumstances of writing invite a

different, more visual presentation style.

Embodiment/materiality and writing process. Wilson's comments also speak

to the process of putting together technical documents, which Dina Lopez also discussed

when she talked about a project where she combined several documents into a single

manual:

DL: The student handbook and the policies and the teacher handbook I literally

cut up into sections, put them on a table, and put the sections that overlap

together, and then from there, built the handbook because they overlap so

much.

She continued, "I have found that if I take something, and I can manipulate it physically,

it's a lot easier for me to get a handle on it than to look at it on the screen." Like Lopez,

Jerry Grohovsky thought of material issues when asked about the specifics of his writing

process:

JG: I always outline my steps on paper, because I feel like, I mean, if you want

to use that perspective, too. I never generate an outline off of a keyboard. I

don't know, you've probably talked to writers who feel more creative by

putting it down with a, with a pen or pencil in hand to a piece of paper

versus doing it from your fingers on a keyboard. To me, there's more,

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there's more of a creative tapping into your brain that's more magical with putting it down on paper with, with your penmanship.

Connected to this idea, some writers talked about *embodiment/materiality* in terms of writing process for an instructional document. Marsha Patterson, Nick Peterman, and Phyllis Walsh talked about the importance of actual physical familiarity with the product and its use in the writing of instructional documents. Walsh used embodied familiarity with the process described as a means to get at the "particular human moments" that a good set of instructions anticipates and addresses.

Embodiment/materiality and audience. Sometimes, the material circumstances affecting the audience also affect style through a form of audience address where writers consider carefully the physical moves, stance, orientation, and potential difficulties that readers might face when interacting with a piece of technical documentation such as an instructional document. Jim Wilson spoke of the Thule Stacker 830 document in this way, "Well, considering their audience and a fellow is going to be putting this together in his driveway, they kept it very simple." This comment is similar to his comment on the size of that document's visuals:

JW: And I can see, the thing I like about it is I know when I put these together, I'm standing there trying to put it on my hood, the roof of my car, and I'm looking down at this thing that's laying on the ground, you know what I mean, so they made the instructions, the illustrations very large, so you could see it while you're working.

In these two comments, Wilson shows sensitivity to the physical circumstances of reception as a guide to making stylistic decisions about a document.

A common practice in technical writing is the implementation of usability testing to get a sense of the material aspects of audience reception and implementation of texts. Jim Wilson suggested that some of the style evident in the Thule Stacker 830 document might derive from such testing:

> JW: Well, it seems to me that, just my impression is that they used a lot of customer feedback in putting these instructions together. I'm looking at these illustrations that show you how to route that rope in step nine. I mean, we've done similar things. Look at step eight where they show you how to loop that strap for load clearance, and we've done similar things in response to customers; we have these straps, a carrying strap or something, a fancy buckle, and they're completely confused about how to hook it up, so I'm thinking that Thule has probably encountered the same type. It looks to me that even the tying of the hook on, they do a pretty nice job of showing how that knot is tied.

In this case, the needs of the user to understand the manual aspects of the knot used in the instructions drove the visuals and presentation in the text on Wilson's usability-based reading. These considerations are an important ground for technical writers, especially with instructional documents as readers undertake physical processes.

Embodiment/materiality and deliverables. Kelly Smith discussed issues of *embodiment/materiality* in terms of the deliverables that end users need:

> KS: I can either call [the end users for a document she is writing for in-house use] on the phone or go to their office or visit them at the manufacturing plant and say, "This is what I'm preparing for you. Is this helpful?" You

know, do you need it . . . For example, I was writing things for people to

use in a garage where it was really dirty and greasy, so what format do I

have to give it to you in? If I give it to you on a computer, that's no good.

It has to be laminated paper, you know, that kind of thing.

Smith allows the needs of end users in terms of document type and format to guide

presentation and the deliverable offered to the user.

Phyllis Walsh took this issue of the medium of delivery in a different direction,

suggesting that print and online mediums of delivery have an impact on reception.

JO: Well, you know, you're a good person to ask this question because of your

perspective and your experience. I mean, to what extent do you see

technology kind of impacting even what you do? And again, think of style

in that larger sense of even graphics, visuals? I mean, do you see that the

force of technology impacting the style?

PW: Oh, definitely. The whole experience thinking back to Marshall

McLuhan's [unclear] Internet. Internet is a cool medium from that point of

view. It's just passively sitting there whereas picking up a manual, looking

through the pages, you have to act. You have to think ahead. With a

screen, you just let it wash over you, and if you're not writing right, if

you're expecting people to read this and pay attention like they would a

printed page, you're gonna lose them.

Walsh's perceptive remarks speak to the impacts of both *technology* and also

embodiment/materiality as impactful constructs affecting reception.

Embodiment/materiality metaphors. *Embodiment and materiality* impact the production and reception of texts in other ways as well including the use of embodiment metaphors to characterize writing style itself. Amira Patel used such a metaphor when discussing writing on several occasions, the word "clean": "So I just felt that. You know, steps are labeled. It's very clean. It's easy on the eyes. The spacing is good." Sue Ann Hartmann and Susan Davis used the same metaphor, seemingly as a metaphor for the writing ideals of *clarity* or *simplicity*. Speaking of the Thule Stacker 830 document, Sue Ann Hartmann said, "I do like the illustrations. I think the illustrations are nice and clean." Jerry Grohovsky talked about the need to "clean up" sentence structure and punctuation, picturing a writing ideal of *correctness*. In this study, writers used this embodiment metaphor to depict writing ideals, always favorably.

Embodiment/materiality is a wide-ranging construct affecting the production and reception of style. This construct, one of the original eight constructs theorized in Chapter 2, is of such potent impact that its importance is hard to overstate. It affects writers in their language use, no doubt in ways far wider than the use of material metaphors noted above, it brings writers and audiences into relation as a means to structure content and style, it impacts technology use and process for writers, and it weighs significantly into the effectiveness and effects of deliverables that technical writers produce.

Finding 6

Table 13

Finding 6 Overview and Perspectives

Finding 6

The exigencies of one's specific writing situation foreground various constructs above

others in the production and reception of writing style for technical writers.

General Overview

A specific writing style does not emerge in a vacuum, but rather the exigencies of

contexts, genres, and audiences all play a role in foregrounding various constructs in

the production and reception of technical writing style.

Representative Participant Perspectives

I have a feeling that everything that I write is going to have a very long shelf life. So

I'm very deliberate. (Eva Miranda)

So, you know, I mean, you've got your standard questions that you want to ask when

you take on a project. You just want to know who the audience is. You want to know

what the purpose is? And then the third question is when do they need it by? (Sue Ann

Hartmann)

A finding of this study emerged as I found constructs impacting technical writers

in individual- and context-specific ways. This is an example of the concept of exigence as

portrayed in Lloyd Bitzer's (1992), "The rhetorical situation." In Bitzer's (1992)

formulation, "Any exigence is an imperfection marked by urgency; it is a defect, an

obstacle, something waiting to be done, a thing which is other than it should be. In almost

any sort of context, there will be numerous exigences" (p. 6). This picture of exigence is

reflected in this study as the fluidity and specificity of contexts tells on each writer and that person's production and reception of writing style.

I categorized *topic*, *purpose*, *time-deadline*, *time-shelf life*, and *cost* under this heading since those concepts were active as constructs in the study, but they did not fit easily under headings such as *audience*, *genre*, *language ideology*, and other constructs mentioned above. Instead, I needed a new categorization that depicted how writers used these constructs in relation to exigencies unique to situations. The constructs of *topic*, *purpose*, *time-shelf life*, *time-deadline*, and *cost* foreground constructs in ways that I show below. In addition, I treat the *writer* as a separate construct impacting reception of style under *Exigent factors* since that construct emerged in relation to *purpose*.

Topic. *Topic* is one of the original constructs I theorized affecting writing style in Chapter 2. I found it operant at times in the interviews with each writer, though not as a dominant construct on its own. Rather, I found that it acts as a cipher, foregrounding other constructs as writers encode and decode writing style. One way this occurs is through softwares like DITA that force writers to categorize information as Reference, Task, or Concept, in a way shifting each writer's construction of text and information into those pre-determined modes. This mode of writing is sometimes called "topic-based writing." Marcy Sager depicted the effects of *topic* on her writing:

> MS: I was lucky my, my sort of informal training when I first started in this
>   business, it just fit with DITA like hand in glove. It was amazing so when
>   I discovered this I was like, well, shoot, the stuff, I've been writing is
>   already, it's already pretty much yet you know, Reference, Task, and, and
>   Concept. So, I didn't have much trouble splitting myself up, splitting

myself up into, into appropriate topics. But DITA really helps with that. I

mean, it really, really, really, really does.

Sager enunciated this idea again as we discussed potential problems with the

classification of information in the Thule Stacker 830 document. The categorization of

topics in DITA offers a clear path for writers to know what to include and exclude from

each unit of text they write.

A number of writers talked about the impact of *topic* when we discussed the FAA

report. When I asked Jim Wilson to compare and contrast the Thule Stacker 830

instructions and the FAA report in terms, he averred,

JW: I'll have to think about that for a second, you know, they are different

kinds of documents. One you are trying to support your product so people

are happy with it and will continue to buy it and use it safely and

effectively and in this case, you just have a large body of information that

you're trying to share with legislators and other scientists and government

officials and so forth. To me, it wasn't written obviously for, with the

intention of making it easy to understand this topic, although that is

always the case in writing. I think, you know, it's a different approach,

you know, for this second document, like I said, they have a lot of

complex information to get across and that was the priority as opposed to

making it easy to understand.

Several writers responded to the FAA report in this way, commenting on its obfuscatory,

thorny style as a function of its *topic* and *genre*.

Kelly Smith made a distinction between *topic* and the *audience* for the topic when I asked her about topic impacting writing style:

JO: Another thing that I have noticed is topic, I mean, do you, does the topic kind of ever impact you, you're writing for, you know, this topic, and it kind of changes a little bit of your approach?

KS: Yeah, if I'm writing, well, maybe not the topic so much as the audience for the topic. Like if I'm writing a year-end report and I know that four vice presidents are going to read it, not only do I put a lot more effort in for it to be perfect, but it's going to be more serious sounding. It's going to be more . . . I don't want too corporate sounding because that's almost a bad thing. But it's going to sound like something that a vice president would expect to read, and if I'm writing a newsletter article, it's going to be more conversational and "Hey, did you know about this?" you know. Look at this awesome thing that this team did. So it's gonna be more newsy and casual.

Smith connects *topic* to tone and word choice. She shows how topic draws out different tones as writers choose diction and style carefully.

As mentioned above under *Genre and audience* in Finding 1, with a few participants, I discussed a piece of camping equipment I had bought that did not include a typical set of instructions within the packaging but instead referred consumers to an online set of instructions. In part, I asked about this practice to get a sense of where the instructions genre is headed in terms of deliverables. McKenzie Williams related the

decision about what kind of deliverable to offer the consumer back to a topic- and

audience-based consideration:

> MW: That is, that is when you think about how they considered their audience
> in that case . . . Yeah, people who, you know, the kind of people who are
> camping at probably, you know, families, you know, who can watch a
> video just as easily as read something; in fact, more easily. Yeah, and you
> won't mind getting a laugh out of it. Because they're about to go on
> vacation. Yeah, versus like, you know, your vacuum cleaner, where you're
> just sort of like, just tell me . . .

Williams implies that this informal style and approach might suit documentation related

to camping equipment but not something as humorless and practical as a vacuum cleaner.

Though several participants noted the effects of *topic* on their style, especially when

coupled with *audience* and *genre* considerations, it was often expressed in terms of tone

and diction.

Purpose. Several of the participants enunciated a place for *purpose* as

determinative of their style. I had noted a consistent reference to *purpose* as a construct

affecting style and thus coded for it in first cycle coding, but I did not know where to link

it to the rest of the codes in the study until I did a round of second cycle, focused coding

to ascertain whether writers linked *purpose* to specific and exigent factors or whether

they spoke of it in more general terms such as "to inform" or "to persuade." The former

proved to be the case, prompting me to locate *purpose* as one of the *Exigent factors*

affecting technical writing style. Amruta Ranade was especially specific on this point:

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> AR: So I have this process in which I do a thorough audience analysis and like the purpose and how are they going to read it and what do I want them to take from it? And then I consciously choose a style I want to portray. It also depends on who like the country that I'm writing for. I'm writing for an Indian audience is very different from the way I write for an American audience. So I have to be very mindful about the purpose of that particular piece of writing and next, what do I want the people to do with it? So the style is dictated by that.

Ranade's comments show how significant an issue *purpose* can be for technical writers who use it as a filter to adjudicate decisions about language and presentation.

Another example of the *purpose* construct used in this way is in the linking of *purpose* to a company's mission statement. McKenzie Williams summarized how *purpose* relates to company and organizational needs in a technical writer's perspective:

> MW: Yes, no, I like to think of it because, you know, with personal and creative writing, you need, you've got the rhetorical triangle: writer, audience, purpose, but when you get into the professional world, that triangle becomes not a triangle anymore, because it's, really, it's writer, purpose, audience, clients, and then employer.

Williams evidenced a subtle understanding of the impact of *purpose* on style when we talked about changes to the Thule Stacker 830 document:

> MW: But again, I mean, it comes back to purpose, and this, your purpose is to use your instructions in such a way that they can easily follow them and do what they need to do then, I mean, because you do need to add

personality into that? I mean, you know, your purpose is not to entertain, and it's not a marketing document. It's a user guide.

In this case, Williams' definite sense of the *purpose* of the document guides her reception of the specific style of a text. The *purpose* she discusses is localized and specific to an audience and a company's needs, making it impossible to characterize with simple phrases like a purpose "to inform" or "to persuade" or "to entertain."

Finally, Deborah Hemstreet spoke about the exigencies of *audience* and *purpose* in terms of constructing a letter to a donor, which is one of her tasks as an English writer at her organization in Israel:

> DH: Well, even something like a letter from my boss is going to depend on who's the letter to. I mean, if it's a high-end donor that he is personally in contact with, you know, I want to know, "Well, when did you last talk to him?" "Have you talked with him recently? What did you talk about?" So that I can mention it in the letter, and that's going to be very different from a letter that he's going to write recommending graduate students for a position someplace else. I mean, it's a totally different tone, totally different vocabulary and, and total, you know, it's just different.

In this case, *purpose* is linked to *audience* in a way that shows how exigencies of each communicative act determine stylistic approach. Indeed, *purpose* links itself to other considerations as technical writers take on the task of crafting communication in corporate and organizational contexts.

Purpose and the writer in reception of style. Another finding of this study is that readers, when constructing perceptions of style, may sometimes use a mental

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representation of the writer's purpose(s) to guide their representation of the document's style. This recognition in mind, I included the *writer* in the kairotic funnel for readers at the bottom of the Construct Model of the Sociocultural Theory of Style (see Figure 12). Only a few participants mentioned this reading strategy, so it did not seem consistent or insistent enough to represent it as a separate finding in the study. Also, since I think it likely that readers picture the *writer* in other ways that impact their reception of style and do not limit their mental representation of writers only to that writer's supposed purpose(s), I did not place the *writer* under *purpose* and thus *Exigent factors* in the Construct Model but rather left it separate in the Final list of themed codes (see Figure 7). I have no data to warrant this claim from this study, yet I also do not have enough data to locate *writer* under *purpose* either. I discuss the *writer* as a construct affecting the reception of style under *purpose* since that is where the discussions surrounding the *writer* as a construct emerged.

A couple interview selections will clarify how the participants in the study factored the *writer* into their reception of style. When discussing the conclusion of the FAA report, McKenzie Williams sought to identify the *purpose* of the *writer* so that she could interpret this somewhat difficult document on those terms:

> MW: Yeah, I mean, yeah, it, it, it's not like outwardly offensive, like, the introduction was to me, but I do have to say, as a reader, I'm missing the "So what?" a little bit especially if I'm a policymaker, it's like, "Okay, what do I do with this information?" And that, to me, is probably the biggest challenge with reports like this. So often, and even at the college

level is . . . writers, it's difficult, really difficult for writers to remember to

get that "So what?" across to the reader?

Williams searches for the "So what?" or the purpose of the document in order to

comment on the document's quality. She implies that the writer has a responsibility to

bring the document's purpose to the awareness of the reader, and if this responsibility is

not met, the writer can justly face censure. This is an aspect of the shaping of perceptions

related to reception of style by sensitive readers—at least at times, they construct

readings based on placing themselves in the writer's position and ascertaining the

purpose driving the communication.

Likewise, Sue Ann Hartmann took the FAA report on its own terms, suggesting

its writers encoded the appropriate style for its apparent *purpose*. We were discussing the

differences between academic and technical writing in this exchange:

SAH: Right, and, you know, you go out of your way, and you remain objective

and a lot of things and you, you know, at the most basic level . . . . And,

and I get it because, you know, when they're doing scientific reports, when

they're doing studies, things like that, you know, you're, you're remaining

objective and I completely get where they're coming from. It's just that I'll

change it around for our purpose.

Hartmann takes the FAA report on its own terms based on its *purpose*, a consideration

that is part purpose-based and part genre-based. She seeks to relate the writer's *purpose*

to the document's style to construct her own reading of the document, noting contextual,

genre, and purpose factors that shift her perception of the document's style.

A couple other participants responded in this vein as well, allowing the writer's

supposed *purpose*, and the genre as well, to guide their reading of a document's style. Jim

Wilson perceptively noted the contrasting rhetorical purposes at work when comparing

the two documents I presented for discussion in this study, and he allowed that

consideration to guide his reaction to the style of each one. Speaking of the FAA report,

he noted,

> JW: To me, it wasn't written obviously for, with the intention of making it easy
>
> to understand this topic, although that is always the case in writing. I
>
> think, you know, it's a different approach, you know, for this second
>
> document, like I said, they have a lot of complex information to get across
>
> and that was the priority as opposed to making it easy to understand, and
>
> you know, if I could have gone another ten pages at all the information
>
> they probably have available, but the style of writing I like.

Marsha Patterson's comments on the FAA report were very similar:

> MP: [T]he purpose of this wasn't to give an outcome. If the purpose of this was
>
> just to show the data and the research and then pass it along to someone
>
> else who determines the outcome, you know, then that, then it may have
>
> served its purpose. So, I'm not really sure, you know, the audience for this
>
> and the purpose for this.

Patterson carefully modulates her reading of the report based on her lack of precise

understanding of the purpose and intended audience of the document, a move only a

rhetorically-sensitive person would make. Likewise, Nick Peterman did not commit to a

characterization of the FAA report's conclusion in the absence of clear understanding of

how direct and concise the writers of the report wanted to be.

The writers in the study only started to bring up the *writer* as a construct as they encountered the FAA report where they were less sure of the writers' purpose(s) in writing the document. I did not encounter this same hesitation in readings of the Thule Stacker 830 document which was written by technical writers. The participants in the study seemed much surer of their readings of that document's style and its purposes.

All told, the *writer* as a construct affects readers in ways that are similar to the ways in which the *audience* affects the writer, the vision of an active intelligence on the other side of a document affecting how it is constructed from the reception side and how it is received from the production side. Less clear based on the limited findings of this study is how widespread constructions of the *writer* affect readings of texts and whether the participants in this study, themselves writers, are more prone to think of texts in "writerly" ways such as considering authorial *purpose*. Much is not clear on the reception of style in relation to how the reader constructs the *writer*, though it is apparent that at least at times readers construct readings of style based on their conception, or lack thereof, of the writer's *purpose*.

Time-deadline: Deadlines that technical writers face are an important, exigent consideration when crafting documents and their style in some cases. I began asking some participants about this construct after several commented on it as a construct affecting technical writing style.

A few participants linked the *writing ideal* of *concision* to the issue of time with more time for revision resulting in more concise documents. Sue Ann Hartmann was very specific on this point, suggesting that it plays a significant role in her constructions of documents:

SAH: [W]hen they give you a deadline, and, you know, it's next week instead of

next month then, you know, there is that, as crazy as it sounds, I tend to

think I'm going to come up actually with, my document will actually be

longer rather than shorter because I won't have that extra time to be able to

cut out the extra words and make it more concise and to the point, you

know, that kind of thing.

Later, Hartmann talked about the pressure of having the "time that it takes to make things

shorter and still have them be as effective." Susan Davis and William Loy Pearce also

talked about the pace of workplace environments militating against *concision* and

attention to detail.

Paula Robertson talked about the *time-deadline* construct as well, even noting

how that problems with vendors or unfinished portions of production upstream from the

technical documentation process can force her to write "agnostically" due to deadline

pressures:

PR: [M]ost of the time, [technical writers are] under such ridiculous time

constraints, they just want to get it done. And then, then there'll be glitches

with a third-party partner. So it's delay, delay, delay, and nothing you can

do about it, and, and then, and then we have issues with tools being

discontinued that they have written into the curriculum. They got to find

another way around that to find another tool or write it, you know,

agnostically.

These comments show some of the exigent pressures on technical writers impacting

construction of style; in this case, *time-deadline* issues even forced writing to be

completed in the absence of all of the information and tools needed to inform its construction.

Cynthia Vann talked about this issue in an editing role. She brought up the *time-deadline* construct unprompted when I asked whether style is a significant or top-of-mind consideration as she produces technical documentation:

> CV: I think, I don't know that [style is] top of mind because I think what I encounter is, so first of all, when my assignments come to me, it's pretty uncommon for me to be the original author. I'm typically taking multiple authors and I'm writing, you know, essentially, it's like an editing role. But I do produce. I do also produce writing as a part of that role. So I think it's not top of mind, probably because they don't always, if you can imagine, they don't always get it to me with enough time to do all of it, you know, to do all of the tasks, like it's, it's quite likely, especially if we're dealing with, so sometimes we receive material from sub-consultants to our firm and those typically require more of my voice, you know, like my, you know, my unifying writing style, but if I don't have enough time to do that and clean up, you know, essentially what we call cleaning up the text, then I'm not spending much time on style. However, I would like it to be top of mind. My interest is in having it be top of mind because of what we just talked about. Because I feel like if you do have five authors, you want it to be one voice and our clients also say that. They, you know, we will routinely get feedback from them that you can tell more than one author

> wrote it. But, you know, you also have these constraints that you have to
> work with it.

Vann's comments show just how exigent *time-deadline* is for technical writers. It impacts the attention to style that they can afford to give to any single piece of writing. The impact of *time-deadline* is such that it restricts the attention to style that a document might otherwise receive. Many businesses and organizations seek to address this issue through layers of writers and editors seeing any particular document, as the comments on *co-construction* show below. However, in some cases even editors or those with final proofing responsibilities face time pressures significant enough to cause style to suffer or at least receive less attention.

Finally, I note that an assumption of the writers in the conversations on the *time-deadline* construct is that style is a later, fine-tuning consideration that mostly centers on *writing ideals* and available time to attend to its construction. This suggests that writers must rely on training and instincts to a degree in their writing and construction of style. It also shows a conception of what style is and its place in the writing process for some writers in this study.

Time-shelf life: Some technical writers in the study brought up an unexpected construct affecting writing style that I had not theorized before the actual research process began: the anticipated life cycle of a single piece of technical documentation and its impact on the time and effort that is invested in the style of a document. Jim Wilson brought up this consideration when comparing the Thule Stacker 830 document and the FAA report:

JW: Well, you know, when you think about it, this is something that people

        are, they are, someone is probably going to keep this and reference it and

        keep it in their file for a while, whereas that Thule thing, they are going to

        put it on. Although some people keep instructions, a lot of people just

        throw them away because they don't need it any more, whereas this is

        going to be referenced. This document is going to have a different life

        cycle than the other document.

I captured this idea of life cycle in my analytic memo on the interview and noticed when

it came up again. Susan Davis coupled this idea of time with the cost and effort involved

in qualifying some products for production:

SD: Yes, I would say if you're writing specifications, you're usually writing

        them with the intention that they're, they're going to have some longevity

        because it's very expensive to qualify materials and processes and parts so

        you want, you're hoping that those get used on lots and lots of builds.

        Yeah, so, you know, that would be a genre or category of documents that

        you are looking at like, like really long term used. But if you're writing a

        bulletin, then it's a flash in the pan, you know, so for something like that,

        you know, my goal would be to get all of the salient information on one

        page or half a page, and, you know, then get some, some contact

        information out there and yeah, you drop that off and walk away.

Davis sees the impact of longevity, what I term *shelf life*, as mostly a matter of

investment in the single piece of writing with shorter-lived documents requiring more

focus on *accuracy* and necessary information and longer-lived documents coming in for a

full-orbed consideration of the various *writing ideals* impinging on writers'

consciousnesses.

McKenzie William spoke in a similar vein about a document she edited in the

aerospace sector she works in:

MW: I remember when I edited it, for one thing I wasn't even entirely sure what

I was looking at, and I think I didn't really have the time to figure it out

and I frankly, didn't think that my contacts knew either. And, and also,

but, you know, I think the audience doesn't care. This is just for internal

NASA, NASA use, and I have a feeling it was one of those documents that

was never going to see the light of day anyway, just one that's in draft

perpetually. And so I remember I sat down, I just, I just edited it purely for

clarity and correctness, just to make sure, do these sentences make sense.

Is this consistent because, you know, and I kind of just, you know, I am

not super proud of it, but that's what I did.

The *shelf life* considerations at work in any single piece may foreground or elide various

writing ideals as Williams' comments show. This construct, though not as prevalent as

time-deadline as a construct affecting writing decisions related to style for the

participants in this study, is nonetheless a part of the total network of constructs affecting

style identified in this study.

Co-construction. An especially important construct affecting the reception and

production of writing style is *co-construction*. Olinger (2014b) noted the importance of

co-construction in delineating the sociocultural theory of style. In her statement of the

theory, she defines styles as "the *dynamic co-construction of typified indexical meanings*

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(types of people, practices, situations, texts) perceived in a single sign or a cluster of signs and influenced by participants' language ideologies" (p. 125, italics in original). I did not initially take *co-construction* to be a construct affecting stylistic production and reception on my reading of her theory since, in this statement, she defines style *as a form of co-construction itself* rather than style *as a result of that co-construction*. While coding the interviews for this study, it became apparent that style is both a co-construction, especially as a joint venture between author and reader, but also is influenced by co-constructive factors as well, including *technology*, as I discussed in Finding 5.

    Co-construction occurs at several levels. The communication climate of American business and organizational language is a macro-level source of *co-construction* (I discuss this in Chapter 5). *Co-construction* not only occurs at this ideological level but also at the level of industry- and company specific style guides and approved language codes, in the required language of regulatory and compliance considerations, and in the often collaborative environment and process that attends the production of most technical and business documentation. Such writing is rarely the product of a solo writer but rather subject matter experts; various constituencies like marketing teams, management, and regulatory and legal agencies; and professional expectations of communication encoded exterior to any single project such as style guides and required language all place their stamp on the style of written documents.

    Participation in professional organizations and connection with other professional communicators constitutes a form of *co-construction* for the participants in this study. Looking specifically at ways that the technical writers in the study contact other professionals in their field formally or informally, I asked a question about organizations

and groups that each participant is or was part of. Their answers noted participation in a wide variety of professional and informal organizations[28] and their use of listservs, blogs, and discussion boards related to technical writing or writing in general such as Tech Whirl, Tech Shorts, the Society for Technical Communication discussion boards, and others (Marcy Sager, Deborah Hemstreet, Eva Miranda, Amruta Ranade, Phyllis Walsh, Paula Robertson, Cynthia Vann, William Loy Pearce). A number of participants also mentioned attendance at conferences on aspects of their professional roles as technical writers (Deborah Hemstreet, Eva Miranda, Amira Patel, Sue Ann Hartmann) with some noting their involvement in master's degree programs as a place where they connect with other technical writers (McKenzie Williams, Dina Lopez). Other participants had or currently occupy roles on advisory boards for college technical communication programs (Jim Wilson, Jerry Grohovsky). Other participants mentioned colleagues at in-house technical writing departments as a primary source of connection to other technical writers (Nick Peterman, Kelly Smith, Amira Patel, Susan Davis, Sue Ann Hartmann) or past colleagues at other companies that they still connect with on a professional level (Ashley Fields, Dina Lopez, Paula Robertson). Finally, a few mentioned technical writers at other companies or technical writers that they know personally that they might not have ever worked with but they connect with on professional matters (Cynthia Vann, Jim Wilson, McKenzie Williams, Vincent Tomaino).

The picture that emerges is of a well-connected, engaged pool of writers.

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[28] Participants noted a variety of organizations and groups, both professional and informal, in which they participated in the past and present: the Society for Technical Communication, the American Medical Writers Association, the American Society for Training and Development, the American Copy Editors Society, Blank Area* Distance Learning Association (*represents a pseudonym), Learning and Development CityName* (*represents a pseudonym), the Society for Women Engineers, the Western States Communication Association, the Association for Writing Professionals, and the Association for Proposal, Bid, and Management Professionals.

Technical writing is a complex, demanding field with many aspects of communication demanding awareness and attention. The writers in the study use their professional participation and their connection with others in person or online to inform their writing style.

A couple participants said they worked alone, however, occupying the role of the single technical writer at their workplace (Marsha Patterson, Ashley Fields). Kelly Smith, though she works with other writers, mentioned that she often produces documents by herself with no other input or revision. Similarly, Marcy Sager noted that she is often a "solo writer." Jerry Grohovsky mentioned "one person, one project" at his technical writing business. William Loy Pearce noted that he is often a "one-man army" at work, though he also mentioned how he reaches out to other writers and looks up answers to specific writing questions online when they arise. Even solo writers need input and information from others in this form of writing.

Co-construction occurs in other ways with issues such as compliance and regulatory considerations weighing significantly on what must be included in some documents and the wording required. I discussed *legal/regulatory considerations* under Finding 1 above. At some businesses and organizations, templates constructed by those outside the technical writing department are mandated. Marcy Sager mentioned the marketing department at her workplace mandating the use of some templates while other writers mentioned requirements for government documents or consultation with government agencies (Ashley Fields, Phyllis Walsh, Cynthia Vann, Vincent Tomaino). Paula Robertson noted Advanced Placement (AP) requirements impacting her work in the curriculum publication field. Initiatives like the Plain Language movement and

Simplified Technical English (see *Language standardization* in Finding 3) and technical

writing certifications such as through the Society for Technical Communication, can be

seen in this light as well, as macro-level co-constructions of style.

Style and format guides are another form of co-construction at the in-house but

cross-document level. A company style guide or style sheet is often internal, but

sometimes it is external to a company and operates at more of a macro level (such as the

Microsoft Manual of Style). I did not ask a specific question about this issue, though a

number of participants brought up this issue as determinative of at least parts or nearly all

of their stylistic decision-making, eleven participants to be exact (Sue Ann Hartmann,

Phyllis Walsh, Marcy Sager, Vincent Tomaino, Amruta Ranade, Amira Patel, Nick

Peterman, Marsha Patterson, Ashley Fields, Susan Davis, Paula Robertson). Amira Patel

mentioned the use of the *Microsoft Manual of Style* and the *Chicago Manual of Style* at

her workplace while Vincent Tomaino, working in the government sector, noted the use

of the United States Securities and Exchange Commission's (1999) *A Plain English*

Handbook, the Strunk and White handbook, and a pamphlet titled *How to Write for a*

Judge and Not Like One (Painter, n.d.) as models for his workplace writing. Most

technical writers in the study work with officially-adopted company style guides that

govern choices related to presentation, tone, design, and even specific word choice. These

usually behind-the-scenes templates standardize workplace communication and constitute

a co-constructed form of audience address, a corporate, managed, consistent, and

mandated mode of communication that impacts technical writers' stylistic choices.

Co-construction is also apparent at the specific document level, which seems to

be the primary meaning in Olinger's (2014b) use of the term. Amira Patel discussed this

process:

<blockquote>
JO: I was gonna ask you a little bit about the, the impact of the group. So you know, is there anything that kind of comes across your desk that's ever kind of a solo construction where you just write it and you're done or is it always going to see multiple people?

AP: Anything I come across that I can just write and be done? No, or, or you know, in my case, if I can just look at it and edit it and say like, okay, it's ready for publication? No, never. All of our content goes through a review cycle.
</blockquote>

Editors, reviewers, managers, and stakeholders of all sorts invest their ideas and contributions into writing at nearly every stage of the writing process, depending on the process and document in production. A depiction of a similar process was very consistent across the data set with most documents, especially public-facing, "glossy" documents receiving special focus and treatment, sometimes by stakeholders outside the technical writing department. Amruta Ranade's comments on the technical writing process show co-construction as a dominant consideration in creating the style of a final product:

<blockquote>
AR: So I'm lucky to work at, work at a company that has a very strong documentation culture, which means that everybody's invested in documentation, and they want to help us put out the best documentation we can. So the fine, like, once I have a review of a draft ready, like once I have a draft that I'm happy to share with other people, I, the first step of review is the technical interview where I share it with the engineer who worked on the feature and they give me feedback, which is technical
</blockquote>

accuracy and correctness. But the people being good writers themselves, they also have suggestions for like style, or you know, actually writing feedback. And then the second layer of like, the second round of review is my fellow technical writers. We do a round robin system of, of, of peer reviews. So yeah, I send it to my fellow technical writer, and she takes a look at it. And she is the one who, like, actually focus on the style and stuff. So yeah, the peer review is supposed to be like more editorial than writing-based feedback, so that is like that, I get most of the suggestions of feedback about writing, and the final review is my managerial review.

In Ranade's workplace with its strong documentation culture, style is checked, modified, and re-checked at every stage by multiple people, a dramatic picture of *co-construction*.

Convergence of style and tone across documents is important in many corporate and organizational settings, especially for public-facing documents. Eva Miranda spoke of this factor in her stylistic construction as she seeks to manage professional and personal styles:

EM: So, you know, we have kind of an overall established style, and I have a little bit of my own style. And sometimes I, you know, if I'm co-authoring a large chunk of content of documentation, I will make an effort to follow the style of my manager, of the other writers on my team. And sometimes, you know, I have my own story style, depending on the documentation that I write so I wrote tutorials and they have their own style. And then when I worked on more conceptual information, I definitely feel like I'm writing in a different style.

This form of co-construction is less formal but nonetheless active and significant for writers since it produces reflection on the personal versus corporate aspects of style.

Co-construction is a significant factor in technical writing style, usually tied to specifics of individuals, contexts, and language ideologies that impact the design and language of technical documents at every level. Whether at the communication climate level, at the regulatory/compliance level, at the level of voluntarily-adopted style guides both internal and external, or the document level with multiple writers and constituencies weighing in on a specific document's style, *co-construction* is active and significant as a construct affecting style for the writers in this study.

Cost. A construct sometimes affecting style within business and organizational settings that became apparent as I coded the interviews in the study is *cost*. This construct is unique to local settings and circumstances. *Cost* as a construct in this study may be broken down in a few ways: (1) *cost* in terms of deliverables and (2) *cost* in terms of reporting out on a study or product that was costly in itself, which usually centers on how much the document is expanded or contracted in its reporting.

Related to *cost* in terms of deliverables, some writers discussed this topic in terms of the deliverables offered to consumers since those deliverables represent a cost to companies for printing and distribution. Susan Davis brought up this consideration when we were discussing the offering of three languages in the Thule Stacker 830 document:

SD: I'm not sure what motivated them to put all three languages on the same

sheet. Digital world, this is a little bit less necessary, right? Like, you

don't need to . . . if you're printing these out and putting them in the

boxes, then I get it. You might save a little bit of money. But yeah, like,

we wouldn't do this today. We would let people pull up the instructions in
their own language, and have it be the only thing.

Davis, who works in a highly technical field, notes the options that companies have to
offer documentation in a variety of ways; the considerations about ways to deliver
information are at least somewhat dependent on cost. Nick Peterman suggested that the
potential cost savings associated with printing are important, though that is not the only
factor impacting the expansion or contraction of documents, other factors weighing in as
well.

Jerry Grohovsky mentioned the cost of deliverables as well when I asked him
about the practice of companies like IKEA who offer visual-only instructions in part to
reduce costs of translation and reproduction of multiple versions of the same document.
He offered a counter consideration related to the needs of customers versus the
production costs of documentation:

JO: Do you think it's important to have supporting text or do you think like
       you know, you know IKEA, another Swedish company, of course, is
       famous for their visual only, right, instructions. Do you try to, do you
       think it's important to manage both sides of that and have some supporting
       text?

JG: Yeah, I say, I say it is. I think sometimes it goes to the extreme of not
       supporting text and then the questions that the customer or some person
       assembling the product has comes out in frustration, and possibly a
       negative attitude towards the product. . . . I don't think adding 15 to 25
       words of text is really going to make that much difference in terms of

adding pages, you know, to any costs of production but I think it's

worthwhile just to have a happy customer, not have a customer hold

something up when they have to ship something back.

Grohovsky still considers cost in his reply but links that cost to the happiness of

customers. He implies that the costs of supporting products will weigh in for companies

at some point, whether in the detail offered in documentation or in terms of needed

support of faulty products or customers who do not repeat business with a company. Nick

Peterman made almost perfectly mirroring comments on this issue of cost as well.

Related to *cost* in terms of reporting out on a study or product that was costly in

itself, the costs or importance associated with the project or study that a piece of

documentation supports weigh in as a consideration as to how expansive the reporting

and detail of its documentation needs to be. I asked about how the reporting of the FAA

report should be presented, prompting the following response from Ashley Fields:

JO: Yeah, and really, it has that one main finding there. It's kind of the middle

sentence, "The mean and median blood concentrations . . ." I mean, would

you, would you handle this differently? Would you be tempted to kind of

bullet out your main findings or anything like that?

AF: Well, they don't have enough findings here to bullet out. But if it was

expensive, I, I may consider it.

Fields, who has experience with the government sector, implies that the cost and

worthiness of a project impact the documentation generated by that project or study.

Kelly Smith suggested that the cost of the product itself affects the expansiveness

and thoroughness of the documentation supporting that product. We were discussing the

possible inclusion of an introduction in the Thule Stacker 830 when she brought up this point:

KS: I don't think that's how things are written any more, although, it might

depend on the kind of product. For something like, this is a fairly simple

product. But if I was getting something like a farm tractor that I paid

$300,000 for, I might want a bit more instruction, more hand holding and

more like, I would want someone to come out there and show me how to

use it, you know. ((chuckles))

JO: Yeah, that's Interesting. So, so the price, you know, really the, the level of

complexity . . .

KS: The price and, and the complexity. Yeah, like, I mean, the book that

comes with your car is, is, you know, half an inch thick.

Smith raises the issues of price and complexity affecting style in this exchange,

considerations that impact the level of detail and attention to *audience* needs and

expectations.

Exigent factors tell strongly in the styles that technical writers encode and decode.

This occurs in the ways that Finding 6 details. Whether it is *topic*, *purpose*, *time-

deadline*, *time-shelf life*, *co-construction*, or *cost*, exigence impacts styles across the

board in ways summarized in this finding. In addition, the *writer* as a construct to guide

reception is linked to *purpose* in the readings constructed by some participants in this

study. Communication, especially skillfully-constructed reception and production of

style, does not occur in a vacuum, but rather *exigent factors* contribute to it in a myriad of

ways.

Summary

The six findings of this study detailed in this chapter are the result of the coding processes I describe above under *Themeing the data* in Chapter 3. They represent a wide range of impacts on technical writers, their processes, the styles they seek to write in, the ideals that inform the shaping of those styles, and the exigencies, technologies, ideologies, and personal experiences that are involved in writing style and its production and reception. With these findings in mind, I turn to connecting the findings of this study to Olinger's (2014b) sociocultural theory of style by answering the research questions that shaped this study, I augment and explicate the Construct Model of the Sociocultural Theory of Style in ways those answers inform, and I draw out conclusions and recommendations from the study as a whole.

CHAPTER 5

ANALYSIS, CONCLUSIONS, AND RECOMMENDATIONS

In this final chapter, I update the Construct Model of the Sociocultural Theory of Style, I address the research questions of this study, and I make recommendations on theory, pedagogy, and further research in the area of style within rhetoric-composition.

The Construct Model of the Sociocultural Theory of Style

First, I present an updated visual of the Construct Model of the Sociocultural Theory of Style (compared to the first version of the Construct Model in Figure 1). The large portion of the Construct Model (see Figure 12) held up under scrutiny, the eight constructs theorized in Chapter 2 (*audience*, *appropriateness*, *embodiment/materiality*, *genre*, *language ideology*, *language/style*, *topic*) found within the responses of the participants to greater and lesser degrees. Twenty other codes were added to this list, resulting in the Final list of themed codes in Figure 7. In addition, I identified several subordinate/superordinate relationships including *exigent factors*, *audience addressed*, and *writing ideals*, under which I placed five constructs, five constructs, and eight constructs respectively. I placed these codes under the visual. Some of the sub-codes, *cost* for example, might not come into play as a construct for certain types of writing, so I considered it inappropriate to place that construct in the kairotic funnel for all readers or writers since the Construct Model visual is intended to cover writing generally and not technical writing in particular. Further, I do not think the twenty-eight codes in the Construct Model exhaustively capture every construct affecting style. So some level of summary as in the terms "writing ideals" and "exigent factors" is used to create depositories into which further theory and findings can submit other constructs. In

addition, I placed *writer* in the kairotic funnel for readers since that construct was

identified by some readers in the study in constructing readings of style, in this study in

terms of the writer's imagined *purpose*.
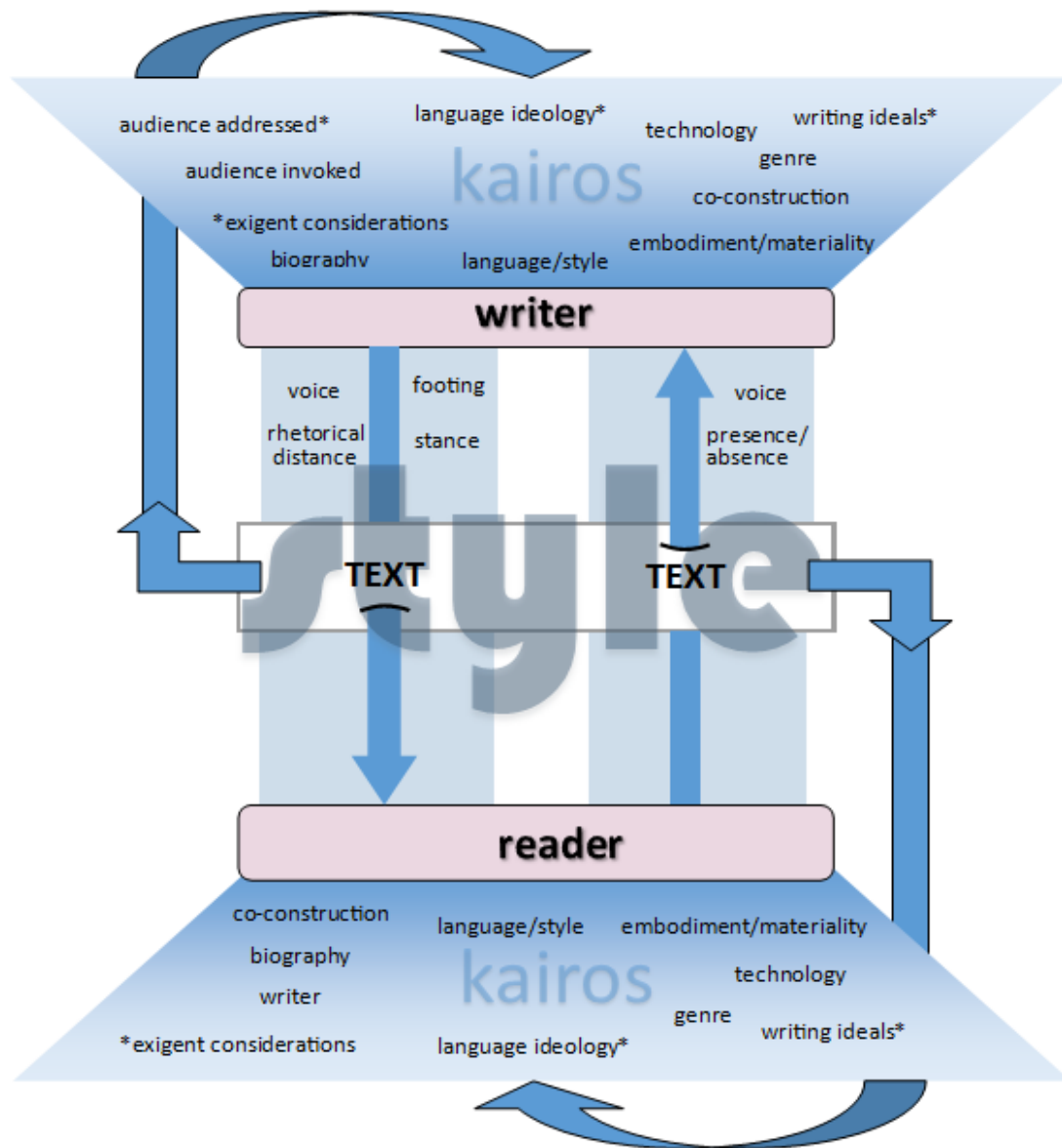
Figure 12. The construct model of the sociocultural theory of style.

My hope is that the arrows indicating a cyclic motion show something of

Olinger's "dynamic co-construction" idea while the word "style" overlaying the word

"text," leaking outside of its bounds, shows style as the ephemeral contact point between

writers and readers. The rhetorical terms, rhetorical distance, footing, stance, and

presence/absence on the writer's side show that individual in relation to the text and

through it, the reader. This relation to the text happens *before and during* the writer's

construction of style. On the other hand, voice and presence/absence refer to the reader's

conceptions of the writer, both constructed only *during and after* contact with the text.

Both of these constructions happen according to and in one sense are themselves,

"typified indexical meanings." The "text" itself may involve a "single sign or a cluster of

signs."

The Construct Model of the Sociocultural Theory of Style is hopefully

picturesque of the hard-to-capture, dynamic, expansive process that is stylistic

perception. Writing, and particularly style, might find depiction in many ways, but this

model prioritizes the sociocultural theory of style. Style in this theory is not within the

text, just as that word is not embedded within the TEXT in the visual. The Construct

Model, in its employment of rhetorical terms that have seen long use and its integration

of the constructs affecting style, pictures style primarily in rhetorical terms, painting it as

a site of co-constructed perceptions.

Research Questions Addressed

I turn now to addressing the research questions that shaped this study, listed

below:

1. What descriptive power does a sociocultural theory of style bring to the production and reception of written style?

2. What constructs are operant as writers and audiences approach the task of encoding and decoding literary style?

   o How do these constructs relate to one another in terms of priority, symbiotic relation, and negotiation?

3. How do the constructs under examination relate to one another in terms of conscious and unconscious use by writers and audiences?

The answers to these questions are necessarily partial since this study, as an ethnographic-inspired study featuring case studies and document review, only looks at a specific population (technical writers) and only at a sub-set of that larger group (the twenty participants of this study) and then extrapolates out to the more general level of all writers and readers that the sociocultural theory of style seeks to encompass. Thus, all claims are hedged and speak only to the generalizability level that this study can offer. The applicability of this study's findings I leave to the reader's evaluation and the findings of other studies on the questions that this study raises.

In addressing the research questions of this study, I present Table 14, to be read in a left-to-right manner. The table format is based on Bloomberg and Volpe's (2016) Analytic Category Development Tool (p. 249). I connect each Finding Statement to the Research Question it addresses most pertinently, reiterate the Source of the Research Gap/Problem each research question addresses that I explicated in Chapter 2, and then offer an Outcome/Result on the right side of the table that I develop in greater depth in what follows.

Table 14

Questions to Outcomes

Research Question	Relevant Finding(s)	Source of Research Gap/Problem	Outcome/Result
1. What descriptive power does a sociocultural theory of style bring to the production and reception of written style?	Finding 2 (biography) Finding 3 (language ideology)	Earlier theories of style did not account for conflicting perceptions of the style of texts, dynamic responses to texts, or the multisemioticity and co-construction evident in the stylistic perceptions. Further, they did not proceed on current theories of language.	The sociocultural theory of style, especially as augmented by recognition of various constructs affecting style, pictures the production and reception of style effectively and offers a sound and valid theory to support discussions surrounding style.
2. What constructs are operant as writers and audiences approach the task of encoding and decoding literary style?	Finding 1 (audience) Finding 2 (biography) Finding 3 (language ideology) Finding 4 (technology) Finding 5 (embodiment/materiality) Finding 6 (exigent factors, in relation to the *co-construction* construct)	The sociocultural theory of style in its original formulation offered one construct affecting style calling for more development of the theory on this point.	The constructs theorized in Chapter 2 as well as constructs identified throughout coding are active to varying degrees in the production and reception of any single instance of the production or reception of style.

Research Question	Relevant Finding(s)	Source of Research Gap/Problem	Outcome/Result
2a. How do these constructs relate to one another in terms of priority, symbiotic relation, and negotiation?	Finding 6 (exigent factors)	Little is known of how writers and readers prioritize factors affecting their perceptions of style.	Perception of style is situational, person-specific, and bounded by a multitude of factors that emerge in the moment, yet some general themes emerge in terms of prioritization, symbiotic relation, and negotiation on the issue of construct relevance.
3. How do the constructs under examination relate to one another in terms of conscious and unconscious use by writers and audiences?	Finding 2 (biography) Finding 6 (exigent factors)	Theorists like Rankin (1985/2010) and Milic (1971) suggest that addressing issues of conscious and unconscious factors affecting style is an important area of study for stylistic theory.	The constructs affecting style move along a continuum of consciousness and unconsciousness due to biographical and exigent factors involved in interaction with texts.

Rather than explicating each Outcome/Result in detail separately, I develop each in the

discussion below where relevant rather than treat them discretely and divorced from the

contexts where their presence is most insistent and applicable.

Conclusions

I draw the Conclusions in Table 15 below from Chapter 4's Findings, from the

Outcome/Result section of Table 14, and from connections to theory and research in

rhetoric-composition and allied fields. I employ Bloomberg and Volpe's (2016) model

(Table 10.2, p. 271) for connecting findings, interpretations and conclusions, which is an

if (finding), *then* (interpretations), *therefore* (conclusions) mode of reasoning. I

sometimes offer multiple interpretations and conclusions for the same findings.

Interpretations are numbered where there is more than one, and the corresponding

number in the Conclusion column clarifies which Interpretations and Conclusions are

linked.

Table 15

Findings, Interpretations, and Conclusions

Findings, Interpretations, and Conclusions		
Findings (If)	Interpretations (then)	Conclusions (therefore)
Finding 1 (audience)	(1) The audience, its qualities, needs, and preferences, impacts production of style.	(1) Building awareness of the reception of style can assist writers in co-constructing style.
Finding 2 (personal biography)	(1) It is likely that biography affects all writers in a variety of ways, both consciously and unconsciously.	(1) Experiences and instruction that build the literate lives of writers and readers expand their rhetorical resources for constructing style perceptions.
	(2) Writing style differs based on elements like literacy level, personal experiences, education, personal reading and writing, and emotional states.	(2) Determining gaps in any single writer's stylistic repertoire is important to building rhetorically-sensitive construction of style.

Findings, Interpretations, and Conclusions

Findings (If)	Interpretations (then)	Conclusions (therefore)
Finding 3 (language ideology)	(1) Language ideology affects writing style in wide-ranging ways.	(1) Language ideology, especially in terms of dominant language ideology, the rules of disciplinary linguistic practices, and writing ideals impacting style, are an important topic of examination and discussion in writing classrooms.
Finding 4 (technology)	(1) Technology as a construct affecting style needs awareness and illumination to support stylistic theory and pedagogy. (2) Awareness of, training, and reflection on the implementation of technologies in writing instruction can support various constructs of style in ways unique to each intervention.	(1) Research on the impacts of technology on writing style is relevant and needed. (2) Awareness of, training for use, and reflection on the implementation of technologies in writing instruction can support various constructs of style in ways unique to each intervention.
Finding 5 (embodiment/materiality)	(1) The multitudinous impacts of embodiment and materiality on writing demonstrate its importance to style.	(1) Experiences and dispositions impact writing style production and reception.
Finding 6 (exigent factors)	(1) Focusing writers and readers on exigent considerations will build their skill in stylistic production and reception.	(1) Pedagogies that foreground exigent factors will assist writers in their stylistic reception and production.

I discuss the conclusions above in what follows. More or other conclusions might be

drawn from the interpretations I present. A qualitative study affords the reader the unique

voice of the researcher, a fact of that design. I discuss the Conclusions in the context of the Construct Model of the Sociocultural Theory of Style and in the context of relevant research and theory.

The Audience, Reception, Pedagogy, and Style

The importance of the *audience* in this study is hard to overestimate. It is the single most insistent construct affecting technical writing style in this study and, though I think that in technical writing *audience* is probably more dominant as a construct than it is in other genres of writing, it is nonetheless present in most forms of writing outside of private and self-exploratory modes. If style is the dynamic contact point between writer and audience, this argues that reception of style is a critical element in audience address. Reception is where style is enacted most insistently in the social arena, where it is most strongly co-constructed. Audiences encounter and co-construct it in part based on *writing ideals* that shape their perceptions of style. Technical writers value *accuracy*, *appropriateness*, *clarity*, *concision*, *fluency*, *simplicity*, and *tone* because that is what their audiences value. But other audiences might value other ideals—clever wordplay and inventiveness in creative writing; precise terminology and elaborated reasoning chains with evidence in academic writing; and so on. This is essentially what Conclusion (1) in Finding 1 avers: *Building awareness of the reception of style can assist writers in co-constructing style*.

Some extant pedagogical models show this centralization of reception in style construction. One example is Buehl's (2013) model of teaching science writing through three styles: technical prose aimed at reports and other science genre documents, deliberative prose aimed at decision-makers in a "more energetic science-marketing

style" (p. 285), and a public-facing "epideictic popularization" mode to convey scientific ideas to wider audiences. Ross (2014) prompts higher education students to alter writing style depending on three audiences: "orientation towards assessment criteria, attention to teacher presence and preferences, and sensitivity towards a general 'Other'" (p. 219), positioning style as a form of performance, reminiscent of Holcomb and Killingsworth's (2010) model. Research on error gravity has informed business and technical writing pedagogy on approaches to error (Rifkin & Roberts, 1995; Beason, 2001). Egbert's (2014) dissertation entitled *Reader perceptions of linguistic variation in published academic writing* captures insights informing style discussions for academic writers. Research on plain language preference of business professionals has informed style as well (Campbell et al., 2017). One study of science writing reception among undergraduate science majors revealed preferences in reading various portions of the science writing genre (results) rather than other portions of that writing, showing a stylistic preference for outcomes rather than methods (Verkade & Lim, 2016). Style in these models connects readers to writers in their preferred or expected modes of address, making reception central to stylistic construction.

The main assertion of this conclusion is that style and audience need attunement to each other, resulting in subtler, richer, more apropos styles. As a socially semiotic, co-constructed, ideologically-charged use of linguistic resources, style can take a central role in pedagogy, moving it from a primarily linguistic to a primarily rhetorical consideration. I think this important since I doubt whether compositionists will institute pedagogies based on style if they think of it as a linguistic concept primarily. I think this is Butler's (2007) claim when he avers that style has not receded in composition but has been

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renamed, finding its way into pedagogies across the landscape of rhetoric-composition. This inclusion, though, is still often thought of as a process addendum, a part of revision to tune up writing. In fact, handbooks[29] and textbooks[30] often treat it as primarily linguistic. Style is indeed concerned with these matters, in its dualistic, linguistic orientation. But in its sociocultural orientation, it also encompasses wide-ranging rhetorical concerns.

Thus, I argue that style, in whatever models it is incorporated, needs to be named for what it is. Style is indeed central to rhetoric; it is the contact point where the text is co-constructed. Thinking of it rhetorically rather than primary linguistically can actuate its implementation more widely in composition pedagogy, and that path leads in part through audience reception and co-construction of style. To explain this reasoning, I turn to Milic's (1965/2010) categorization of style theories as basically monistic or dualistic.[31] He claims that a mixed approach to style is likely best to build language repertoire and skill through treating it dualistically first, a matter of linguistic competence and skill, but then instruction should proceed on a monistic account of style to account for individual purposes (pp. 144-145). Dualistic models of style separate language from the contexts in which it operates, treating it in terms of skills acquisition. I think such models have a

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[29] A few examples show this orientation toward style. Kirszner & Mandell's (2014), *The concise Wadsworth handbook*, features a section on "Grammar and Style for ESL Writers (49) that presents style as a grammatical concern. Aaron's (2016) *LB Brief* includes a section on "Clarity and Style" (Part 3) that presents style as concerned with issues of emphasis, parallelism, variety and details, appropriate and exact words, completeness, and conciseness, all primarily grammar and usage issues.

[30] Wyrick's (2011) *Steps to writing well* textbook, in Chapter 6 titled "Effective sentences," has subheadings called Developing a clear style, Developing a concise style, Developing a lively style, and Developing an emphatic style, all elements that she develops in terms of linguistic competence. Dobrin's (2015) *Writing situations* textbook deals with style in Part 7 called "Editing writing," linking it most explicitly to correctness.

[31] Milic's (1965/2010) categories of style theories include "ornate form" or "rhetorical dualism"; "individualist or psychological monism"; and "Crocean aesthetic monism" (pp. 141-142). See the fuller discussion of these terms in the *20th Century Stylistic Theory and Pedagogy within Rhetoric-Composition* section in Chapter 1.

place but as methods for building facility with language use rather than as models of building rhetorically-sensitive, effectively-deployed style.[32] They are not full-developed style pedagogies if one proceeds with a sociocultural account of style since they divorce language from context and audience. They do not capture style in its dynamic, co-constructive aspects. Such texts proceed from *writer to text* and not from *audience (reception) to writer to text*; this is the critical turn when considering language from a sociocultural perspective.

The main problem with the monistic/dualistic divide enunciated by Milic (1965/2010) is that it has no third space for the social, contextual, exigent milieu where style is constructed/received; in doing so, it treats style as mostly a linguistic issue (see dualism) or a private matter (see the monisms) rather than a rhetorical matter (see sociocultural theory). The question then becomes how to approach the tasks of improving style, making it rhetorical in addition to linguistic, attuning it to context and exigency. I think this road leads straight through stylistic reception for the larger portion of writing. If a person writes only for private purposes, then reception matters little except to oneself. One is free to see writing as monistic, in Milic's terms. If one writes to be read, however, then reception is the touchstone of effective style.

The discussion about reception and its role in style is in many ways really a discussion about *co-construction*, which is evident on several levels in this study. At the highest macro-level, technical writing is inherently co-constructed since it relies not on an individual's private purposes but on the larger purposes and needs of companies and

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[32] Killgallon's (1998) *Sentence composing for college*, McGuigan's (2007) *Rhetorical devices: A handbook and activities for student writers*, Strong's (1996) *Writer's toolbox: A sentence combining workshop*, Roper's (2007) *The writer's workshop: Imitating your way to better writing* while ostensibly teaching style actually teach facility with written language.

what audiences demand. This is especially evident in the low amount of consideration

language/style played in constructing perceptions of style by the writers in the study.

Language/style as a construct, as I define it in Chapter 2, is an author's self-aware use of

language as a value in itself, a plaything, most commonly seen in personal and creative

writing. So while technical writers do evidence strong attention to *language/style* in one

sense, they do this not for a private purpose but as an expression of the corporate identity

and tone that technical documentation evinces.

　　　Co-construction is also evident in organizational participation, a strong finding of

this study. Technical writers connect with others. This happens at both intra- and inter-

organizational levels as writers bring their work to other writers, editors, review boards,

subject matter experts, regulatory agencies, managers, and other stakeholders while also

reading others' work at the lexical, linguistic, rhetorical, and pragmatic levels. They co-

construct in many ways, the style of their documents and the ones they read a shared site

of rhetorical meaning that is guided by organizational purposes. They also participate in

organizations, partake in trainings, and receive certifications that evolve their

understandings of style, as Finding 6 showed. This same intra- and inter-organizational

level *co-construction* is also evident in the industry and company style guides and

regulations impacting some writers' styles.

　　　Also, in another version of *co-construction*, the evidence that the reader

constructs the writer's *purpose* and partially co-constructs the text on those terms is a

finding of the study. Pavlickova (2013) described the impact that the writer exerts

through the reader's perception in her "imagined author" model, which she builds from

earlier models including Booth's (1983) "implied author" and Foucault's (1980) "author-function":

> [T]he reader's interpretation of the text is co-determined by the reader's image of the author. The imagined author is a result of the encounter between the notion of an author brought into the encounter by the text and the reader's articulation of the author that precedes the encounter. (p. 33)

This model of the author centralizes the role such conceptions play in constructing perceptions of the text. Pavlickova (2013) develops her "multidimensional model" of the author in ways that go beyond the bounds of how the author was pictured by readers in this study, beyond thinking in terms of the writer's supposed *purpose* alone, thus arguing that the *writer* is an active, nuanced construct in reception of texts. All told, *co-construction* indeed both creates and is style in some ways; this fact shows a way forward for a more rhetorical style pedagogy.

Finally, I think genre has an important role to play in a rhetorically-based style pedagogy, especially as it centralizes reception and co-construction. Bawarshi (2016) has argued that Rhetoric Genre Studies needs to offer more attention to readings of texts to guide connections between genres and audiences:

> Inviting students to practice the iteration of a convention under different conditions and at different moments in space and time allows them to spend time within the uptakes—how and why genre users take up various conventions in various circumstances—and to identify and account for not only the relations and meanings that are secured by dominant uptakes, but also to pay attention to the uptakes that, in the words of Min-Zhan Lu, are "dismissed or trivialized" (613).

And then to act on that knowledge in strategic ways, learning, for example, how

to cue readers for encountering different, unexpected uptakes when these readers

might not be prepared for, interested in, or tolerant of difference and when

uptakes are subject to power imbalances. Such strategic knowledge and brokering

of uptakes shifts the locus of agency from the genres themselves (which is often

implied when explication of genres is the pedagogical goal and when genres are

treated as sites of access) to their users, who are constantly having to negotiate

genre uptakes across boundaries. (p. 248)

Her connection of reader uptakes and the cues prompting those uptakes is where style

connects to audience reception. If style is co-constructed, then understanding the ways in

which cues prompt those uptakes opens possibilities for writers to cue desired uptakes

through style according to their own purposes, thus taking up their own role in co-

construction.

Genre itself might be characterized as a macro-level co-construction as well with

the demands of various document types impacting style of language and presentation.

Genre played an intriguing role in this study, in some ways both less and more important

and active than I thought it might be when designing this study. The majority of the

writers in the study felt that it was significantly less important to their writing and style

than audience and exigent factors attending their writing; these are notions that I discuss

under the *Genre and audience* sub-heading in Finding 1 in Chapter 4. Yet, l still think

genre impacts technical writers powerfully, mainly because discussions of *genre* were

often embedded in other discussions in this study. It hedged the discussions in ways that

are hard to detect unless one takes a view of genre as rhetorically-enacted. As depicted in

Rhetorical Genre Studies, genres are built through a mix of audience expectations, experiences with previous documents, and the communication needs of the sponsoring organization (Miller, 1984; Aull, 2015). All of those elements showed comprehensive presence in this study. In short, genre's impact is so wide that it is assumed at nearly every level, a near perfect picture of how a macro-level co-constructive construct is felt.

In sum, since the *audience* is so impactful as a construct affecting style, this fact foregrounds the importance of reception and co-construction in shaping theory, research, and pedagogy. Style, socioculturally conceived, is a name for the ways that language connects to audience. Genres, as sites of co-construction, both shape and are shaped by the reception of audiences, which is in turn shaped by style.

Biography, Reading, Literacy, and the Acquired/Learned Distinction

Biography is inescapable for any writer/reader as a construct affecting style. This construct, like other constructs such as *embodiment/materiality*, *exigent factors*, and *language ideology*, impacts writing comprehensively. The social, embedded, embodied, emplaced, enacted aspects of language come under this large heading of *biography*. Olinger implies that such a consideration is central in creating "typified indexical meanings" attached to the production and reception of style since such meanings are inherently personal and socially-constructed. Finding 2 explored this issue in detail, showing how *biography* significantly impacts the construction and reception of texts. Finding 6 speaks to this element as well; constructs emerge and recede as contexts and exigencies change.

This finding is important since it speaks to the "unconscious" element of the "conscious/unconscious" distinction that Rankin (1985/2010) and Milic (1971) argue is

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important to support theory and pedagogy surrounding style. If writers and readers partially construct styles based on literate, educational, and personal experiences, then building the relevant experiences that impact that construction is of interest and concern for style theory, pedagogy, and research. This is conclusion (1) in Finding 2: *Experiences and instruction that build the literate lives of writers and readers will expand their rhetorical resources for building perceptions of style.*

One experience that bears on literate constructions of texts directly is reading. Research in the connections between the teaching of reading in composition courses has been ongoing since Haas and Flower's (1988) seminal work in the field and Haswell, Briggs, Fay, Gillen, Harrill, Shupala, and Trevino's (1999) reiteration of their research. More recently, several studies have explored the connections between reading and writing for the teaching of composition (Bunn, 2013; Carillo, 2013). Surveying a range of studies and articles, Carillo (2013) argues that skills of "rhetorical reading" link together the practices of both reading and writing (p. 42). Such reading is rhetorically sensitive to author, purpose, context, and purpose considerations, contrasted to reading for content alone (Hass & Flower, 1988, p. 188). My sense is that the most rhetorically-sensitive and -aware students I teach are also the best, most engaged readers. I add my voice to scholars like Carillo (2015) and Keller (2014) who argue for a stronger place for reading in composition pedagogy, though I connect it to stylistic considerations.

Some style-oriented pedagogies intentionally built around genres and literature are intriguing applications of the value of reading to style. Kelleher (2005) discusses the usage of literature in a stylistically-oriented pedagogy and concludes by arguing, "By exposing the limitations and virtues of linguistic choice, style highlights the synergistic

and experiential components of reading and writing and provides a provisional means to traverse vast disciplinary terrain" (pp. 91-92). Wide disciplinary reading is used in her stylistic pedagogy to offer more linguistic choices and options to readers. De Piero (2019) writes about a study in which three reading lenses were applied (deconstructing genres, learning the rhetorical practices of unique discourse communities, and reading like a writer) which resulted in student writers building rhetorical facility and writing skill. Reading and literate experiences can offer much to style pedagogy.

Conclusion (2) in Finding 2 says, *Determining gaps in any single writer's stylistic repertoire is important to building rhetorically-sensitive construction of style*. Such identification of gaps might be prompted through pedagogical models that accentuate the reflective practices of readers/writers. Metacognitive approaches to writing production can promote and accentuate awareness of constructs affecting any single instance of reading or writing. In one sense, metacognitive approaches to writing are models for moving personal, process, contextual, and rhetorical factors affecting the writing circumstance to the writer's conscious awareness and away from unconsciousness or lack of awareness.

One metacognitive model that seems especially promising in terms of its range and subtlety in prompting metacognitive reflection is Lee and Mak's (2018) metacognitive model, which is based on metacognitive knowledge, experiences, and skills/strategies. Their model escapes criticisms that metacognition is mostly genre-focused (Negretti, 2017; Negretti & Kuteeva, 2011) and process-focused. Their "integrative" model updates Dunlosky and Metcalfe's (2009) model of metacognitive knowledge, monitoring, and control (see Figure 13).
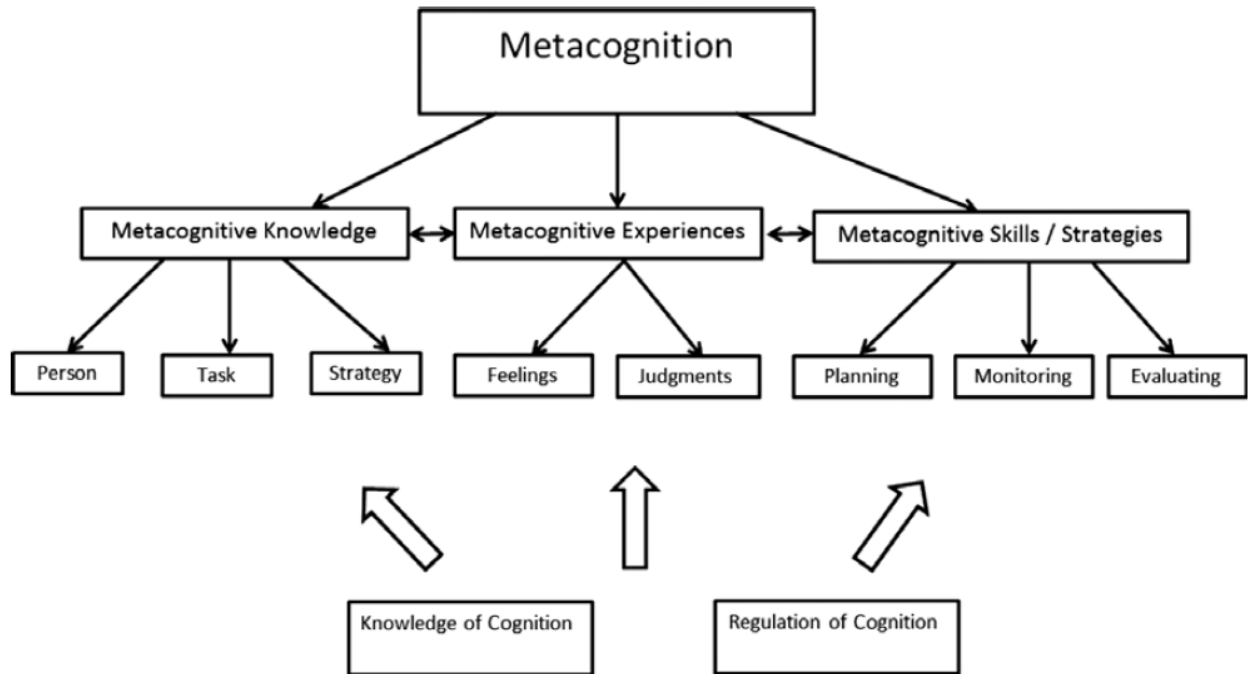
Figure 13. Screenshot of Lee and Mak's (2018) metacognitive model (p. 1087).

I take "metacognitive knowledge" as a depository for many of the constructs that impact

style (*audience*, *writing ideals*, *language ideology*), a place to bring those constructs

forward and prioritize them for any single act of writing or reception. "Metacognitive

experiences" also impact writing style as some of the constructs discussed in the

Construct Model showed (*biography*, *embodiment/materiality*). I take "metacognitive

skills/strategies" as a place to bring forward issues such as *technology* and *exigent*

considerations. The many and wide-ranging constructs affecting style require an equally

wide-ranging theory and practice of pedagogical application, and metacognitive

approaches seem promising in this regard. However, a critique of metacognitive

approaches in isolation is that they can forestall co-constructions that are central to

understanding reception and relevant construction of style. Yeh (2015) has conducted

research where metacognition is enacted by working in social groups, a co-constructive

method that has shown improvements in metacognition. Yeh's application of

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metacognition as a co-constructive tool avoids the isolation critique by connecting co-construction and metacognition, accentuating both.

Overall though, I am skeptical of pedagogical models that seek to build writing skills based on metacognition and genre awareness alone, much in the way that Anson (2016) discusses situational knowledge and the unique needs of learners impacting transfer writing pedagogy (pp. 541-542). These models follow in the stream of pedagogy within the last decades that emphasizes the private, reflective practice and process of writers/readers. They centralize prior knowledge, metacognition, transfer of knowledge across contexts, and multimodal aspects of composition. Such models develop a writer's process awareness but can falter in addressing the sociocultural, lived impacts of writing style on audiences and the unconscious aspects of writing production and reception effectively.

My skepticism of such models is not total, since I see much value in their overall approach. However, I think these approaches incomplete. Style emerges not from a vacuum but from a rich, networked web of causal relationships that defies photorealistic characterization, in part because many constructs in the web are unconscious. This realization contradicts models of writing that picture it as "applied metacognition" (Hacker, Keener, & Kircher, 2009) since such a model describes only one aspect of writing, its conscious enactment by the writer.

However, I have struggled with this issue since the "conscious/unconscious" language that scholars like Milic and Rankin use to characterize the constructs affecting style can present its own problems. As this study has progressed, it has become apparent that this characterization belies assumptions about writing as an inherently cognitive

rather than a social process, assumptions that I challenge by suggesting a different model

for thinking of constructs that escape metacognitive awareness yet remain impactful on

stylistic perception. Cognition, conceived in embodied terms, is distributed, social, and

enacted. It is not just "mental" in the sense of "in the mind alone." As such, rather than

belaboring the issue of whether a construct affecting style is conscious or unconscious,

the well-known "acquired/learned" distinction (Krashen, 2004) can guide thinking about

style pedagogy. Acquisition can occur in many settings: reading, exposure to expert or

native speakers, literate experiences of many descriptions, exposure to genres, and so

forth. This form of learning has already been shown as impactful within composition-

rhetoric. Krashen (2012) has shown that readers can acquire more academic vocabulary

through genuine academic reading than through direct instruction. Nagy, Townsend,

Lesaux, and Schmitt (2012) acknowledge this contention but support Graves' (2006)

argument for a mix of "acquired" and "learned" strategies: "wide reading, promoting

word consciousness, teaching word-learning strategies, and teaching individual words"

(p. 97).

The "acquired/learned" distinction can apply Gee's (2012) "Discourse/discourse"

sociocultural model within language learning, relating one's discourse to primary or

secondary Discourses through style. One's primary Discourse shapes the values, norms,

positionality, ideology, and fund of options for enacting one's discourse (pp. 158-159).

One "acquires" such knowledge; it functions as hardware in some sense, in the

background, "unconscious," until it is enacted for discourse purposes. Secondary or

"Borderland" discourses (p. 185), on the other hand, are "learned," the ways they are

enacted built through style. Translingual approaches to writing are a picture of this idea

in action since they make communicating across boundaries a central skill of rhetorically-skillful writing (Matsuda, 2006; Canagarajah, 2013; Horner, Lu, Royster, & Trimbur, 2011). Durán (2017) argues that "To be a skilled writer in an increasingly complex world is to have command of and flexibly draw from a range of discourses, styles, registers, language practices, and rhetorical strategies" (p. 109).

One's primary Discourse can function at this acquired, unconscious level, but metacognitive models can expose its contours to readers/writers in part, offering them agency in constructing their own discourses. Since the mechanisms by which one's literate experiences translate to perceptions of style are not always apparent, literate experiences and reading are central to style pedagogy. However, since other Discourses must be learned, pedagogical approaches that prompt this learning are needed. Several such approaches (reception-based, audience-centered, exigence-focused, problem-based) are treated in this chapter, all geared toward learning of Discourses.

Important in this discussion is that any secondary Discourse is learned, but it may be primary for someone else. So it is difficult to characterize where acquisition and learning break for individuals. The concept of salience is central on this issue. In Chapter 2 under *The Importance of Salience*, I discuss sociolinguist Peter Kortmann Rácz's (2013) distinction of two types of salience: cognitive and social: "Cognitive salience is the objective property of linguistic variation that makes it noticeable to the speaker. Social salience is the whole bundle of the variation along with the attitudes, cultural stereotypes, and social values associated with it" (p. 1). So a mix of approaches is needed.

Finally, I think an actionable understanding of the constructs that are acquired and those that are learned, versus conscious and unconscious, is helpful since I remain agnostic about making strong causal claims about constructs and their outcomes in the perceptions surrounding writing style due to philosophical and actual difficulties in tracing causal chains, especially in chains that purport to describe human perceptions. Patton (2015) notes that qualitative methods have advanced significantly in the last twenty years and can "rigorously and credibly" describe some causal relationships (p. 584). I do not take writing style perceptions to be in the category of causal relationships that can be so described since writing is so affected by local, specific, unconscious, exigent, ideological, and embodied factors that a full description of its causal mechanics is unrealistic. Rather, qualitative studies that look at the factors impacting it, when repeated, compounded, and accrued, and pedagogical models that capture the wide array of constructs affecting style and the processes of reading and writing themselves, offer direction in terms of style pedagogy and theory. The changeability and ephemerality of perceptions of writing style show writing and reception of writing to be what accomplished writers and readers know it to be—an absorbing, dynamic, co-constructed process that mixes ideological, social, and material impacts in wide-ranging, surprising ways at times. A more comprehensive, accurate picture of the actual forces impinging on writers' styles can only assist with further theory, pedagogy, and skillful address and decoding of those same styles.

Connecting Language Ideology to Style

Understanding the impact of *language ideology*, what it means, how it operates, and ways it impacts writers, has grown over recent decades. Pedagogical models that

centralize language games of power, social capital, value, marginalization, and related themes have proliferated partially as means to address language ideological issues of power and dominance. These themes are active in this study as well with some technical writers conscious of these issues. However, Finding 3 covered this concept in a wider sense, showing language ideology at work specifically at work in creating ideals that orient to values outside of a specific writing situation. Language standardization, common in technical and professional writing settings, proceeds on assumptions based on corporate and organizational culture. The style of writing evident within technical writing is the product of education and genre expectations taught within textbooks, the certification literature surrounding technical and professional communication, the tone and style mandated by company style guides, and the wider communication context of current corporate and organizational life.

Language ideology is significant and ubiquitous as a construct affecting technical documentation because of the strong ideological orientation of modern business and corporate communication. This style of communication might be described as mostly emotionless, conservative, purposeful, image-focused, and audience-directed, resulting in tones from the formal to informal. A survey of major technical writing textbooks is revealing in terms of how style is taught to technical writers. Some textbooks argue for a predominantly conversational style, a tone that is casual for colleagues and clients who are known, and a more formal, "restrained" style for most business communication. The aim of this style is to "convey a professional image of yourself and your organization" (Oliu, Brusaw, & Alred, 2016, p. 267). An appropriate, skillfully-deployed style, in this sense, is a tender of an organization's fitness to handle itself professionally and

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competently. Lannon and Gurak (2018) develop the tonal aspects of workplace writing in nuanced ways, presenting writers with the need to recognize contexts that call for formal or semiformal tones as well as the needs of avoiding bias and sexist usage even while avoiding unethical communication and considering global and local contexts. They center their discussions of writing style on the writing ideals of clarity, conciseness, fluency and tone (pp. 203-232).

The Society for Technical Communication, the leading organization of English-speaking and –writing technical communication professionals, instantiates the model of business/technical writing style pictured in technical writing textbooks as well. Its re-designed certification series (Foundation, Practitioner, and Expert) offers a glimpse into how technical writing style is not only taught but policed. The Certified Professional Technical Communicator (CPTC) Foundation Exam Study Guide (April 2016) shows the need for the development of two main writing styles: the plain and the persuasive (p. 4). Further, the exam also covers circumstances for deciding on the appropriate style in a given writing situation (p. 12).

The model of style of American public and business discourse, the "prose of utility" in Tebeaux' (2004) words (p. 194), is predominantly spare and utilitarian. It is most directly pictured in this study in the *writing ideals* discussed in Finding 3: *accuracy*, *appropriateness*, *clarity*, *concision*, *correctness*, *fluency*, *simplicity*, and *tone*. These ideals, all charged with value and necessity, drive much of the style perceptions that writers shared in this study. Focusing on *appropriateness* rather than on a personal, private *language/style*, some writers recoiled at the idea of humor in technical writing. They also showed sensitivity to intimations of power in style by commenting on the

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favored position of English in the Thule Stacker 830 instructions. A few also commented on the style of the FAA report as suited to its purpose of communication of a scientific study. In such ways, *language ideology* showed its presence in this study.

Conclusion (1) in Finding 3 is *Language ideology, especially in terms of dominant language ideology, the rules of disciplinary linguistic practices, and writing ideals impacting style, should be discussed and examined in writing classrooms.* Pedagogical models that center on issues of language ideology and dominance are well known, and such models often turn on style as the evidential piece betraying the values and assumptions of dominant language groups. Likewise, disciplinary writing practices have received attention in research and pedagogy in recent years. Thonney's (2011) model of direct instruction of the values informing academic discourse is one example. Olinger's (2014a) work on the malleability of disciplinary style is another example. Rhetorical Genre Studies as a field has much to offer in this connection, in the areas of literary studies (Wilder, 2012), professional writing (Adams & Jenkins, 2015), and translanguaging and multimodal composition (Gonzales, 2015), among others. Much the same can be said for WAC/WID approaches that interrogate the ideologies impacting disciplines. Especially notable in this connection is Gere, Swofford, Silver, and Pugh's (2015) work on the notion of disciplinarity itself and the styles and ideologies that tender disciplinary capital, an interrogative process that has been extended to trans-ing disciplinary discourses and practices (Hall, 2018).

Style pedagogies that are ideologically aware might also focus on the ideals portrayed as valuable in various forms of writing. The *writing ideals* identified in this study play a significant role in constructing stylistic perceptions for technical writers.

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However, those ideals might change dramatically for other genres of writing. Vetter and Nunes (2018) describe a Writing about Writing (WAW)-designed course where social knowledge is a significant component. They prompt student writers to think through linguistic values and practices and their practical outcomes in language (p. 163). This is a key way that style can take up a role in interrogating language ideology—by connecting such ideology distinctly to writing ideals and values and the expression of those ideals in stylistic choices.

Much current research and pedagogy is involved in the project of identifying, interrogating, and even trans-ing disciplinary categories and practices, all centering on style as the evidence and tender of language ideology. Style is indeed impacted by language ideology as Olinger averred and as this study's findings show. Awareness of that ideology and its outcome in style can offer pedagogies a tool in examining assumptions about language both within disciplines and across language divides.

Technology, Multimodal Pedagogy, and Style

Technology, in its multitudinous forms, is a form of *embodiment/materiality* in one sense, but I treat it as distinct from that construct in this study. This is mainly because of the insistence of the importance of technology moving forward by several writers in the study, and because of how technology is shifting writing in technical fields in substantive ways such as in the use of data-structuring platforms (DITA; HTML; XML, etc.) and given the prospect of automated writing programs and their potential impact on style. The effects of technology might be more significant for technical writing than other forms of writing, though.

In relation to conclusion (1) in Finding 4, *Research on the impacts of technology on writing style is relevant and needed*, some important research has been conducted that offers connections between technology and style in interesting ways. One example is a study that shows that technologically-assisted writing interventions assisted participants with dysgraphia on a functional writing test (Marshall, Caute, Chadd, Cruice, Monnelly, Wilson, & Woolf, 2018). Technology has been used to assist the building of writing skills and style in a variety of formats including the use of social networking sites for EFL students (Vikneswaran & Krish, 2016) and the use of blogs as a means to improve writing style, performance, and motivation for EFL students (Asoodar, Atai, & Vaezi, 2016). Open online writing aids have shown benefits for student writing and writer motivation (Sevcikova, 2018). Computerized writing instructional software for instruction of students with disabilities, when paired with in-person instruction, built writing competency and skill for participants in one study (Park, Ambrose, Coleman, & Moore, 2017). This sampling shows some ways that technology interacts with stylistic considerations that have important implications for theory and pedagogy.

Of course, any movement creates its own response, so "post digital" (Cramer, 2014) forms of technological interaction are important as stylistic moves within themselves. Indeed, these modalities of reception and production seem significantly built around preferred and alternate modes of production and reception as their defining feature. One listens to a record on vinyl for the very reason of the subjectively-unique experience that such a technology produces on reception. The rejection of the cleanliness, sheen, and production of modern technological writing platforms and deliveries, of the

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valorization of the digital over the analog, these are intriguing moves that portend insights into the ways that style reacts responds to and is not just formed by technology.

Overall, this project might be seen as part of the larger picture of "multimodal" approaches to writing, an argument Barnard (2017) makes (p. 278), though the modes of communication might leak outside traditional writing literacies, offering new experiences both within reception and production of writing style. These funds of semiotic sources, the "sign of cluster of signs" in Olinger's (2014b) theory, create an array of stylistic possibilities that bears further exploration and openness on the part of both practitioners and instructors as they interact with what production and reception look like and mean going forward.

In relation to conclusion (2), *Awareness of, training, and reflection on the implementation of technologies in writing instruction can support various constructs of style in ways unique to each intervention*, writing teachers need awareness of the options, availability, uses, and outcomes of technologies on writing style if they are to use them effectively as style pedagogies. Some research has been done in this area, and a sampling of this research illuminates ways that such research can benefit style pedagogy. Hansen (2016) notes that one outcome of blogging as a pedagogy is increased communication skills and more collaboration (p. 87). The use of e-portfolios produced higher writing proficiency on an objective test in one study of EFL undergraduate writers while also affecting student dispositions toward writing positively as well as self-regulation (Samaneh, Firooz, Bagheri, & Riasati, 2019). Balaman (2018) found that digital storytelling platforms that allow for use of pictures, music, video, and other visuals in concert with text built students' narrative writing skills compared to a control group. The

researcher concluded that the technology implemented in the classroom induced students to reflect more deeply about writing process elements of planning and presentation, resulting in more aware, subtle styles (pp. 208-209). Austin, Sigmar, Mehta, and Shirk (2018) found that web-assisted instruction in grammar in business communication courses affected correctness virtuously in statistically significant ways, prompting their recommendation of that technology as a means to support students' writing for business.

The technological impacts on pedagogical methods that touch on stylistic concerns show that modalities, platforms, and technological genres can make varying impacts on students, likely foregrounding various constructs in the production and reception of the stylistic qualities of texts. Ongoing work is needed to inform pedagogy on the impacts of technology in relation to style, both in terms of reception and production.

Embodiment/Materiality, Experience, Dispositions, and Style

Embodiment/materiality in one sense is a fact of biography, but the concept goes beyond that concept alone, impacting both writers and readers in ways ranging from the grammaticalization of language all the way to the physical circumstances and modes of the creation and reception of writing. Part of the struggle of prioritizing the salience of stylistic constructs for any single instance of production or reception of style is the ubiquitous nature of many of the constructs under consideration in the study, and issues of *embodiment* and *materiality* are a perfect example. Since "Embodiment fundamentally underlies human conceptualization" (Brenzinger & Kraska, 2014, p.2), the style of language use is impacted significantly by it, alternately pushing forward and receding as a construct affecting style according to each person's situation and needs along with the

exigencies of situations. This is apparent in technical writing style where safety emerges importantly in reading and writing instructions, for instance, as an indexer of style.

This issue runs even deeper, however, than the overt issues of safety and harm that some documents represent since embodiment research has looked at issues such as the "grammaticalization" of language in accordance with embodied needs and exigencies (Heine, 2014). Ellis (2019) discusses the four "E's" of post-Cartesian cognitive science: embodied cognition which is "the recognition that much of cognition is shaped by this body we inhabit" (p. 41); embeddedness: "the dependence of a phenomenon (an activity, a set of relationships, an organization, or an individual) on its environment (defined alternatively in physical, cognitive, social, institutional, or cultural terms)" (pp. 41-42); enactivism where cognition is thought of as "a dynamical sensorimotor processes" meaning that the mind "has roots in the body as a whole and in the extended environment where the organism finds itself" (p. 43) and extended mind which refers to the fact that language use "is ever situated, either in the moment and the concrete context or by various means of mental extension to reflect prior or imaginary moments" (p. 44). Ellis' depiction of embodiment is as wide as experience and language use. With this definition of embodiment, anything said in relation to *biography* (Finding 2) or *language ideology* (Finding 3) or *technology* (Finding 4) or *exigent factors* (Finding 6) might as easily apply here.

However, I note the relevance of experience to style which is what conclusion (1) in Finding 5 claims: *Experiences and dispositions impact writing style production and reception*. Writers are known for their pursuit of experience to provoke writing production. I might cite hundreds of writers on this point, but I will note only one.

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George Orwell's dogged pursuit of experiences to inform his writing is well known; however, he saw such experiences also as contributory to his style, prompting him to seek out sparse, utilitarian, dreary surroundings to harden and refine his style (Stodola, 2016). The advice to seek out experience to inform writing is such an old saw as writing advice that I leave this conclusion quickly, though I add, following Orwell's example, that style as well as content are shaped by experience.

Scholars in various fields have investigated dispositions and their impact on transfer of knowledge and skills especially. Baird and Dilger (2018) define dispositions as "individual attitudes that influence the motivation of intellectual traits" (p. 21). Since Driscoll and Wells (2012) called for more research in this area, others have looked at dispositions and their impact on transfer in writing centers (Bromley, Northway, & Schonberg, 2016), the effects of dispositions on translanguaging (Wang, 2017), and the impacts of dispositions on writing majors (Hall, Romo, & Wardle, 2018), among other studies. Greene and Carpenter's (2011) research showed that implicit attitudes can impact readings of texts. For instance, they asked research participants to identify their favorite characters from film clips and found that participants incorporated aspects of those same characters into their own written self-descriptions, which were written after the interviews (pp. 117-118). Readers' responses to texts can be primed with reflections or discussions prior to the reading taking place, thus foregrounding various constructs into the "kairotic funnel" wherein they come into play in stylistic perception. Dispositions in one sense are an implication of embodiment, and their connection to style should find more development and explication.

Some dispositions are connected with emotions, and those emotions and their resultant connection to writing style are intriguing to consider, especially given emotion research that paints a picture of emotions that is less private and personal. Work on the social construction of emotions has been discussed and elucidated in the academic literature (Averill, 2012). Composition scholar Laura Micciche (2014), commenting on and applying this research to composition pedagogy, summarized, "emotions are relational and social rather than exclusively interiorized and private" (p. 137). These socially-constructed emotions can be codified and then take on meanings that are themselves socially-constructed. It is interesting to consider the impacts to style of "emotions that have become standard (cognized) within a culture and that take an object" (Averill, 2012, p. 218).

Research on emotion and writing can make for interesting connection to constructs affecting style that center in personal and embodied factors, especially since most emotion and writing research centers on it as a therapeutic or personal management tool (Suhr, Risch, & Wilz, 2017; Dingle, Williams, Jetten, & Welch, 2017). However, some research has been done connecting multimodal texts with emotions and writing for children (Latham, 2016), and a recent dissertation on emotions and writing (Arcello, 2018) argues for moving writing in a direction that sees emotions as part of embodied practice. Potential connections are many and would offer clarification on emotions as a construct affecting style, which was not identified in this study.

Embodiment/materiality as a construct is as wide a construct affecting style as any examined in this study. In the conclusions for this finding, I looked at topics brought up

specifically by *embodiment/materiality* on its own, matters of experience, dispositions, and emotions. These ideas offer many avenues for further research and theory.

Exigence and Style

The impact of *exigent factors* is apparent in this study from both the perspectives of production and reception of style. Conclusion (1) in Finding 6 states, *Pedagogies that foreground exigent factors will assist writers in their stylistic reception and production.* Pedagogical models that foreground the types of exigent factors mentioned in this conclusion can facilitate the constructs needed to construct style. Ann Beaufort's (2007, 2012) transfer-centered writing pedagogy centering on five domains (discourse community knowledge, subject matter knowledge, genre knowledge, rhetorical knowledge, and writing process knowledge) is a good example of this approach in action, especially in relation to teaching to the rhetorical situation. Yancey, Robertson, and Taczak's (2014) teaching for transfer (TFT) model applies the direction-charting work of Perkins and Salomon (1988) in which the conditions and contexts foregrounding transfer issues are centralized through "hugging" and "bridging" students in situations that promote "low" and "high road" transfer (pp. 28-29). Wardle (2007) notes the importance of the entire ecosystem that writing inhabits and reflects as critical for transfer; this ecology is itself part of the exigent situation. Many metacognitive models, like Lee and Mak's (2018), with their focus on metacognitive experiences, processes, and skills/strategies, can offer a method for adjusting language to exigent factors as well.

Problem-based learning (PBL) is especially interesting in this connection as a pedagogical model that seeks to build critical thinking and skills through context-rich instruction. It has been applied in writing classrooms with mostly positive results

(Rosinski & Peeples, 2012; Brown, Lawless, Rhoads, Newton, & Lynn, 2016; Kumar & Refaei, 2017; Ghufron & Ermawati, 2018). Smart, Hicks, and Melton (2013) implemented this model in a business writing course that looked specifically at disciplinary writing outcomes, favorably reviewing its success in moving student writers away from academic to business prose. In study conducted by Kumar and Refaei (2017), the PBL model, as implemented in a second-year college writing course, assisted students with critical thinking skills and with some improvement in addressing the specific writing situation. Another PBL-based study showed improvement in student argumentative writing skills in an EFL context (Jumariati & Sulistyo, 2017). PBL has shown promise as a mode to enhance writing skills and style against exigent considerations.

Scenario-based learning is similar to problem-based learning in its careful exegesis of the context in which communication arises. Golden (2018) discusses the promise of this mode of contextualized learning outside of areas like medical and legal writing where it is customarily used. In this mode as implemented by Golden, the audience is clearly explicated to the reader before writing begins with rich description of the audience's preferences and identity. In a study of undergraduate freshman writers in a liberal arts setting taught in this mode, students showed transfer of audience-centered writing skills to other contexts based on measures of writing skills, writing mechanics, and problem solving (p. 6). This study is interesting in how its approach allows for rich description of problem, context, and audience, prompting more self-aware, nuanced styles.

Various exigence- and context-centered pedagogical models might bring forward various constructs affecting style perceptions. The constructs derived from and affecting

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the exigent considerations that these models address are the contact points between writer, text, media, audience, and context. I see models that offer relevant contacts to writers and readers for any single act of reading and writing as especially important as style pedagogies.

Recommendations

The discussion above on conclusions naturally leads into the recommendations that follow. This study offers some data and findings that suggest several recommendations, though I make no claim that I grasp or present all the possible recommendations that this study might offer. Rather, I present recommendations in three areas (pedagogy, readers and writers as a whole, and theory and research) that seem especially salient and significant to me; each recommendation is inspired by broad swaths of the findings, responses to the research questions, and the conclusions noted above.

Recommendations for Pedagogy

1. Offer clear understanding of audience and its needs, preferences, and expectations for student writers to co-construct writing styles around.

2. Build pedagogical models for style on a clear understanding of the reception of style.

3. Prompt cognitive/affective/dispositional aspects of writers' identities as an acquisitional aspect of stylistic production and reception.

4. Promote awareness of, training, and reflection on the implementation of technologies in writing instruction to support various constructs of style in ways unique to each intervention.

5. Offer means for student writers to consider issues of language ideology and its impacts on writing style.

6. Prompt acquisition of rhetorical resources for stylistic perception through literate experiences and reading.

7. Elucidate factors affecting writing style through pedagogical models that foreground embodied, emplaced, exigent factors as a means to build students' rhetorical skill in addressing audiences through style.

Recommendations for Readers and Writers

1. Recognize the impacts of literate experiences, emotions, and dispositions on stylistic perceptions.

Recommendations for Theory and Research

1. Develop stylistic research on the reception of style.

2. Research the values that inform stylistic perception, both for readers and writers.

3. Research the impacts of technology on writing style.

Researcher Reflections

My aim in this final section is to think reflectively on this study as a whole, what it means, what I have experienced in doing this research, and where style study goes from here. I am amazed in terms of where I started this research and where it has led in my thinking about style. As I mentioned in Chapter 1, my background with "classical" and "Great Books" approaches to literacy and learning significantly impacts my valuation of sentence-level pedagogies as means to building writing skill and stylistic options as well as my belief in reading and literate experiences as foundational to style instruction and skill. Though I still hold those traditions in regard, my view of style has expanded

significantly through interaction with the sociocultural theory of style and seeing style as social, dynamic, co-constructed, semiotic, and construct-impacted rather than as a feature of texts. The limitations of my earlier view are now apparent to me, if that view is taken in isolation.

In response to the study first research question, "What descriptive power does a sociocultural theory of style bring to the production and reception of written style?," the sociocultural theory of style seems a provocative, expansive theory that shows promise in moving theory and research around style in new directions; this study is one example with its focus on the "constructs" or forces impacting the production and reception of writing style. The findings of this study, in wide scope, support this theory in my view, "vetting" the theory in the words of the sub-title of this dissertation. Yet, these same findings and their analysis are part of "extending" the theory as well, fulfilling the hopeful vision of this dissertation's sub-title.

The second question in the study, "What constructs are operant as writers and audiences approach the task of encoding and decoding literary style?," is answered in part by the list of twenty-eight constructs identified in this study (see Figure 7) with the sub-question, "How do these constructs relate to one another in terms of priority, symbiotic relation, and negotiation?," addressed in the nuanced responses of the writers in the study depicted in Chapter 4. The task of identifying the constructs in the study prompted me to see writing in new ways but especially in terms of how person- and context-dependent it is. I saw this especially in how the study participants move constructs forward and backward in their thinking as needs shift making style the evidence and actuation of those changing situations.

Finally, the third question, "How do the constructs under examination relate to one another in terms of conscious and unconscious use by writers and audiences?," represents for me one of the important outcomes of the study as I came to see this issue less in terms of consciousness/unconsciousness and more in terms of application. Where, when, how, and to what degree any single instance of the production and reception of style is active is not only practically impossible to characterize, it is less important than awareness of the factors present and how pedagogy can prompt acquisition and learning of the constructs that yield rhetorically-aware and nuanced styles for any Discourse. This is a key reason I believe style should be named as such in pedagogy, though it will find its place within already extant pedagogies in most cases. Socioculturally-conceived, it is what each pedagogy attempts to realize.

Finally, the recommendations presented in this chapter offer ideas for application of what is presented in this study. My hope is that they will be received in the spirit in which they are offered, as tentative, possible, yet hopefully wise and intelligent outcomes of this study. The depth and breadth of the applicability of style is as wide as the depth and breadth of rhetoric-composition, style in one sense a description of the ways that texts communicate. I am grateful to Andrea Olinger for her provocative, ground-breaking work as a style scholar just as I am grateful to the many scholars and authors whom I cited in this work. My ultimate goal is to assist my students, others, and myself in constructing more stylistically-rich, more rhetorically-sensitive reading and writing.

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Appendix A

Participant Informed Consent Form A

Indiana University of Pennsylvania
SCHOOL OF GRADUATE STUDIES AND RESEARCH

Jonathan O'Brien, PhD student
flfv@iup.edu *920-498-6802
Composition and TESOL Program
Humanities and Social Sciences
Building, Fifth Floor
Indiana, PA 15705

Informed Consent for
*CONSTRUCTS OF STYLISTIC PRODUCTION AND RECEPTION: VETTING AND
EXTENDING THE SOCIOCULTURAL THEORY OF STYLE*

Purpose of this study

You are invited to participate in a study that I, Jonathan O'Brien, am conducting. This study is part of my dissertation in Indiana University of Pennsylvania's PhD in English: Composition and TESOL (Teaching English to Speakers of Other Languages) program. I am conducting this research under the direction of Dr. Dana Driscoll, the dissertation chair, and readers, Dr. Gian Pagnucci and Dr. Matthew Vetter. I am conducting research to help scholars and teachers understand how writers create and readers interact with the style of a text. I am interested in how writers represent the choices they made in creating their own style and how readers encounter that same style. The goal of this research is to examine a new theory of style that attributes writing style to social forces within the text, writer, and audience. Support for, modification of, or rejection of this theory will help scholars understand writing style better and may ultimately benefit teachers in how they teach writing style in classrooms.

Criteria for participation

This study involves only the following participants:

(1) Those over 18 years of age
(2) Bachelor's degree college graduates
(3) Those involved in drafting, constructing, revising, or otherwise participating in the process of creating technical documents

If the criteria listed above do not describe you, please do not proceed with this form or sign it.

What is involved

I will ask you to participate in a 30-45 minute in-person or phone interview, which will be recorded with an audio recorder. In this interview, I will discuss your literacy history and writing ideals and practices with you. Specifically, I will talk to you about the style of the technical documents you participate in creating—how you conceive of that style,

what goals/ideals you aim at in terms of style, methods/tricks you use to create a document's style, what forces—technical, audience-based, genre-based, personality-based—impact you as you write in a technical, professional style.

At the end of the interview, I will ask if you would like to continue your participation in the study by allowing me to review documents you have created and agreeing to a second interview.

Publication and identifiability

The data and results of this research may be published in conference presentations, a dissertation, and print or electronic academic publications. I may quote from or describe recorded activities of interactions, any texts you have written that you have made available for this study, and any interview comments you made that fall within the scope of the permissions granted in this document. It is likely that you could be recognized by people who know you if they interact with this study or any resulting articles or presentations. Seeking to limit your identifiability, I can use a pseudonym for your name and client/company/organization names in all of my drafts and final reports of this research. (However, if some of the texts that you provide for this study are published texts, then I would need to use your real name in order to quote from these texts.)

The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages, and to the prospective publication of my dissertation by UMI. The permission also extends to the use of the data set for future articles and presentations. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this form will also confirm that you own (or your company owns) the copyright to the writing materials you provide to me, if you have done so.

Regardless of whether you are referred to by a pseudonym or your real name, to safeguard your privacy, I will keep any identifying data (recordings, copies of your writing, interview transcripts) in a private office, and I will not release this raw data to anyone else.

Your rights, benefits, and concerns

You may benefit from this research through the opportunity to reflect on your writing style and process with a style researcher. Also, you will be compensated with a $25 Visa gift card after completion of the interview. I will ask you for a mailing address where I can send the gift card.

The most likely risk of participating in this research comes from possible loss of privacy and potential to be identifiable to others in research reports. However, safeguards described above in this section minimize these risks, and throughout the process, you will have a high level of control over what data you make available and how that data can be used.

Your participation in this research is voluntary. Your decision to participate, decline, or withdraw from participation has no effect on your professional or personal life or on the researcher's perception of you. You may withdraw at any time after signing this form by contacting Jonathan O'Brien or Dana Driscoll. If you choose to withdraw, you may request that any data collected be destroyed and such data will be destroyed by the researcher (files deleted, hard copies shredded, audio-recordings deleted).

If you have any questions about this research project, please contact me, Jonathan O'Brien (920-498-6802; flfv@iup.edu; Northeast Wisconsin Technical College, SC342, 2740 W. Mason St., Green Bay, WI 54302), or Dr. Dana Driscoll (724-357-3968; dana.driscoll@iup.edu; 506T, Humanities and Social Sciences Building; Indiana, PA 15705). If you have any questions about your rights as a participant in this study, you can contact the Indiana University of Pennsylvania Institutional Review Board (724-357-7730; irb-research@iup.edu; Stright Hall, 210 South Tenth St., Indiana, PA 15705).

Please review and check off the options on the next page to ensure that I know how your data may be used. Please use Adobe Acrobat's Fill & Sign Tools at the top right of the screen when initialing and signing the document below. If you have questions, please contact me at the contact information in the paragraph immediately above this one.

*Special thanks to Andrea Olinger, whose dissertation informed consent form was the basis for this form. This form largely follows hers with only minor modifications based on IUP's Thesis and Dissertation Manual. For Olinger's informed consent form, see Appendix B in her dissertation:

Olinger, A. (2014b). *Styling academic discourse: A sociocultural account of writing styles across disciplines* (Order No. 3673816). Available from ProQuest Dissertations & Theses Global.

Permissions page

Use of my name and/or client/company/organization names:

Please initial the items below that indicate your choices.

- I would like to be identified by my real name in any of the data collected. ＿ (please initial)
- Clients/companies/organizations mentioned in documents and interviews may be identified by their real names in any of the data collected. ＿＿＿ (please initial) Please indicate any exceptions (for these, pseudonyms will be used): ＿＿＿＿＿

  ＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

  ＿＿＿＿＿＿＿＿＿＿＿＿＿

OR

- I prefer that a pseudonym be used to refer to me in any of the data collected. ＿＿＿ (please initial)
- I prefer that a pseudonym be used to refer to all clients/companies/organizations in any of the data collected. ＿＿＿ (please initial)

Audio recordings

I give permission to the researcher to audio-record the interview and to use the recording (quotation, paraphrase, selective replaying) in writing about/presenting about the study. ＿ (please initial)

I have read this informed consent form, am 18 years of age or older, have checked answers to the questions above, and agree voluntarily to participate in this research.

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿   ＿＿＿＿＿＿＿＿
(signature)   (date)

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
(print name)

THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS (PHONE 724.357.7730).

Appendix B

Participant Informed Consent Form B

Jonathan O'Brien, PhD student
flfv@iup.edu *920-498-6802
Composition and TESOL Program
Humanities and Social Sciences
Building, Fifth Floor
Indiana, PA 15705

Informed Consent for
CONSTRUCTS OF STYLISTIC PRODUCTION AND RECEPTION: VETTING AND EXTENDING THE SOCIOCULTURAL THEORY OF STYLE

Purpose of this study

You are invited to participate in a study that I, Jonathan O'Brien, am conducting. This study is part of my dissertation in Indiana University of Pennsylvania's PhD in English: Composition and TESOL (Teaching English to Speakers of Other Languages) program. I am conducting this research under the direction of Dr. Dana Driscoll, the dissertation chair, and readers, Dr. Gian Pagnucci and Dr. Matthew Vetter. I am conducting research to help scholars and teachers understand how writers create and readers interact with the style of a text. I am interested in how writers represent the choices they made in creating their own style and how readers encounter that same style. The goal of this research is to examine a new theory of style that attributes writing style to social forces within the text, writer, and audience. Support for, modification of, or rejection of this theory will help scholars understand writing style better and may ultimately benefit teachers in how they teach writing style in classrooms.

Criteria for participation

This study involves only the following participants:

(4) Those over 18 years of age
(5) Bachelor's degree college graduates
(6) Those involved in drafting, constructing, revising, or otherwise participating in the process of creating technical documents

If the criteria listed above do not describe you, please do not proceed with this form or sign it.

What is involved

Now that we have discussed your literacy history and your ideas about technical writing style in the first interview, I would like to discuss how those elements translate into your analysis of technical documents with you. To that end, I will provide one or two technical writing documents to you in attachments to an email, and I will contact you for a 15-20

minute interview about those documents. You do not need to review those documents ahead of time. In this "discourse-based" interview, I will ask about stylistic aspects of the text(s) under consideration and gather your ideas on possible edits and changes to diction, style, presentation, and so on.

After this interview, I will do two things: (1) I will send out a $25 Visa gift card to you immediately, and (2) if you request, after I have completed my analysis I will send that analysis of your contribution to the data set in the study to you and will provide an opportunity for you to respond to my analysis in writing, agreeing, disagreeing, modifying, or alternately interpreting my own analysis. This "member check" ensures that your voice as a participant is heard clearly in the data set and that you have an equal voice in the study with the researcher. Your participation in this portion of the study is optional. Your contribution, if you choose to offer it, will be added to the dissertation in unedited form. If you would like any commentary or analysis removed for privacy or personal reasons, I will remove it from the data set and erase it from the study documents.

Publication and identifiability

The data and results of this research may be published in conference presentations, a dissertation, and print or electronic academic publications. I may quote from or describe recorded activities of interactions and any interview comments you made that fall within the scope of the permissions granted in this document. It is likely that you could be recognized by people who know you if they interact with this study or any resulting articles or presentations. Seeking to limit your identifiability, I can use a pseudonym for your name and client/company/organization names in all of my drafts and final reports of this research.

The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages, and to the prospective publication of my dissertation by UMI. The permission also extends to the use of the data set for future articles and presentations. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this form will also confirm that you own (or your company owns) the copyright to the writing materials you provide to me.

Regardless of whether you are referred to by a pseudonym or your real name, to safeguard your privacy, I will keep any identifying data (recordings, copies of your writing, interview transcripts) in a private office, and I will not release this raw data to anyone else.

Your rights, benefits, and concerns

You may benefit from this research through the opportunity to reflect on your writing style and process with a style researcher. Also, you will be compensated by a $25 Visa gift card after completion of the interview.

The most likely risk of participating in this research comes from possible loss of privacy and potential to be identifiable to others in research reports. However, safeguards described above in this section minimize these risks, and throughout the process, you will have a high level of control over what data you make available and how that data can be used.

Your participation in this research is voluntary. Your decision to participate, decline, or withdraw from participation has no effect on your professional or personal life or on the researcher's perception of you. You may withdraw at any time after signing this form by contacting Jonathan O'Brien or Dana Driscoll. If you choose to withdraw, you may request that any data collected be destroyed, in which that data will be destroyed by the researcher (files deleted, hard copies shredded, audio-recordings deleted).

If you have any questions about this research project, please contact me, Jonathan O'Brien (920-498-6802; flfv@iup.edu; Northeast Wisconsin Technical College, SC342, 2740 W. Mason St., Green Bay, WI 54302), or Dr. Dana Driscoll (724-357-3968; dana.driscoll@iup.edu; 506T, Humanities and Social Sciences Building; Indiana, PA 15705). If you have any questions about your rights as a participant in this study, you can contact the Indiana University of Pennsylvania Institutional Review Board (724-357-7730; irb-research@iup.edu; Stright Hall, 210 South Tenth St., Indiana, PA 15705). You will be given a copy of this form to keep.

Please review and check off the options on the next page to ensure that I know how your data may be used. Please use Adobe Acrobat's Fill & Sign Tools at the top right of the screen when initialing and signing the document below. If you have questions, please contact me at the contact information in the paragraph immediately above this one.

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Permissions page

Use of my name and/or client/company/organization names:

Please initial the items below that indicate your choices.

- I would like to be identified by my real name in any of the data collected. _
  (please initial)
- Clients/companies/organizations mentioned in documents and interviews may be
  identified by their real names in any of the data collected. _____ (please initial)
  Please indicate any exceptions (for these, pseudonyms will be used): _____
  _____
  _____

OR

- I prefer that a pseudonym be used to refer to me in any of the data collected. _____
  (please initial)
- I prefer that a pseudonym be used to refer to all clients/companies/organizations
  in any of the data collected. _____ (please initial)

Audio recordings

I give permission to the researcher to audio-record the interview and to use the recording
(quotation, paraphrase, selective replaying) in writing about/presenting about the study. _
(please initial)

I have read this informed consent form, am 18 years of age or older, have checked
answers to the questions above, and agree voluntarily to participate in this research.

_____   _____
(signature)   (date)

_____
(print name)

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PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF
HUMAN SUBJECTS (PHONE 724.357.7730).

Appendix C

Literacy History Interview Questions

 (some questions based on Olinger, 2014b, Appendix D; Vieira, 2016; Brandt, 2001, Barton & Hamilton, 1998)

Personal Literacy History

- What is your language history? What do you consider to be your first or home language?
- Have you studied and/or speak other languages? Which ones?
- Did you grow up in what you would consider to be a literature household?
    o Did you read as a child? Did your parents or caregivers read to you?
- Do you consider yourself a reader? If so, what genres do you prefer?
- Do you write outside of the workplace? Personal writing? Fiction? Poetry? Blog? Non-fiction? Professional?

College

- Where did you go to college?
- Was style and grammar explicitly taught in your college writing classes?

Workplace Writing

- As you sit down to write a document at work, is style a relevant, front-of-mind concept for you in your writing?
- Would you alter the style of your writing in the workplace if you had freer rein and more control of your stylistic choices?
- To what extent, if any, is a single document written by yourself alone or are there others always involved—subject matter experts, editors, managers, and so on?
- Do you network with other technical writers? If so, does that occur in your workplace, online, through organizations, at conferences?
- Does your company/organization seek to instantiate a/n company/organization-wide style and tone in its technical documents?

Style

- How would you characterize the styles you write in?
    o Do you think the Society for Technical Communication's Foundation certification characterization of style as "plain" or "persuasive" is accurate?

- o Do you think Lannon and Gurak's (2018) ideals of clarity, conciseness, fluency, and tone (p. 201) are the ideals you aim for in your own writing style?
- What do you think are the most important and forceful impacts on technical writing style both now and going forward?
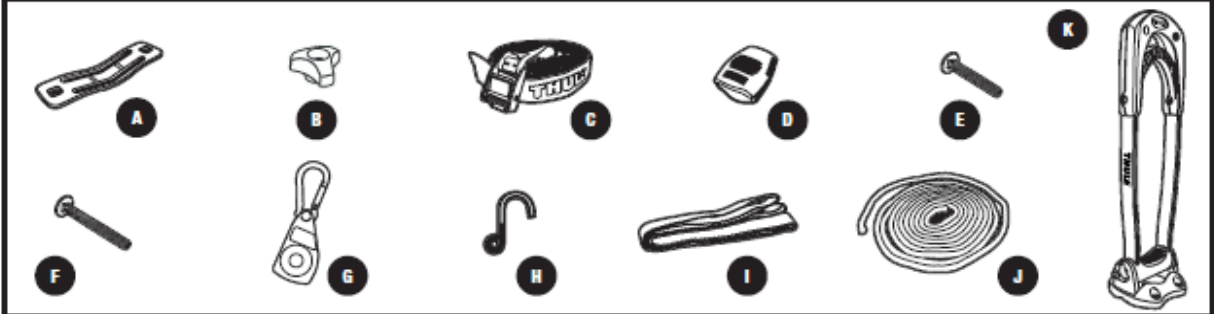
Appendix D

Discourse-based Interview Document 1: Thule Stacker 830 (Thule, 2018)

THULE® SWEDEN **THE STACKER™ 830**

PARTS INCLUDED • PIÈCES INCLUSES • *PIEZAS INCLUIDAS*

part pièce parte	description description *descripcion*	part number numéro de pièce *numero de parte*	qty. qté *cant.*
A	metal bracket / plaque mètallique / *placa de metal*	853-5513	4
B	knob M6 low / molette M6 basse / *perilla M6 corta*	753-0783	8
C	strap / courroie / *correa*	753-2030-02	2
D	buckle bumper / tampon de la boucle / *tapa de la hebilla*	853-5593	2
E	carriage bolt M6 x 50 mm / boulon ordinaire 50mm / *perno de carro 50mm*	915-0650-31	8
F	carriage bolt M6 x 60mm / boulon ordinaire 60mm / *perno de carro 60mm*	915-0660-31	8
G	ratchet with carabineer hook / cliquet avec mousqueton / *trinquete con gancho carabinero*	8522883001	2
H	hook / crochet / *gancho*	853-5465	2
I	attachment strap / courroie d'attache / *correa de sujeción*	853-5467	2
J	1/4" rope / corde 1/4 po / *cuerda de 1/4 de pulg. (6 mm)*	853-5466	2
K	stacker assembly / assemblée de chargeur / *la asamblea de stacker*	753-3247	2

PRODUCT REGISTRATION / ENREGISTREMENT DE PRODUIT / *REGISTRO DE PRODUCTO*

Model # _____   Purchase Date ____/____/____   Place of Purchase _____

Register online at www.thuleracks.com/register   THULE 42 Silvermine Road Seymour, Connecticut 06483 (800) 238-2388

WARNINGS / LIMITATIONS • AVERTISSEMENTS / LIMITATIONS • *ADVERTENCIAS / LIMITACIONES*

- Load bars must be at least 24" (610 mm) apart for safe use.
- Ensure that boat does not contact vehicle while loading or unloading; otherwise, damage to vehicle or boat could occur.
- Always tie down bow and stern of boat to vehicle bumpers or tow hooks.
- Do not exceed weight limitation of racks or factory installed bars.
- Ensure load carrier or factory cross bars are properly installed and tight to vehicle.
- Failure to follow above guidelines voids warranty.
- Not compatible with fiberglass boats.

- L'écartement entre les barres de toit doit être de 61 cm (24 po) minimum pour une utilisation sûre.
- Veillez à ce que l'embarcation ne touche pas le véhicule lors du chargement ou du déchargement, afin de ne pas risquer d'endommager l'un ou l'autre.
- Attachez toujours la proue et la poupe du bateau aux pare-chocs ou aux crochets de remorques du véhicule.
- Ne dépassez pas la limite de poids de la galerie ou des barres installées en usine.
- Assurez-vous que la galerie ou les barres transversales sont correctement installées et bien fixées au véhicule.
- La garantie sera nulle et non avenue en cas de non-respect des consignes antÉrieures.
- Pas compatible avec les bateaux de fibre de verre.

- *Para un uso seguro las barras de carga deben tener una separación de por lo menos 61 cm (24 pulg).*
- *Asegúrese de que la embarcación no toque el vehículo mientras la carga o la descarga; de no ser así, se podrían producir daños en el vehículo o en la embarcación.*
- *Ate siempre la parte delantera y trasera de la embarcación al parachoques o a los ganchos de remolque del vehículo.*
- *No sobrepase los límites de peso del portacargas ni de las barras instaladas en fábrica.*
- *Asegúrese de que el portacargas o las barras transversales defábrica estén instalados y sujetos correctamente al vehículo.*
- *Se anulará la garantía si no siguen las directrices anteriores.*
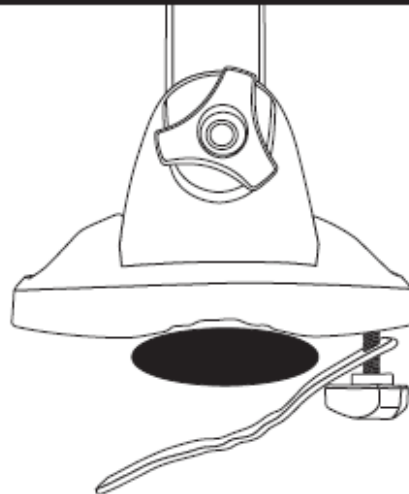- *No compatible con barcos de fibra de vidrio.*

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1

FOR USE ON AFTERMARKET ROOF RACKS	FOR USE ON VEHICLES WITH FACTORY RACKS
POUR UTILISATION SUR DES BARRES DE TOIT MONTÉES PAR L'UTILISATEUR	POUR UTILISATION SUR DES VÉHICULES AVEC BARRES DE TOIT MONTÉES EN USINE
PARA USAR EN VEHÍCULOS CON PORTAEQUIPAJES POSTVENTA	*PARA USAR EN VEHÍCULOS CON PORTAEQUIPAJES DE FÁBRICA*

OR
OU
O

- **Thule square and Xsporter load bar and Yakima round load bar.**
  Barre de toit carrée Thule et barre de toit ronde Yakima.
  Barra de carga cuadrada de Thule y barra de carga redonda de Yakima.

- **Loosely attach 60mm carriage bolts (F) and knobs (B) as shown.**
  Les barres at attachez les 60mm boulons et les motettes,comme dans l'embarcation sans les serrer
  Instale el 60mm perno y la perialla de la manera que se muestra en el dibujo sin apretarlos.

- **Look up your vehicle in the included Hardware Fit Guide. Identify the proper bolt length for your vehicle.**
  Recherchez votre véhicule dans le guide de réglage de la visserie inclus. Déterminez la longueur de vis appropriée à votre véhicule.
  Busque su vehículo en la Guía de ajuste de las piezas de montaje adjunta. Identifique la longitud de perno adecuada para su vehículo.

- **Loosely attach carriage bolts and knobs (B) as shown.**
  Les barres et attachez les boulons et les motettes, comme dans l'embarcation sans les serrer.
  Instale el perno y la perialla de la manera que se muestra en el dibujo sin apretarlos.

2
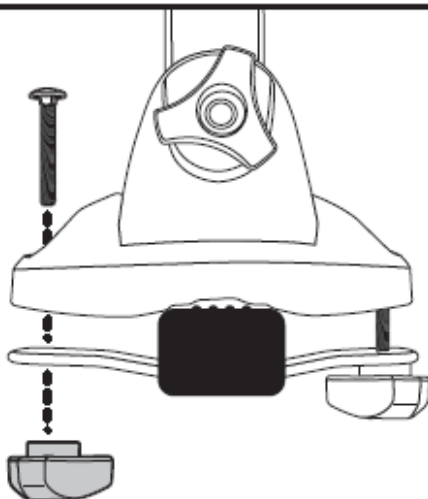
- **Place carrier on bars and loosely attach bolt and knob as shown.**
  Placer le transporteur sur les barres et attacher lâchement le boulon et le bouton comme indiqué.
  Coloque portador en barras y conecte flojamente cerrojo y perilla como mostrado.

- **Load bars must be at least 24" (610mm) apart for safe use.**
  Les barres de charge doivent être écartées de 610 mm (24 po) au minimum pour garantir une utilisation sans risques.
  Para un uso seguro las barras de carga deben tener una separación de por lo menos 61 cm (24 pulg.).

- **Tighten all knobs firmly and evenly.**
  Resserrer tous boutons fermement et également.
  Apriete todas perillas firmemente y uniformemente.

3

- **Adjust stacker to upright position.**
  Ajuster le chargeur à la position debout.
  Ajuste stacker a la posición vertical.

- **Tighten side knob.**
  Resserrer le bouton de côté.
  Apriete la perilla del lado.

- **Loosen knob to fold down when not in use.**
  Desserrer le bouton pour plier en bas quand pas dans l'usage.
  Afloje la perilla para doblar hacia abajo cuando no en uso.

4

- **Route free end of strap, with logo side up, through the Buckle Bumper as shown. Pull Buckle Bumper over buckle to protect boat and vehicle while strapping down boat.**
  Insérez l'extrémité libre de la courroie, logo vers le haut, dans la butée de la boucle, comme illustré sur le schéma. Faites glisser la butée sur la boucle afin de protéger le véhicule et l'embarcation lors de l'arrimage de celle-ci.
  Deslice el extremo libre de la correa, con el logotipo orientado hacia arriba, a través de la tapa de la hebilla, según se muestra en el dibujo. Tire de la tapa de manera que descanse sobre la hebilla para proteger a la embarcación y al vehículo cuando amarre la embarcación.

5

- **Upon use, periodically check that the load is tied down firmly. Cinch strap through buckle tightly. Position strap away from all areas with exposed sharp edge.**
  Pendant l'utilisation, vérifiez régulièrement que la charge est correctement fixée. Tendez fermement la sangle dans la boucle. Positionnez la sangle à l'écart de tout bord coupant exposé.
  Mientras lo usa, compruebe periódicamente que la carga esté atada firmemente. Cinche firmemente la correa a través de la hebilla. Coloque la correa lejos de todas las zonas con bordes afilados expuestos.

Max load: 4 kayaks.
Charge maximale: 4 kayaks.
Carga máxima: 4 kayaks.

Additional straps required

Supplémentaire sangle exigé.

Las correas adicionales requirieron.

6 — BOW / STERN TIE DOWN / ARRIMAGE DE LA PROUE / POUPE / *SUJECIÓN DE LA PROA/POPA*

- **Carefully attach hook to end of rope.**
  Attachez le crochet soigneusement au bout de la corde.
 *Sujete el gancho al extremo de la cuerda cuidadosamente.*

7

- **Feed end of rope up through the bottom while rotating the spool clockwise.**
  Enfilez le bout de la corde à travers le bas du cliquet tout en tournant la bobine dans le sens des aiguilles d'une montre.
  Pase la cuerda a través de la parte inferior a la vez que gira la bobina en dirección horaria.

- **Keep rotating the spool until rope exits at the bottom.**
  Continuez à tourner la bobine jusqu'à ce que la corde ressorte.
  Continúe girando la bobina hasta que la cuerda salga por la parte inferior.

8
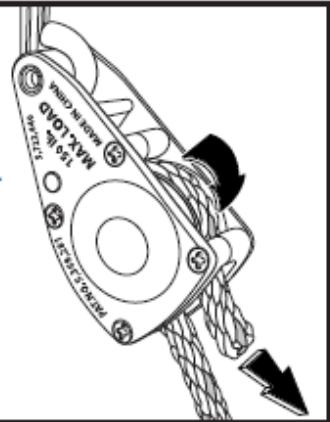
- **Attach carabineer hook to boat strap or roof top cargo.**
  Fixez le mousqueton sur la sangle du bateau ou aux bagages sur le toit.
  Monte el gancho carabinero a la correa del bote o carga sobre techo.

- **Attach bottom hook to vehicle bumper or tow hook.**
  Fixez le crochet inférieur au pare-chocs ou au crochet de remorquage du véhicule.
  Sujete el gancho inferior al parachoques del vehículo o al gancho de remolque.
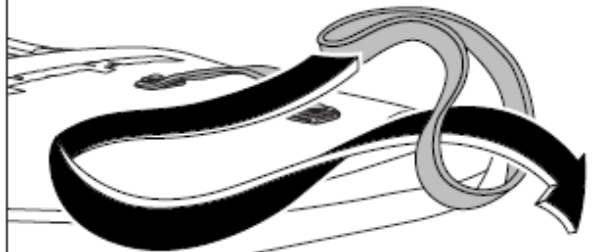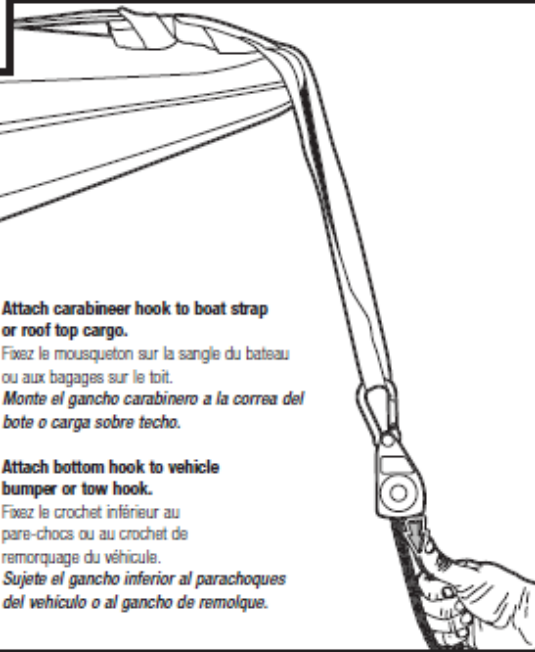
- **Use attachment strap for better load clearance, if necessary.**
  Si nécessaire, utilisez des sangles pour une meilleure séparation de la charge.
  Use la correa de sujeción para separar mejor la carga, si es necesario.

9

- **Pull free end of rope until desired tightness is reached.**
  Tirez l'embout de la corde pour qu'elle soit suffisamment tendue.
  Tire del extremo libre de la cuerda hasta que consiga la tirantez deseada.

- **Do not over tighten as this could deform boat.**
  Ne serrez pas trop pour ne pas déformer l'embarcation.
  No lo apriete demasiado, ya que esto podría deformar la embarcación.

- **Each tie down will secure up to two kayaks.**
  Chaque cordon obtiendra jusqu'à deux kayaks.
  Cada sujeta asegurará hasta dos kayaques.
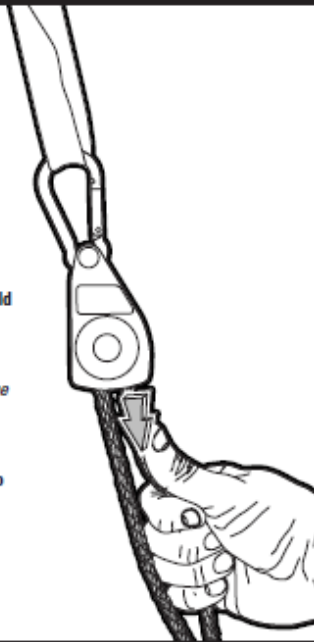
- **To release, press lever located above ratchet spool.**
  Pour relâcher, appuyez sur le levier situé au-dessus de la bobine du cliquet.
  Para soltar, oprima la palanca colocada encima de la bobina del trinquete.

|		
WARNING:	Do not exceed load 150lb. limit of QuickDraw. Inspect rope and ratchet before each use. Do NOT use if damaged. Avoid sharp edges, pinch points, abrasive or hot surfaces.	
AVERTISSEMENT:	Ne dépassez pas la limite de charge de 70 kg (150 lb) du QuickDraw. Inspectez la corde et le cliquet avant chaque utilisation. NE les utilisez PAS s'ils sont endommagés. Évitez les angles vifs, les points de pincement, les surfaces abrasives ou chaudes.	
ADVERTENCIA:	*No supere el límite de carga de 70 kg (150 lb) del QuickDraw. Inspeccione la cuerda y el trinquete antes de cada uso. NO los use si están dañados. Evite los bordes afilados, los puntos de constricción o las superficies abrasivas o calientes.*	

10

- **Be sure to tie down bow & stern of boat to vehicle bumpers or tow hooks.**
  Veillez à toujours attacher la proue et la poupe du bateau aux pare-chocs ou aux crochets de remorques du véhicule.
  Asegúrese de atar la parte delantera y trasera de la embarcación al parachoques o a los ganchos de remolque del vehículo.
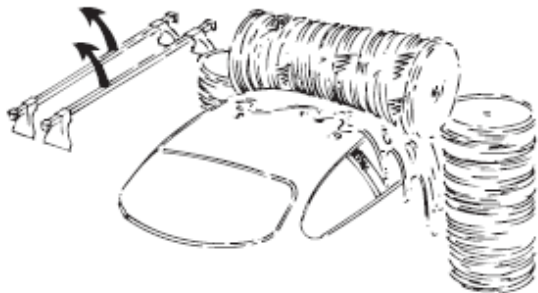
- **Always remove the load carrier before putting the vehicle through a car-wash.**
  Retirez toujours le porte-kayak avant de passez le véhicule au lave-auto.
  Quite siempre el portacargas antes de pasar el vehículo por un lava-autos.

THULE RACK GUIDELINES

When using Thule Load carriers and accessories, the user must understand the precautions. The points listed below will assist you in using the rack system and will encourage safety.

- For quality fits and safety, use only the recommended rack or accessory as stated in Thule's current Fit Guide. Do not assume a rack will fit, always check the current Fit Guide when obtaining a new vehicle.

- Unless stated otherwise in these instructions, do not carry more than 75 kg (165 lbs.) on Thule load carriers. Thule load carriers do not increase gutter or roof strength. Thule can not warranty loads that exceed this limit. Total load = cargo weight plus weight of accessories used to carry cargo.

- Always make sure all doors are open when mounting a roof rack system. Make sure all knobs, bolts, screws, straps, and locks are firmly attached, tightened and locked before every trip. Knobs, bolts, screws, straps and locks must be periodically inspected for signs of wear, corrosion, and fatigue. Check your load at stops during the trip to ensure continued fastening security.

- Check local and state laws governing projection of objects beyond the perimeter of a vehicle. Be aware of the width and height of your cargo since low clearance branches, bridges, and parking garages can affect the load. All cargo will affect the vehicle's driving behavior. Never drive with any lock, knob or rack in an open or unlocked position. All long loads such as, but not limited to, sailboards, surfboards, kayaks, canoes, and lumber must be tied down front and rear to the bumpers or tow hooks of the vehicle.

- Remove your Thule rack and accessories when they are not in use and before entering automatic car washes.

- All locks must be turned and moved periodically to ensure smooth operation. Use graphite or dry lubricant to help this. Thule locks are designed to deter vandalism and theft but should not be considered theft proof. Remove valuable gear if your vehicle is unattended for an extended period. Place at least one key in the glove compartment.

- For safety to your vehicle and rack system, obey all posted speed limits and traffic cautions. Adapt your speed to the conditions of the road and the load being carried.

- Do not use Thule load carriers and accessories for purposes other than those for which they were designed. Do not exceed their carrying capacity. Failure to follow these guidelines or the product's instructions will void the warranty.

- All loads must be secured using the provided straps.

- Consult with your Thule dealer if you have any questions regarding the operations and limits of Thule products. Review all instructions and warranty information carefully.

- Not for use on trailers or towed vehicles.

- Not for offroad use.

- Keep bicycle tires away from hot exhaust.

DIRECTIVES POUR SUPPORT THULE

Lorsque vous utilisez les supports et accessoires Thule pour voiture, vous devez observer les précautions suivantes. Les conseils ci-dessous visent à faciliter l'emploi de votre galerie et à l'utiliser en toute sécurité.

- Pour respecter les règles de sécurité et obtenir un ajustement de qualité, utilisez uniquement le produit ou l'accessoire recommandé dans le guide actuel de correspondance de Thule. Ne présumez pas qu'un produit sera adapté; consultex toujours ce guide de correspondance lorsque vous achetez un nouveau véhicule.

- Sauf indication contraire, ne dépassez pas la capacité maximale de 75 kg (165 lb) permise pour les porte charges de Thule. Ne transportez pas plus de 75 kg (165 lb) sur les galeries Thule. Ces dernières ne renforcent pas votre toit ni les points de fixation. Les charges dépassant cette limite ne peuvent pas être garanties. Charge totale = poids du chargement + poids des accessoires utilisés pour le transporter.

- Assurez-vous toujours que les portes de la voiture sont ouvertes lors de l'installation d'une galerie. Avant de prendre la route, assurez-vous que les molettes, les boulons et les vis sont bien serrés, les sangles bien attachées et les dispositifs de verrouillage fermés à clés. Examinez régulièrement ces éléments afin de déceler tout signe d'usure, de corrosion ou de fatigue. Vérifiez votre chargement à tous les arrêts pendant votre voyage pour vous assurer qu'il est bien attaché.

- Vérifiez les lois locales ou provinciales sur le dépassement d'objets sur les côtés d'un véhicule. Soyez conscient de la largeur et de la hauteur de votre chargement pour passer sous les branches basses, les ponts et les plafonds de stationnement couverts. Tout chargement modifie la tenue de route du véhicule. Ne conduisez jamais avec une serrure, une barre ou un écrou ouverts ou non bloqués. Tous les chargements longs, de type surfs, planches à voile, kayaks, canoës, bois, etc. doivent être attachés à l'avant et à arrière aux pare-chocs ou aux crochets de remorquage du véhicule.

- Retirez votre galerie et vos accessoires Thule lorsque vous ne les utilisez pas et avant de passer au lave-auto.

- Faites fonctionner régulièrement toutes les serrures afin qu'elles ne se grippent pas. Employez du graphite ou un lubrifiant sec pour conserver leur souplesse. Les antivols Thule sont conçus pour dissuader les voleurs et éviter les actes de vandalisme. Retirez tout matériel de valeur de votre véhicule s'il doit rester sans surveillance pendant une période prolongée. Gardez au moins une clé dans la boîte à gants.

- Pour protéger votre véhicule et votre galerie, respectez les vitesses limites et le code de la route. Adaptez votre vitesse aux conditions de la route et à la charge transportée.

- N'utilisez pas de galerie et d'accessoires Thule à d'autres fins que celles pour lesquelles ils ont été conçus. Ne dépassez pas leur capacité de charge maximale. Le non respect de ces consignes et des instructions spécifiques au produit annulera la garantie.

- Tout chargement doit être attaché en utilisant les sangles fournis.

- Consultez votre revendeur pour toute question sur le fonctionnement et les limites des produits Thule. Lisez attentivement toutes les instuctions et les informations de la garantie.

- Ne pas utiliser sur une remorque ou un véhicule remorqué.

- Ne pas utiliser pour la conduite hors route.

- Garder les pneus de vélo éloignés du tuyau d'échappement chaud.

DIRECTRICES PARA LOS PORTAEQUIPAJES THULE

Cuando use portacargas y accesorios Thule, debe asegurarse de entender todas las precauciones. Los puntos indicados a continuación le ayudarán a usar el sistema de bastidor y fomentarán su seguridad.

- Por seguridad y para obtener un ajuste correcto, use solamente el bastidor o accesorio Thule recomendado según en la Guía de ajuste Thule más actual. No suponga el ajuste del bastidor, siempre verifique la Guía de ajuste más actual cuando compre un nuevo vehículo.

- Salvo instrucción contrario, no se debe superar la capacidad máxima de 75 kg (165 lb) designada para los portacargas de Thule. No transporte más de 75 kg (165 lb.) en los portacargas Thule. Los portacargas Thule no incrementan la resistencia de las canaletas ni del techo. Thule no garantiza cargas que excedan este límite. Carga total = el peso de la carga + el peso de los accesorios usados para el transporte.

- Siempre asegúrese que las puertas del automóvil estén abiertas cuando monte un sistema de bastidor para techo. Cerciórese de que las perillas, los pernos, los tornillos, las correas y las cerraduras estén firmemente sujetos, apretados y asegurados con llave antes de cada viaje. Debe revisar periódicamente que las perillas, los pernos, los tornillos, las correas y los seguros no tengan señales de desgaste, corrosión o fatiga. Revise su carga en las paradas durante su viaje para garantizar la seguridad continua de la sujeción.

- Verifique las leyes estatales y locales que rigen la proyección de objetos más allá del ancho del vehículo. Esté al tanto de la anchura y altura de su carga, ya que las ramas, los puentes, los estacionamientos de baja altura pueden dañar su carga.Toda carga afectará el comportamiento de manejo del vehículo. Nunca conduzca con alguno de los seguros, las perillas o los bastidores abiertos o sin seguro. Todas las cargas largas, como tablas a vela, tablas de surf, kayacs, canoas y madera, deban atarse al frente y atrás los parachoques o ganchos de remolque del vehículo.

- Quite su bastidor y accesorios Thule cuando no se usen y antes de entrar a establecimientos para lavado automático de vehículos.

- Todas los seguros deben girarse y moverse periódicamente para garantizar que no se atasquen. Use grafito u otro lubricante en seco similar para este fin. Los seguros Thule están diseñados para disuadir el vandalismo y los robos. Saque todo equipo valioso si su vehículo no tendrá vigilancia por largo tiempo.Ponga porlo menos una llave en la guantera.

- Como seguridad para su vehículo y sistema de bastidor, obedezca todos las límites de velocidad y avisos de tráfico. Adapte su velocidad a las condiciones del camino y de la carga transportada.

- No use portacargas y accesorios Thule con otra función para la que fue destinada. No exceda su capacidad de carga. Se anulará la garantía si no sigue estos lineamientos o las instrucciones del producto.

- Todas las cargas deben atarse con la correas incluidas.

- Consulte a su distribuidor Thule si tiene alguna pregunta sobre el funcionamiento y los límites de los productos Thule. Repase cuidadosamente todas las instrucciones y la de garantía.

- No use en tráilers o vehículos de remolque.

- No conduzca fuera del camino.

- Mantenga las ruedas de las bicicletas lejos del tubo de escape caliente.

THULE CAR RACK SYSTEMS LIMITED LIFETIME WARRANTY [EFFECTIVE JANUARY 1, 2006]
Register online at www.thule.com/register

THULE will warranty all THULE brand car rack systems and its accessories manufactured by THULE during the time that an original retail purchaser owns the product. This warranty terminates if a purchaser transfers the product to any other person.

Subject to the limitations and exclusions described in this warranty, THULE will remedy defects in materials or workmanship by repairing or replacing, at its option, a defective product without charge for parts or labor. In addition, THULE may elect, at its option, not to repair or replace a defective product but rather issue to a purchaser a refund equal to the purchase price paid for the product or a credit to be used toward the purchase of a new THULE load carrier system.

No warranty is given for defects caused by normal wear and tear, cosmetic rust, scratches, accidents, unlawful vehicle operation, or modification of, or any types of repair of, a load carrier system other than those authorized by THULE.

No warranty is given for defects resulting from conditions beyond THULE's control including, but not limited to, misuse, overloading, or failure to assemble, mount or use the product in accordance with THULE's written instructions or guidelines included with the product or made available to the purchaser.

No warranty is given for THULE products purchased outside of the United States, Canada and Mexico.

In the event that a product is defective, the purchaser should contact the THULE dealer from whom the product was purchased or an Authorized Thule Service Center. If the dealer or Authorized Thule Service Center is not able to correct the defect, the purchaser should contact THULE in writing or by phone using the contact information listed at the bottom of this page.

In the event that a product needs to be returned to THULE, a THULE technician at the address or telephone number listed below will provide the purchaser with the appropriate mailing address and any additional instructions. Please note that the purchaser will be responsible for the cost of mailing the product to THULE and that proof of purchase in the form of an original purchase invoice or receipt and a detailed description of the defect must be included in the mailing.

DISCLAIMER OF LIABILITY

REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT OR THE ISSUANCE OF A REFUND OR CREDIT (AS DETERMINED BY THULE) IS A PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY. DAMAGE TO A PURCHASER'S VEHICLE, CARGO AND/OR TO ANY OTHER PERSON OR PROPERTY IS EXCLUDED.

THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THULE'S SOLE LIABILITY TO ANY PURCHASER IS LIMITED TO THE REMEDY SET FORTH ABOVE. IN NO EVENT WILL THULE BE LIABLE FOR ANY LOST PROFITS, LOST SALES, OR FOR ANY CONSEQUENTIAL, DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES OR FOR ANY OTHER DAMAGES OF ANY KIND OR NATURE.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT BE APPLICABLE.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

THULE garantit tous les systèmes de support de la marque THULE pour voitures et ses accessoires fabriqués par THULE tant que le premier acheteur au détail détient le produit. Cette garantie prend fin si un acheteur transfert le produit à une personne.

Selon les limites et les exclusions décrites dans cette garantie, THULE remédiera aux défauts de matériaux ou de main d'œuvre en réparant ou en remplaçant, à sa discrétion, un produit défectueux sans frais de pièces ou de main d'œuvre. De plus, THULE peut décider, à sa discrétion, de ne pas réparer ou remplacer un produit défectueux mais d'émettre un remboursement de l'acheteur égal au prix payé pour le produit, ou un crédit à utiliser pour l'achat d'un système de support de charge THULE neuf.

Aucune garantie n'est émise pour les défauts causés par une usure normale, pour la rouille esthétique, pour les rayures, pour l'utilisation inégale du véhicule, pour toute modification de celui-ci, pour tout type de réparation, pour un système de support de charge autre que ceux autorisés par THULE.

Aucune garantie n'est émise pour les défauts résultant de conditions hors du contrôle de THULE, notamment une mauvaise utilisation, une surcharge ou un assemblage ou montage non conformes aux instructions écrites ou directives de THULE incluses avec le produit ou mises à disposition de l'acheteur.

Aucune garantie n'est émise pour les produits THULE achetés hors des États-Unis, du Canada ou du Mexique.

Dans le cas où un produit serait défectueux, l'acheteur doit contacter soit le revendeur THULE chez lequel le produit a été acheté, soit le centre de service après-vente Thule. Si le revendeur ou le centre de service après-vente Thule n'est pas en mesure de corriger le défaut, l'acheteur doit contacter Thule par écrit ou par téléphone (voir les coordonnées en bas de cette page).

Dans l'éventualité où un produit doit être renvoyé à THULE, un technicien THULE à l'adresse ou au numéro de téléphone indiqué ci-dessous fournira à l'acheteur l'adresse d'envoi appropriée et des instructions supplémentaires. Veuillez noter que l'acheteur sera responsable des frais d'envoi du produit à THULE et qu'une preuve d'achat sous la forme de l'original d'une facture ou d'un reçu d'achat et une description détaillée du défaut doivent être inclus dans l'envoi.

DÉNI DE RESPONSABILITÉ

LA REPARATION OU LE REMPLACEMENT D'UN PRODUIT DEFECTUEUX OU L'EMISSION D'UN REMBOURSEMENT OU D'UN CREDIT (SELON LE CHOIX DE THULE) CONSTITUE LE RECOURS EXCLUSIF DE L'ACHETEUR SOUS CETTE GARANTIE. LES DEGATS AU VEHICULE DE L'ACHETEUR, AU CHARGEMENT OU/ET A TOUTE AUTRE PERSONNE OU BIEN SONT EXCLUS.

CETTE GARANTIE REMPLACE EXPRESSÉMENT TOUTES LES AUTRES GARANTIES EXPRESSES OU IMPLICITES Y COMPRIS TOUTE GARANTIE DE QUALITÉ MARCHANDE ET DE CONFORMITÉ À UN USAGE PARTICULIER.

LA SEULE RESPONSABILITÉ DE THULE ENVERS TOUT ACHETEUR EST LIMITÉE AU RECOURS DÉFINI CI-DESSUS. EN AUCUN CAS THULE NE PEUT ÊTRE TENU RESPONSABLE DES PERTES DE REVENUS, DE PERTES DE VENTES, DES DOMMAGES DIRECTS OU INDIRECTS, ACCESSOIRES, PARTICULIERS, SPÉCIAUX, INTÉRÊTS MAJORÉS OU PUNITIFS OU DE TOUT AUTRE DOMMAGE DE TOUT TYPE OU NATURE.

CERTAINS ÉTATS OU PROVINCES N'AUTORISENT PAS L'EXCLUSION OU LA LIMITATION DES DOMMAGES ACCESSOIRES OU INDIRECTS, LES LIMITATIONS DÉCRITES CI-DESSUS PEUVENT DONC NE PAS ÊTRE APPLICABLES.

CETTE GARANTIE VOUS DONNE DES DROITS SPÉCIFIQUES QUI PEUVENT VARIER D'UN ÉTAT OU PROVINCE À L'AUTRE.

THULE garantizará todos los sistemas portacargas de la marca THULE y sus accesorios fabricados por THULE mientras el comprador original esté en posesión del producto. Esta garantía finaliza si un comprador transfiere el producto a cualquier otra persona.

Según las limitaciones y exclusiones que se describen en esta garantía, THULE remediará cualquier defecto en los materiales o la mano de obra reparando o reemplazando, a discreción propia, cualquier producto defectuoso sin cobrarle al propietario por las piezas o la mano de obra. Además, THULE puede optar, a discreción propia, a no reparar o reemplazar un producto defectuoso y en su lugar devolver al comprador el dinero del precio que pagó por el producto o dotarle un crédito que puede usarse para comprar un nuevo sistema portacargas THULE.

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En el caso de que el producto deba devolverse a THULE, un técnico de THULE en la dirección o número de teléfono indicados abajo le proporcionará una dirección postal donde enviarlo así como instrucciones adicionales. Por favor observe que el comprador será responsable de abonar el costo de enviar el producto THULE y que debe adjuntar una prueba de compra como una factura o un recibo original así como una descripción detallada del defecto.

DESCARGO DE RESPONSABILIDAD

BAJO ESTA GARANTÍA, LA ÚNICA SOLUCIÓN PARA EL COMPRADOR ES EL REEMPLAZO DEL PRODUCTO DEFECTUOSO, LA DEVOLUCIÓN DEL DINERO O DOTACIÓN DE CRÉDITO (SEGÚN LO DETERMINE THULE). SE EXCLUYEN LOS DAÑOS AL VEHÍCULO DEL COMPRADOR, A LA CARGA O A CUALQUIER OTRA PERSONA O PROPIEDAD.

ESTA GARANTÍA SE HACE DE FORMA EXPRESA EN VEZ DE CUALQUIER OTRA GARANTÍA, IMPLÍCITA O EXPLÍCITA, INCLUSO LAS GARANTÍAS DE COMERCIABILIDAD Y ADECUACIÓN PARA PROPÓSITOS CONCRETOS.

LA ÚNICA RESPONSABILIDAD DE THULE HACIA EL COMPRADOR SE LIMITA A LA SOLUCIÓN ESTABLECIDA ANTERIORMENTE. EN NINGÚN CASO SERÁ THULE RESPONSABLE DE NINGÚN BENEFICIO PERDIDO, VENTAS PERDIDAS O DE CUALQUIER DAÑO CONSECUENTE, DIRECTO, INDIRECTO, INCIDENTAL, ESPECIAL, EJEMPLAR O PUNITIVO DE CUALQUIER TIPO O ÍNDOLE.

ALGUNOS ESTADOS NO PERMITEN LA EXCLUSIÓN O LA LIMITACIÓN DE DAÑOS INCIDENTALES O CONSECUENTES, POR CONSIGUIENTE EN ESOS ESTADOS LAS LIMITACIONES ANTERIORES NO SON APLICABLES.

ESTA GARANTÍA LE OTORGA DERECHOS LEGALES ESPECÍFICOS Y USTED TAMBIÉN PUEDE TENER OTROS DERECHOS QUE VARÍAN DE UN ESTADO A OTRO.

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Appendix E

Discourse-Based Interview Document 2: FAA May 2018 Report (Norris, 2018)

Federal Aviation Administration

DOT/FAA/AM-18/2
Office of Aerospace Medicine
Washington, DC 20591

Assessing Trends in Cannabinoid Concentrations Found in Specimens from Aviation Fatalities between 2007 and 2016

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Kacey Cliburn
Philip Kemp
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May 2018

Final Report

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16. Abstract

Marijuana continues to be the most commonly abused drug in the United States and is known to cause decrements in psychomotor performance. Delta-9-tetrahydrocannabinol (THC), the major psychoactive component of the cannabis plant and its major metabolite, 11-nor-9-carboxy-delta-9-tetrahydrocannabinol (THCCOOH) are routinely tested for in fatal aviation accident investigations by the forensic toxicology laboratory at the Civil Aerospace Medical Institute (CAMI). This study was initiated to examine the blood cannabinoid concentrations of THC and THCCOOH detected in victims of aviation accidents from 2007–2016 and follows a similar report from CAMI that covered the previous 10-year period (1997–2006) in which it was noted that these cannabinoids were increasing in concentration. There were 2,909 cases received by the Forensic Sciences Section at CAMI during the current study period, 99 of which (3.4%) were positive for THC or THCCOOH in at least one specimen-type (fluid or tissue). When compared with the previous 10-year study, 2007–2016 showed a 433% and 23.5% increase in overall median blood concentration of THC and THCCOOH, respectively. However, over the 10-year period of the current study, the blood concentrations reflected a downward trend. The mean and median THC/THCCOOH concentration ratio was 0.62 ($\pm$ 0.53) and 0.45, respectively, with some individuals having ratios > 1.0. The THC/THCCOOH ratios trended upward over the 10-year study period. Fifty-five cannabinoid-positive, medically certificated pilots and 1,918 controls were examined for any relationship between the presence of the cannabinoids and other variables of interest. This examination indicated that cannabinoid-positive pilots tended to be younger in age and were likely to have another impairing drug in their body at the time of the aviation accident. This study contributes much needed data to scant research on postmortem cannabinoid concentrations and will assist with the interpretation of cannabinoid positive cases.

17. Key Words Forensic Science, Toxicology, Marijuana, Pilot Fatalities, Civil Aviation, Accident Investigation		18. Distribution Statement Document is available to the public through the Internet: http://www.faa.gov/go/oamtechreports/	
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ASSESSING TRENDS IN CANNABINOID CONCENTRATIONS FOUND IN SPECIMENS FROM AVIATION FATALITIES BETWEEN 2007 AND 2016

INTRODUCTION

Cannabis sativa (marijuana) is the most commonly used illicit drug, with global reports of approximately 183 million people (3.8%) using the drug at least once in 2015.[1] In the United States, the 2015 National Survey on Drug Use and Health indicated that there was an estimated 22.2 million people (8.3%), aged 12 and older, that used marijuana in the past month. A significant number (4.0 million) had a past year Substance Abuse Disorder related to marijuana use.[2] In 2011, marijuana contributed to 146.2 emergency room visits per 100,000 people with the greatest number of visits from the age group of 21–24 year olds.[3]

The legality of cannabis worldwide has been changing since the late 1990s with many countries decriminalizing the drug or allowing its use for medical and recreational purposes. Although the U.S. government continues to maintain the drug as a Schedule I substance under the Controlled Substances Act, state laws have changed in the past few decades to allow more widespread use. Beginning in 1996, states passed their own legislation allowing marijuana to be used for various medical conditions and in 2012, the first two states, Colorado and Washington, passed statutes to permit recreational use of marijuana. As of April 2017, eight states and Washington DC have laws in place for residents to consume marijuana for recreational purposes, and 18 additional states allow the use of marijuana for medical purposes.[4,5]

These legislative changes add to the already extensive use of the drug, making cannabis a public health concern. A recent study examined recreational use of marijuana before and after legalization for college undergraduates at Washington State University. The authors demonstrated that prevalence of marijuana use and average frequency of use by college undergraduates significantly increased after recreational marijuana legalization.[5] Colorado records show that cannabis is responsible for a twofold increase in visits (85 to 186 visits per 10,000 people) to urban hospitals for non-Colorado residents from 2013 to 2014.[6]

The main psychoactive component of cannabis, Δ9-tetrahydrocannabinol (THC), has been frequently investigated over the last five decades and causes effects including euphoria, relaxation, and altered perception.[7] THC and its inactive metabolite 11-nor-9-carboxy-Δ^9-tetrahydrocannbinol (THCCOOH) are common substances detected in driving under the influence of drugs (DUID) cases due to the high prevalence of cannabis. The 2013–2014 National Highway Traffic Safety Administration (NHTSA) National Roadside Survey (NRS) reported a 48% increase in the weekend nighttime drivers testing positive for THC, with a change from 8.6% in 2007 to 12.6% in the 2013–2014 study.[8]

Psychomotor effects of cannabis on driving have been reported to include increased reaction times, loss of coordination, and impairment of divided attention tasks. A study that compared fatal and nonfatal road traffic collision (RTC) victims suggests that cannabis plays a greater role in fatal road traffic collisions. THC concentrations were significantly higher in fatal RTC victims than nonfatal RTC victims (p = 0.01).[9] Furthermore, in a case-control study with drivers fatally injured in motor vehicle crashes (cases) and drivers not involved in an accident in the 2007 Roadside Survey (controls), prevalence of marijuana was higher (12.2%) in the cases compared with 5.9% in the controls (p < 0.0001).[10] However, the authors demonstrated alcohol was a significant effect modifier on the association of marijuana use and fatal motor vehicle accidents. Using drivers testing negative for both marijuana and alcohol as the reference, the calculated odds ratio was 1.54 (95% CI 1.16–2.03) for those cases testing positive for marijuana but negative for alcohol, controlling for age, sex, and geographical region in the model. Using the same group testing negative for both as the reference, the adjusted odds of being fatally injured increased more than 16-fold (95% CI 14.23–18.75) for the group testing positive for alcohol but negative for

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marijuana, and over 25-fold (95% CI 17.97–35.03) for those testing positive for both. Therefore, additional studies are needed to address the combined effects of alcohol and marijuana on fatal accidents.

Li et al. performed a meta-analysis of 9 epidemiologic studies that assessed the association between marijuana use and crash risk.[11] Of the 9 studies reviewed, 5 were case-control studies, 2 were cross-sectional, and 2 were cohort studies. The authors extracted data and calculated unadjusted odds ratios for each study. The odds ratios for all studies except one reported a statistically significant increase in risk of motor vehicle crash. The overall summary odds ratio generated for the 9 studies was 2.66 (95% CI 2.07–3.41), indicating consistent evidence of significantly higher odds of crash involvement for drivers that used marijuana compared with drivers who did not.[11] However, the level of heterogeneity between the 9 studies was high (I^2 = 79.1), and thus future studies are needed to confirm the degree of risk between marijuana and transportation accidents. Li et al. also identified a dose-response relationship between THC concentration and fatal crash involvement from data provided by one of the nine studies.[12] The authors of this case-control study used urine samples of fatally injured motor vehicle cases in Quebec from 1999 through 2001 and compared the results with urine samples of randomly selected participants from roadside surveys in Quebec's driving population. Using drivers with no THC detected in the samples as the reference, the odds of having low, medium, and high concentrations of THC were 1.1 (95% CI 0.5–2.6), 1.8 (95% CI 1.0–3.5), and 3.3 (95% CI 1.9–5.9) times higher in those fatally injured compared with controls not involved in accidents, respectively, although the confidence intervals were wide and included 1.0 in all but the highest category.

A study performed by NHTSA evaluated the prevalence of alcohol, drugs, and marijuana in Washington state drivers at three different times surrounding the legalization of recreational marijuana: Wave 1—prior to legal sales, Wave 2—six months after legal sales, and Wave 3—one year after legal sales. The study demonstrated that prevalence of THC-positive drivers increased, though not significantly, from Wave 1 (14.6%, 95% CI 11.9–17.8) to Wave 2 (19.4%, 95% CI 16.4–22.8) to Wave 3 (21.4%, 95% CI 17.5–25.9). The prevalence of THC-positive in addition to any other drug was 5.9% (95% CI 3.9–8.8), 6.3% (95% CI 4.4–9.0) and 8.9% (95% CI 5.4–4.2) for Waves 1, 2, and 3, respectively. The prevalence of both alcohol and THC in this study was 8.5% (95% CI 3.8–18.0) for Wave 1, 2.2% (95% CI 0.6–7.0) for Wave 2, and 6.2% (95% CI 2.9–12.6) for Wave 3.[13] Another longitudinal study examined 1,265 New Zealand children over a 25-year period, and the authors discovered an association between cannabis use and other illicit drug use. The authors reported increased risk, abuse, and dependency of other illicit drugs in those individuals that were chronic or heavy cannabis users. However, testing for cannabis and other illicit drug use is complex and the researchers noted that the models used may have resulted in an overestimation of the causal linkages.[14] Thus, more studies to identify links between cannabis and other illicit drug use would be beneficial.

Reports have also demonstrated that the average THC content in confiscated marijuana from the U.S. has increased over the last two decades from about 4% in 1995 to 12% in 2014.[15] The higher THC content raises concerns for the public health regarding mental health issues, hospital visits, and dependency. A greater risk of psychosis has been associated with individuals who are frequent cannabis users and those who use the higher potency cannabis products.[16] Furthermore, in a study evaluating use of cannabis with varying amounts of THC, those who smoked the high-potency type demonstrated an increased likelihood of dependence, with 38% of the individuals in this group meeting the criteria for cannabis dependence.[17]

Due to the low acute toxicity and the long-held belief that cannabis does not directly cause death, there has been a lack of data and research regarding cannabinoids in postmortem cases. However, with the continued popularity and changes in legal status of the drug, recent publications have focused on postmortem distribution and redistribution of various cannabinoids. Gronewold and Skopp evaluated concentrations of THC along with its equipotent metabolite, 11-hydroxy-THC (11-OH-THC), cannabinol, cannabidiol, THCCOOH and its glucuronide in five postmortem cases in one of the first investigations regarding distribution of cannabinoids. In the cases presented by the authors, THC concentrations ranged from 0.6–1.9 ng/mL in heart blood in four cases, and one case

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had a THC concentration in femoral blood of 2.5 ng/mL. THCCOOH concentrations in heart blood ranged from 9.2–18 ng/mL and the THCCOOH concentration in femoral blood was 13.7 ng/mL.[18] Because this was one of the first papers to report postmortem concentrations of THC and THCCOOH, future studies should attempt to replicate these findings.

THC is highly lipophilic with a large volume of distribution (10 L/kg), thus the drug would appear to be a good candidate for extensive postmortem redistribution (central:peripheral blood ratio > 2). However, two reports that have addressed the postmortem redistribution of THC, THCCOOH, and 11-OH-THC have produced results inconsistent with that expectation. Holland et al. examined 19 medical examiner cases and found a slight degree of postmortem redistribution with median central:peripheral blood ratios of 1.5, 1.7, and 1.8 for THC, 11-OH-THC, and THCCOOH, respectively. Moreover, the authors assessed postmortem interval as a significant interaction in the model, with increasing time from death to autopsy resulting in an increasing trend of postmortem redistribution.[19] Lemos and Ingle analyzed THC, 11-OH-THC, and THCCOOH in blood and urine of 30 postmortem cases and found a modest degree of postmortem redistribution with mean central:peripheral blood concentration ratios of 0.62, 0.99, and 1.07, respectively.[20]

The Federal Aviation Administration's Civil Aerospace Medical Institute (CAMI) has also published three articles on postmortem cannabinoid concentrations. The most recent of which is a detailed distribution of THC, 11-OH-THC, and THCCOOH in postmortem fluids and tissues by Saenz et al.[21] Canfield et al. evaluated concentrations of THC and THCCOOH found in urine and blood from fatal aviation accidents between 1997–2006 and reported that the median THC concentration increased from 0.5ng/mL in 1997–2001 to 2.0 ng/mL in 2002–2006 (p=0.0103), which paralleled the increase in THC potency for that time period.[22] Kemp et al. described the postmortem fluid and tissue distribution of THC and THCCOOH in aviation accident pilot fatalities between 2005 and 2012. The reported median THC blood concentration for this study was 5.0 ng/mL and lung and heart proved to be useful specimens for detection of cannabinoids.[23] While these two studies contribute to the current research regarding increases in THC concentration, an updated study needs to be conducted to address gaps in the literature for more recent years. Thus, the aims of this study are to provide additional data on cannabinoid concentrations from postmortem cases by evaluating the concentration of THC and THCCOOH found in fatal aviation accidents from 2007–2016 and to evaluate any associations between potential exposures and marijuana-related pilot fatalities.

METHODS

Previous publications provide details of sample submission procedure to the CAMI forensic toxicology laboratory.[24] Briefly, biological specimens are sent to CAMI in kits designed specifically for toxicological analysis of aviation accidents. The samples were stored frozen (-20°C) until analysis. Blood and tissue specimens were screened for cannabinoids by enzyme-linked immunosorbent assay (Immunalysis Corp, Pomona, CA) with a cutoff of THCCOOH of 15 ng/mL in blood and 40 ng/g in tissue. Urine specimens were screened by chemiluminescence on the ARCHITECT c4000 system (Abbott Labs, North Chicago, IL) with a cutoff concentration of THCCOOH of 25 ng/mL. The confirmation and quantitation of THC and THCCOOH in blood or tissues is a solid phase extraction followed by analysis on a gas chromatography/mass spectrometry (GC/MS) in negative-ion chemical ionization mode. The urine samples were extracted similarly but included a hydrolysis step and the analysis was performed by GC/MS using electron impact ionization (EI). The limit of quantitation for each method was 1.0 ng/mL. The details of the method used at CAMI can be found in a previously published article.[25]

A 10-year period from 2007–2016 was selected as the timeline for this study to follow-up on published data reporting the same results from 1997–2006. Cannabinoid concentrations in blood for all people whose specimens were evaluated in the laboratory were compared over the 10-year time period. Due to the low number of fatal accidents involving cannabis each year, results from 2007–2011 and 2012–2016 were combined to evaluate trends in blood cannabinoid concentrations. Because the THC concentrations were not normally distributed, the two

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distributions were evaluated using the Wilcoxon-Mann-Whitney test in SAS v.9.4 with an assumed alpha of 0.05. The researchers also quantified the ratio of THC to THCCOOH in all blood samples that had both concentrations (n = 52). The ratios were also separated into the two 5-year periods for statistical analysis.

Additional analyses were conducted to evaluate the association between potential exposures and marijuana-related pilot fatalities in a case-control study among medically-certificated aviation pilots during 2007–2016. The researchers linked records collected from two separate FAA databases, the Document Imaging Workflow System (DIWS), which includes medical certification data for all pilots, and CAMI's Forensic Toxicology Database, which includes demographics and toxicology results from human specimens received from most of the fatal U.S. civil aviation accidents every year. Eligible study participants for this portion of the analyses were restricted to all US pilots aged 18 years or older who had a fatal accident with specimens examined in the toxicology laboratory during the study period and held a valid medical certificate at the time of the accident.

Outcomes of the case-control study were fatal accidents in which the pilot was determined to have THC or THCCOOH in any tissue or specimen. The pilots in the case-control study identified from the toxicology database were linked back to DIWS to obtain exposure and covariate data. Exposure variables were obtained from the airman's most recent medical exam in DIWS prior to the pilot's fatal accident. This was an exploratory analysis, so no variables were identified a priori to include in the final model. Instead, the researchers examined all potential exposures collected from the pilots' most recent medical examinations, which included sex, body mass index (BMI), age at accident (calculated from date of birth and date of the accident), self-reported total flight time, self-reported flight time in the last six months, issued medical class (first-, second-, or third-class), effective medical class, and geographical region of residence.

Although various medical standards for the three medical classes have changed over the years, the concept of three classes with varying degrees of medical standards is currently used to medically certify pilots. Authority for these requirements comes from the Code of Federal Regulations (CFR) parts 61 and 67.[26,27] The three classes of medical certificates are 1) First-class: This class requires the most stringent medical examination. Airline transport pilots (ATPs) need to hold a first-class certificate to fly. 2) Second-class: Commercial pilots (who are not the pilot-in-command), commercial non-airline duty pilots, flight engineers, and flight navigators need to hold at least a second-class certificate to fly. 3) Third-class: Most private pilots, recreational pilots, and student pilots need to hold at least a third-class certificate to fly. Once the validity period for one class has expired, it rolls into the next class. For instance, a certificate can be *issued* as a first-class, and become automatically valid as a second-class as the first-class validity period expires. If the person continues to not renew his/her certificate, the *effective* class of the certificate would then roll into a third-class once the validity period of the second-class expires. Once a third-class certificate expires, the certificate is no longer valid and with few exceptions, the airman would be flying illegally.

A statement of demonstrated ability (SODA) indicated that an airman possessed a waiver that he or she was fit to fly with a permanent disability. A special issuance indicated that an airman possessed a waiver for a specific medical condition. Total flight time, flight time in the last six months, age at accident, and BMI were first examined as continuous variables. In the absence of linearity association, the continuous covariates were categorized for analysis. BMI was categorized as <25 for underweight/normal, 25–29.9 for overweight, and ≥30 for obese. Categories for age, total flight time, and flight time in the last six months were defined by tertiles based on the distribution of the controls in the study population. Finally, the presence of ethanol and other impairing drugs besides THC were examined from the toxicology database as potential exposures in the model. The presence of ethanol was determined by review of case history and laboratory data to exclude cases showing evidence of postmortem ethanol production. The list of impairing drugs included in the analyses is found in Table 1.

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Table 1. List of impairing drug found in pilot fatalities, 2007–2016.

Alprazolam	Citalopram	Hydrocodone	Oxymorphone
Amitriptyline	Clonazepam	Hydromorphone	Pentobarbital
Amphetamine	Clozapine	Hydroxyalprazolam (Alpha-)	Pheniramine
Benzoylecgonine	Cocaethylene	Hydroxyzine	Phenmetrazine
Brompheniramine	Cocaine	Lorazepam	Phenobarbital
Buprenorphine	Codeine	Meclizine	Phenylpropanolamine
Bupropion	Cyclobenzaprine	Methadone	Promethazine
Butalbital	Diazepam	Methamphetamine	Propoxyphene
Carbamazepine	Dihydrocodeine	Methylone	Temazepam
Carisoprodol	Diphenhydramine	Morphine	Tramadol
Cetirizine	Doxylamine	Nordiazepam	Trazodone
Chlordiazepoxide	Fentanyl	Oxazepam	Zolpidem
Chlorpheniramine	Gabapentin	Oxycodone	Zopiclone

Statistical analyses were conducted using SAS v.9.4. There was a total of 55 cases positive for cannabinoids and 1,918 controls (negative for cannabinoids) in the dataset. Crude and multivariate logistic regression models were used to calculate unadjusted and adjusted odds ratios (ORs) and 95% CIs. Covariates were assessed for confounding by adding them one by one using forward selection to evaluate whether addition of selected covariates met the criteria for confounding by altering the OR by more than 15%. Evaluation of effect modification was performed by adding interaction terms into the models and retaining those that had a p-value of less than 0.05.

RESULTS

Of the 2,909 individuals from fatal accidents tested in the laboratory during 2007–2016, a total of 99 (3.4%) individuals had at least one specimen that tested positive for THC or THCCOOH. However, when the researchers restricted the specimens to blood samples, only 74 cases, containing one or both cannabinoids examined in this study, remained for the initial analysis.

Of the 74 total cases, 71 were from males, and 3 were from females. The mean age of the males and females at the time of accident was 46.0 and 43.2 (SD = 13.8 and 15.6), respectively. The overall median THC concentration in the blood for the 10-year period was 8.0 ng/ml (range = 1.3–69.2), while the median THCCOOH concentration was 10.5 ng/ml (range = 1.2–200.5). See Table 2 below. Scatterplots of THC and THCCOOH concentration distributions throughout the 10-year period in Figures 1 and 2 demonstrate the clusters of concentrations as well as the outliers in each year.

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Table 2. Mean and Median THC and THCCOOH concentrations in blood samples by year.

Year	THC (ng/ml)					THCCOOH (ng/ml)				
	N	Mean	SD	Median	Range in Blood	N	Mean	SD	Median	Range in Blood
2007	5	18.3	14.7	12.6	4.5–39.7	6	50.5	47.4	41.9	3.7–128.0
2008	7	30.8	26.3	31.1	3.1–69.2	8	46.1	64.8	30.7	2.7–200.5
2009	7	12.8	10.7	7.5	3.2–34.2	10	45.2	44.3	21.3	1.2–112.6
2010	4	7.2	6.5	4.5	3.1–16.9	5	12.6	8.8	10.4	1.6–25.5
2011	4	9.0	5.5	8.0	3.5–16.6	6	15.1	14.3	13.6	1.6–32.5
2012	2	8.3	7.9	8.3	2.7–13.9	5	10.9	7.6	7.1	5.4–23.9
2013	6	10.4	11.7	6.7	2.1–33.7	7	27.1	43.5	9.6	2.0–124.3
2014	6	5.6	3.9	5.3	1.3–10.7	8	21.2	23.0	14.5	1.5–63.2
2015	5	6.3	5.0	3.6	2.8–14.3	9	13.0	21.2	4.6	2.0–68.6
2016	6	17.5	19.5	10.4	4.5–56.9	10	9.9	7.8	7.3	1.7–24.8
Total	52	13.7	15.4	8.0	1.30–69.2	74	25.8	36.4	10.5	1.2–200.5

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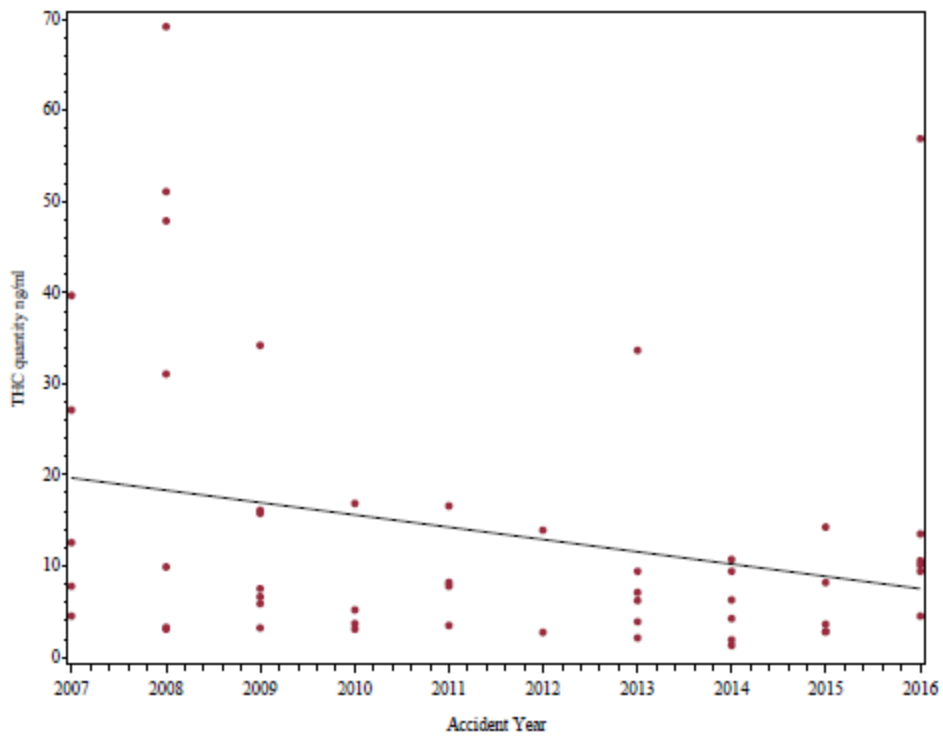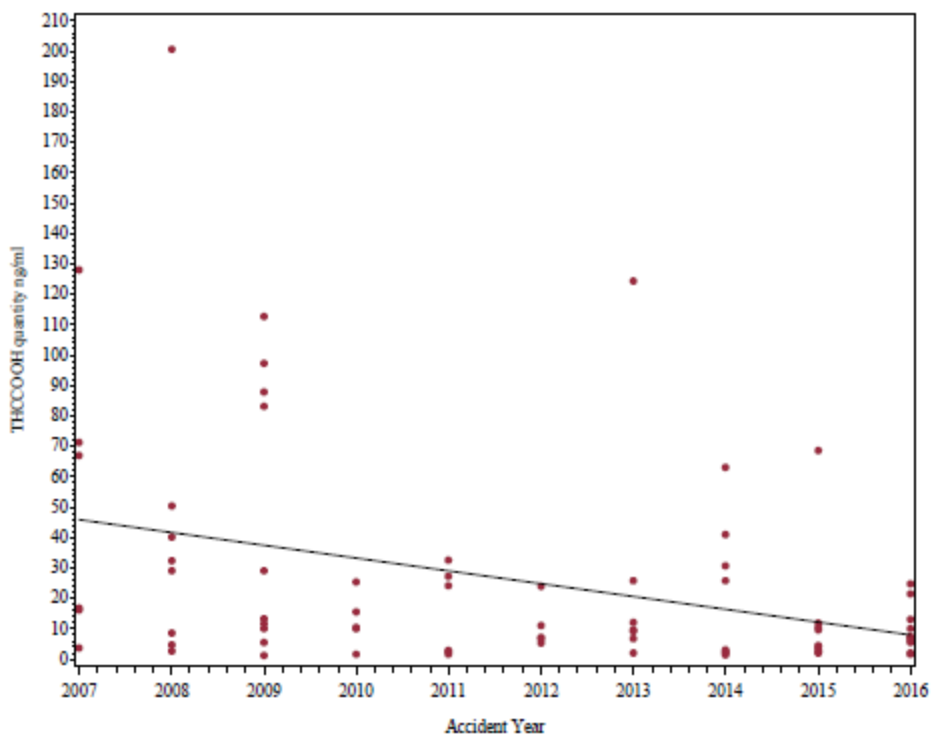Figure 1. Scatter plot (with overall regression line) of THC concentrations by year (ng/mL).

Figure 2. Scatter plot (with overall regression line) of THCCOOH concentrations by year (ng/mL).

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When the quantities were categorized into the two 5-year time periods, the median THC concentration for 2007–2011 was 8.2 ng/ml (range = 3.1–69.2), while the median THC concentration for 2012–2016 was 7.1 ng/ml (range = 1.3–56.9). The distributions of the two periods were not statistically different from one another (Figure 3, p = 0.1030). The median THCCOOH concentration for 2007–2011 was 16.7 ng/ml (range = 1.2–200.5), and was statistically higher than the median THCCOOH concentration of 7.4 ng/ml (range = 1.5–124.3) for 2012–2016 (Figure 4; $p = 0.0155$).

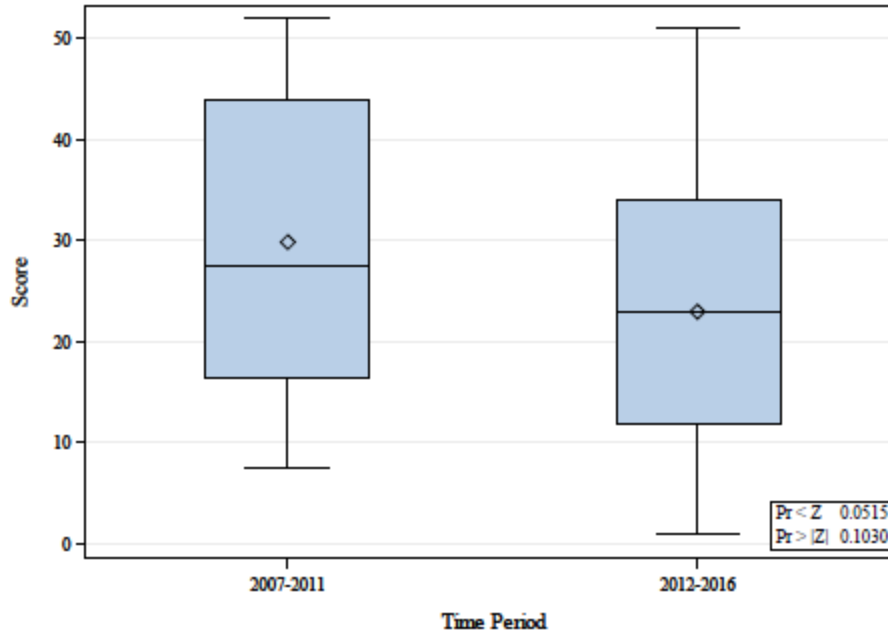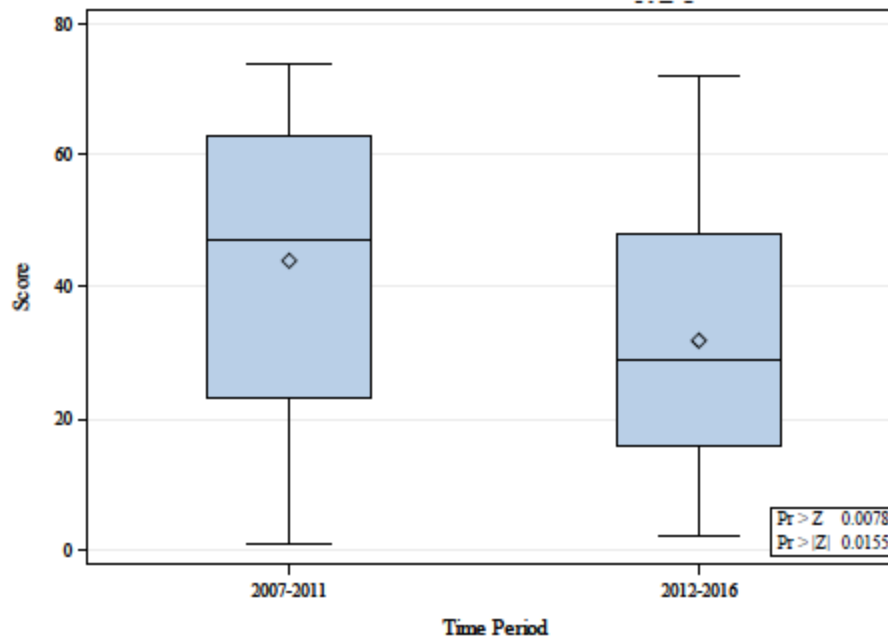Figure 3. Distributions of two 5-year time periods for THC blood concentrations (ng/mL).

Figure 4. Distributions of two 5-year time periods for THCCOOH blood concentrations ng/mL).

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The researchers repeated the above analyses, quantifying the ratio of THC to THCCOOH in all blood samples that had both concentrations. Overall, there were 27 samples with both THC and THCCOOH between 2007 and 2011 and 25 samples for the 2012–2016 period (Table 3). The median ratio for 2007–2011 was 0.38 (range = 0.06–2.19) while the median ratio for 2012–2016 increased to 0.58 (range = 0.12–2.65). However, the increase in concentration ratios for the two periods was not statistically different (Figure 5; $p = 0.3793$). Figure 6 demonstrates the gradual rise in ratio concentrations over the ten-year period, although there are outliers in several years influencing the overall mean values for those years.

Table 3. Mean and median THC/THCCOOH concentration ratios in blood.

Year		Ratio of THC to THCCOOH			
	N	Mean	SD	Median	Range of ratios
2007	5	0.40	0.26	0.40	0.06–0.78
2008	7	0.77	0.52	0.65	0.20–1.58
2009	7	0.32	0.14	0.32	0.14–0.50
2010	4	0.51	0.41	0.41	0.15–1.08
2011	4	0.85	0.91	0.49	0.24–2.19
2012	2	0.54	0.06	0.54	0.50–0.58
2013	6	0.62	0.34	0.59	0.27–1.05
2014	6	0.36	0.27	0.22	0.16–0.79
2015	5	0.53	0.43	0.34	0.12–1.20
2016	6	1.25	0.84	0.88	0.43–2.65
Totals	52	0.62	0.53	0.45	0.06–2.65

Figure 5. Scatter plot (with overall regression line) of THC/THCCOOH blood concentration ratios (N = 52).
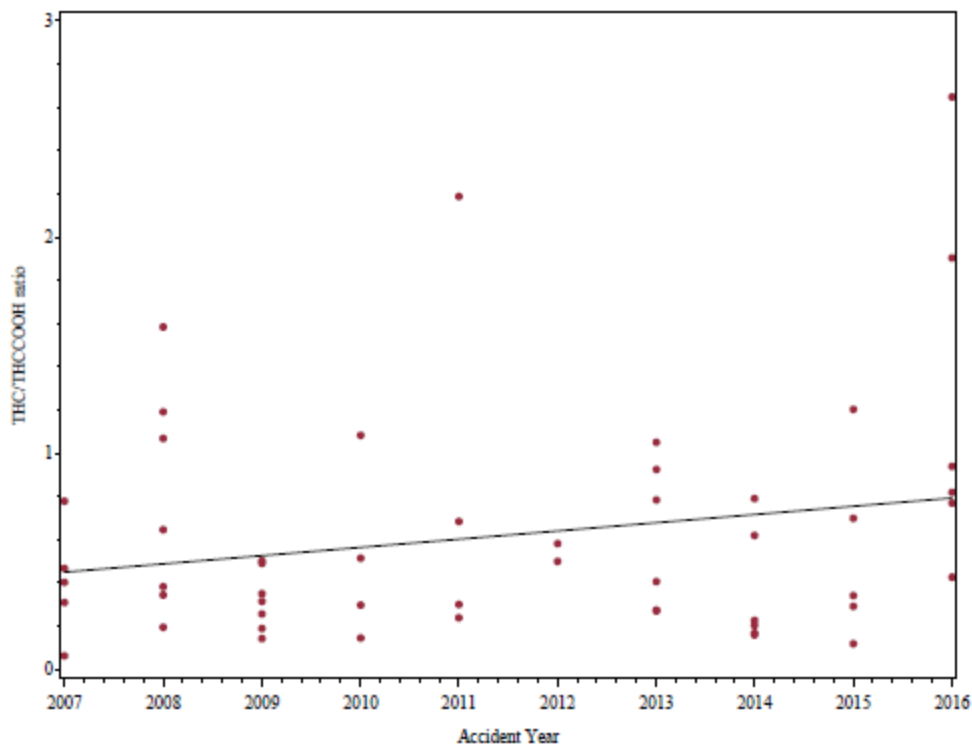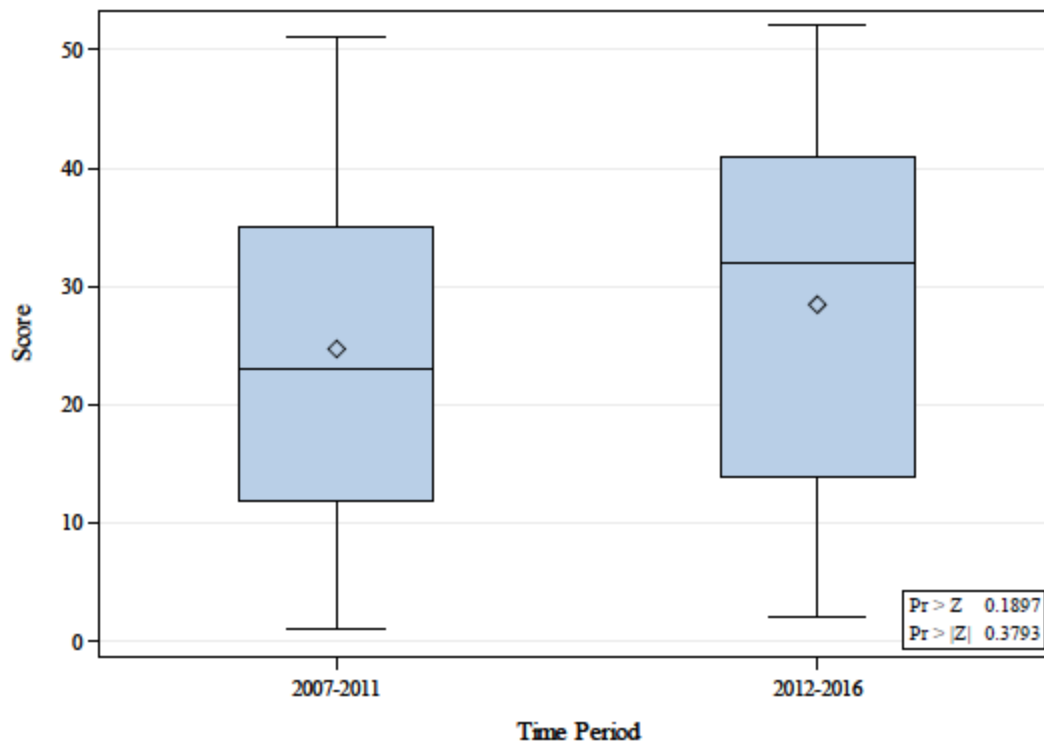

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Figure 6. Distribution of THC/THCCOOH blood concentration ratios for two 5-year time periods.

For the second part of the study, 55 pilot cases were identified with THC or THCCOOH in their system who held valid medical certificates at the time of their fatality, and 1,918 deceased pilot controls were identified who did not test positive for THC or THCCOOH but held valid medical certificates at the time of accident. The investigation indicated that the mean age for the cases was 46.8 years (SD = 13.01), while the mean age of the controls was 53.9 (SD = 14.5), with ages ranging from 18 to 90 years.

With the exception of age at time of the accident and the presence of other impairing drugs, the distribution of cases and controls were similar across most of the exposure categories (Table 4). The unadjusted odds of having at least one impairing drug in the pilot's system were 2.04 (95% CI 1.15–3.63) times higher in pilots who tested positive for THC or THCCOOH compared with the controls. Using pilots aged 61 and older as the reference, the odds of being ages 48–61 and 18–48 were 2.35 times (95% CI 1.02–5.39) and 3.61 times (95% CI 1.63–7.97) higher in positive cases compared with controls, respectively (Table 4). When multivariate analysis was performed with these two variables as exposures in the model together, the odds of cases having at least one impairing drug increased to 2.33 (95% CI 1.30–4.16) times that of controls, and the OR of cases aged 48–61 and 18–48 increased to 2.42 (95% CI 1.05–5.59) and 3.99 (95% CI 1.80–8.89) using those aged 61 and older as the reference.

No covariates met the criteria for confounding when added to the models with age or impairing drugs. Finally, no significant interactions between the age, impairing drugs, and the other covariates were observed.

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Table 4. Study Population and Characteristics Among Cases and Controls

Variables	Cases N = 55 (%)	Controls N = 1918 (%)	Unadjusted OR and 95% CI
Sex			
Male	55 (100.0)	1865 (97.2)	N/A+
Female	0.0 (0.0)	53 (2.8)	Referent++
Ethanol Present			
Yes	1 (1.8)	66 (3.4)	0.52 (0.07, 3.81)
No	54 (98.2)	1852 (96.6)	Referent
Other Impairing Drugs Present			
Yes	18 (32.7)	369 (19.2)	**2.04 (1.15, 3.63)**
No	37 (67.3)	1549 (80.8)	Referent
Class Issued			
1st	6 (10.9)	307 (16.0)	Referent
2nd	22 (40.0)	651 (33.9)	1.73 (0.69, 4.31)
3rd	27 (49.1)	960 (50.1)	1.44 (0.59, 3.52)
Effective Class			
1st	2 (3.6)	216 (11.3)	Referent
2nd	19 (34.6)	575 (30.0)	3.57 (0.82, 15.45)
3rd	34 (61.8)	1127 (58.8)	3.26 (0.78, 13.67)
Region of Residence on Last Medical#*			
Midwest	5 (9.26)	333 (17.6)	0.54 (0.20, 1.45)
Northeast	8 (14.8)	227 (12.0)	1.26 (0.55, 2.92)
South	22 (40.7)	653 (34.5)	1.21 (0.65, 2.25)
Western	19 (35.2)	680 (35.9)	Referent
Presence of Special Issuance			
Yes	1 (1.8)	185 (9.7)	0.17 (0.02, 1.26)
No	54 (98.2)	1733 (90.4)	Referent
Statement of Demonstrated Ability			
Yes	0 (0.0)	44 (2.3)	NA+
No	55 (100.0)	1847 (97.7)	Referent
Age at Accident (in years)			
18–48.2	28 (50.9)	624 (32.5)	**3.61 (1.63, 7.97)**
48.3–61.4	19 (34.6)	651 (33.9)	**2.35 (1.02, 5.39)**
>61.4	8 (14.6)	643 (33.5)	Referent
Total Flight Time**			
1–765 hours	22 (42.3)	613 (32.7)	1.87 (0.92, 3.81)
766–3150 hours	18 (34.6)	638 (34.0)	1.47 (0.70, 3.07)
>3150 hours	12 (23.1)	624 (33.3)	Referent
Flight Time in Past 6 Months of Exam***			
0–30 hours	22 (43.1)	609 (32.7)	1.31 (0.69, 2.49)
31–86 hours	12 (23.5)	639 (34.3)	0.68 (0.32, 1.44)
>86 hours	17 (33.3)	617 (32.2)	Referent
Body Mass Index^			
Underweight/Normal (<25 kg/m^2)	19 (34.6)	463 (24.2)	1.60 (0.78, 3.27)
Overweight (25–29.9 kg/m^2)	23 (41.8)	948 (49.5)	0.94 (0.47, 1.88)
Obese (≥30 kg/m^2)	13 (23.6)	506 (33.1)	Referent

+No exposure in Case group to compare with controls
++ Referent = All other levels of each variable are compared with this baseline level
# Midwest Region included IA, IL, IN, KS, MI, MN, MO, DN, NE, OH, SD, WI; Northeast region included CT, DC, DE, MA, MD, ME, HN, NJ, NY, PA, RI, VA, VT, WV; South region included AL, AR, FL, GA, KY, LA, MS, NC, NM, OK, SC, TN, TX; Western region included AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY
*Missing 26
**Missing 46
***Missing 57
^ Missing 1

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DISCUSSION

Interest in postmortem cannabinoid concentrations in biological fluids and tissues has grown due to the increasing legalization of medical and recreational marijuana use in the U.S. Law enforcement agencies, medical examiners, and other interested parties desire more research on postmortem cannabinoids for case interpretation. The FAA and the National Transportation Safety Board (NTSB) investigate aviation accidents and need postmortem drug testing to determine if cannabinoids may have caused or contributed to a fatal accident. This study was undertaken to follow-up on a previous 10-year study that noted increasing cannabinoid concentrations in fatally injured pilots found during routine toxicology testing at CAMI.

The overall cannabinoid positive proportion for deceased individuals tested at CAMI during fatal aviation accident investigations did not change from 1997 to 2016. The percentage of individuals found to be positive for THC or THCCOOH in at least one specimen (fluid or tissue) from 2007 to 2016 was 3.4% (99 of 2,909 tested). This proportion is identical to that found in the previous 10-year period from 1997 to 2006 (95 of 2,769 tested).

Table 1 demonstrates one of the difficulties in interpreting postmortem cases involving the use of marijuana. In many of the THC-positive cases in this study, 1 or more other impairing drugs were also present. The other drugs represent a broad range of over-the-counter medications, prescription medications, and illegal drugs. Drugs such as fentanyl and morphine must be interpreted with caution, as these may have been administered by emergency personnel during life-saving measures performed on the victim. Oxymorphone may be either a drug itself, administered for pain, or it may be the metabolite of oxycodone, also present on the list.

Interpretation of blood concentrations

The current study focused solely on postmortem blood concentrations of THC and THCCOOH. This reduced the number of cases for the study from 99 to 74 (71 males and 3 females). The excluded 15 cases did not have a blood specimen available for testing. Often in aviation accident investigations, CAMI only receives non-blood fluids (e.g., vitreous fluid, urine, bile) and tissues (liver, kidney, muscle, etc.). This may be due to fire or damage to the body.

Blood concentrations of cannabinoids are used to determine not only the use of marijuana, but also to determine behaviors including psychomotor impairment that may have resulted in an accident. As a result, blood concentrations that are being used to establish legislative limits such as Driving Under the Influence laws similar to the work done with alcohol. Postmortem specimens, however, present complications that must be considered when interpreting such behaviors and impairment. After death, changes in concentration may occur in blood and other biological sample types due to a well-studied phenomenon called postmortem redistribution.[28] This effect has been described elsewhere and presents forensic toxicologists with an interesting challenge when interpreting postmortem cases. The results from studies such as this report, therefore, must be interpreted with caution in light of this phenomenon.

The blood concentrations found in fatal aviation accidents in this study are displayed in Table 2. The data are graphically represented in Figures 1–4. The overall difference in median blood concentrations of THC represents an 433% increase between the back-to-back 10-year periods. For THCCOOH, median blood concentration for 2007–2016 revealed a 23.5% increase over the median concentration for the 1997–2006 period.

The increase in 10-year mean and median blood THC and THCCOOH concentrations in aviation accidents may be related to a reported increase in potency of various cannabinoid products. A study by the Potency Monitoring Program at the University of Mississippi reported data from the analysis of 46,211 samples seized by law enforcement and analyzed by gas chromatography-flame ionization detection (GC-FID) during 1993–2008.[29] Their data showed a significant increase in THC content for all confiscated cannabis preparations from 3.4% in 1993 to 8.8% in 2008. This same research group published another study of 39,000 confiscated samples from 1995–2014

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and found that the potency of the marijuana materials reached approximately 12% by 2014 with some specimens reaching 30%.[15] These authors noted a shift from the routine marijuana plant material to the more potent *sinsemilla*. It is not known what type of marijuana was ingested for any of the cases in this study.

The scatterplots in Figures 1 and 2 graphically represent the THC and THCCOOH concentrations found in aviation accidents over the 10-year study period of 2007–2016. The regression lines of these scatterplots seem to indicate a downward trend in blood concentrations over the 10 years of the study. The low numbers of cannabinoid-positive cases each year make the slope of the regression line sensitive to extreme concentrations. The regression lines for the THC and THCCOOH in the current study period, therefore, are heavily influenced by the high concentrations of both cannabinoids found between 2007 and 2009, 2008 having the most extreme values (69.2 ng/mL THC, 128 ng/mL THCCOOH).

The results of the two 5-year comparisons during 2007–2016 are graphically illustrated for THC in Figure 3 and THCCOOH in Figure 4. The first 5-year period showed higher THC and THCCOOH concentrations when compared to the second 5-year period. Thus, the grouped statistical analysis supported the scatterplot regression lines suggesting a downward trend in cannabinoid concentrations over the 10-year study period.

In the past, interest has been generated in the scientific literature regarding the use of the THC/THCCOOH concentration ratio as a potential indicator of recent marijuana use, suggesting that a ratio of greater than 1.0 is indicative of being within an hour of use.[30,31] The current study examined blood THC/THCCOOH concentration ratios in 52 blood samples from aviation accidents that were positive for both compounds (Table 3, Figure 5). It can be noted from the scatterplot data that there are several concentration ratios above 1.0, a proposed marker for recent use. The overall trend line is gradually rising, an interesting finding in light of the downward trend lines for the individual THC and THCCOOH concentrations (Figures 1 and 2). The reason for the increasing THC/THCCOOH ratio is unclear and, when grouped into two 5-year periods for analysis, the slight increase between the two 5-year periods was not statistically significant (Figure 6). Great caution must be used for any interpretation, however, as the majority of the aviation accident blood samples for this study were classified as heart blood or cavity blood and may be subject to contamination from postmortem redistribution.

Evaluation of potential risk factors for deceased, cannabinoid-positive pilots

As another method of examining prevalence of cannabinoids in this pilot population, a statistical analysis was undertaken to examine the relationship between the presence of cannabinoids, specifically THC and THCCOOH, and multiple variables in pilots who held valid medical certificates (Table 4).

The study revealed no cannabinoid-positive pilots were female and only 53 females were found in the control group of 1,918 pilots. The study also found that cannabinoid-positive cases were more likely to be in the younger age group. These results are not surprising. A recent consumer report from Headset, Incorporated, a cannabis industry analytics service, showed that, according to their customer database, the average consumer is primarily male and 37.6 years of age.[32] A University of Michigan study from 2013 showed that the average age of medical marijuana customers at a single clinic was 41.5 (SD = 12.6) years of age.[33]

Another variable of interest in this pilot population was the presence of other impairing drugs (Table 4). The study determined the odds of having another impairing drug were more than twice as high in the cannabinoid-positive pilots as the cannabinoid-negative controls involved in a fatal accident. These results are consistent with previous research showing an increased risk of abuse and dependency of other illicit drugs in heavy cannabis users.[14] Table 1 lists impairing drugs found in the fatally injured pilots. Of note is the fact that over-the-counter, prescription, and illegal substances are all represented in the table. Some of the drugs in the table, such as fentanyl or morphine, may be present as a result of pain management and life-saving measures taken by emergency personnel. Only 1 of 55 cannabinoid-positive pilot fatality cases was also found to be positive for ethanol. This is comparable to previous

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research from the state of Washington which showed that drivers being positive for both alcohol and THC was rare.[13]

CONCLUSION

Marijuana use is rising as more states legalize its use for recreational and medical purposes. In addition, the potency of marijuana has increased over the years. As demonstrated by this study, the aviation industry is not immune to this phenomenon as fatally injured pilots continue to test positive for cannabinoids in postmortem fluids and tissues. The mean and median blood concentrations for the 10-year period reported here are higher than those previously reported for the 1997–2006 period, although it is encouraging that the concentration trend decreased over the most recent 10-year period (2012–2016). Work is ongoing at CAMI to characterize the postmortem pharmacology of marijuana to provide information for educating pilots and the flying public about its effects and negative impact on aviation safety.

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Appendix F

Codebook (Exported from NVivo 12)

Dissertation style nodes

Name	Description
audience addressed	Speaking of/implying potential readers at multiple levels
demographic factors	Speaking of/implying identity issues affecting reception such as age, race, gender, nationality, etc.
reader's state of mind	Speaking of/implying anticipated mental constructions of potential readers
international/translation considerations	Speaking of/implying potential readers' reception of translated language and/or cross-cultural impacts on language ideology and use
safety	Speaking of/implying potential issues of harm, danger, and risk for readers
legal/regulatory considerations	Speaking of/implying mandated language by internal and external audiences related to law and regulations
audience invoked	Speaking of/implying moving potential readers to uptake readings in specific, author-chosen ways
genre	Speaking of/implying formal elements specific to types of writing
biography	Speaking of/implying personal history, educational, literate, workplace, and experiential
embodiment + materiality	Speaking of/implying embodied, emplaced, enacted modes of language use
exigent considerations	Speaking of/implying factors embedded in specific person and situational contexts affecting language use
topic	Speaking of/implying topic of writing affecting presentation and language use
purpose	Speaking of/implying author's/reader's purpose impacting style
time-deadline	Speaking of/implying exigence of time deadlines impacting style
time-shelf life	Speaking of/implying factoring the anticipated uses and life of a document affecting style

Name	Description
co-construction	Speaking of/implying macro- and micro-level shared impacts on style including language use and writing process factors
cost	Speaking of/implying price and expense impacting writing style and presentation
language ideology	Speaking of/implying issues of dominance, power, and value impacting style
language + style	Speaking of/implying language itself as determinative of its own value and importance; language as a plaything
writing ideals	Speaking of/implying values that shape writing style
accuracy	Speaking of/implying a value of precise, truthful information and presentation impacting writing style
appropriateness	Speaking of/implying values of suitability for a specific mode of writing as impacting style
clarity	Speaking of/implying a value of ease of use for audiences impacting style
concision	Speaking of/implying a value of brevity impacting style
correctness	Speaking of/implying a value of conformity to ideals of standardized language usage impacting style
fluency	Speaking of/implying a value of easy, consistent flow impacting style
simplicity	Speaking of/implying a value of forthrightness and lack of undue sophistication impacting style
tone	Speaking of/implying a value of proper, effective voice impacting style
technology	Speaking of/implying impacts on style from technical, technological, and material sources
writer	Speaking of/implying agency and identity of implied, imagined authors on the part of readers

Appendix G

Member Check Email

Participant name,

I trust this email finds you well. As promised, I am sending my dissertation on technical

writing style for your review and feedback. I will submit the final draft of the document

on May 13, and I will defend the dissertation on June 3. I have been working diligently

on the analysis and writing from the interviews of the twenty participants in the study,

including yours. You might recall in the informed consent form you signed for the study

that I would offer you an opportunity for a "member check." This is an opportunity for

you to write a response to anything I said and add color, commentary, or clarification on

any point you'd like to make. I will place your comments, unedited, in the final draft of

the dissertation in Appendix H. In the dissertation itself, I refer readers to that Appendix

to see your comments.

If you choose to review the dissertation and respond, I would like to direct your attention

to a few items:

- I wrote a brief thank you to the participants in the Acknowledgements section.
- Table 3.1 in Chapter 3 notes all participant names and other information. Please stop there to make sure I got everything correct. Your pseudonym is x.
- Most discussion from the interviews is in Chapter 4. I suggest doing a Find search for your name.
- Feel free to make any comments you'd like on any aspect of the study, not just your own contribution.

Please respond in the section immediately below with any factual errors I made so that I

can correct them. I will not place your comments here in Appendix H but will use them to

fix the errors you noted:

In the section immediately below, please add in any comments you'd like to make. Feel free to offer any clarifications, varying interpretations, and general comments you'd like to make. I will not edit them in any way. This is the portion that will go into Appendix H.

Finally, please accept my sincere thanks for your participation in this study. I have spent a lot of time with you in the past number of months, even if you didn't know it! The interactions I had with you and other participants was the most fun and enlightening portion of this entire study. I wish you the best in the future, and I thank you for your insights and encouragement in this process.

Sincerely,

Jonathan O'Brien

Appendix H

Participants' Responses (Member Checks)

Dina Lopez (email received 3 April 2019)

I am very interested in your research! I am doing a very specific study of student agency

in formalisms. The study considers how well students know their syntax and advanced

grammar, and how they believe they can express their meanings by knowledge of how to

manipulate the stylistic constructions Olinger investigates and which you have explicated

here. I agree with your claims that "a clearer picture of the elements of stylistic

production and reception, whether conscious or unconscious, needs to emerge." I argue

that students want to be aware of the unconscious style they use in their writing, and they

would like to have such a toolkit available so they can make conscious decisions to make

their writing clear and acceptable to the audiences and purposes for which they write.

(And if I'm completely off track here, just let me know!)

Deborah Hemstreet (email received 4 April 2019)

I am also a past Vice-President and President of the STC Israel Chapter (2004-2007) (The

chapter is currently inactive)

Page 140 You wrote "Deborah Hemstreet, who works for an English language Israeli

medical journal, answered my question about internationalization in terms of

intelligibility and levels of competence in the target language."

I don't know if it's relevant, but this anecdote came to mind: I don't know if its relevant,

but I would add that in one instance, I was required to write a warning that made

absolutely no sense. I argued with regulatory about it over and over, but to no avail.

That warning was published. Two years later, when a new director was appointed, I was challenged on the language of that warning and asked what it meant? I told them I had absolutely no idea, but that I had been ordered to write it that way.

They did a lot of research into the issue. It turned out that the regulatory person who required that language was a new immigrant to Israel whose Hebrew was not that great. He was thinking in Russian, wrote in Hebrew, and the translated his own Hebrew into English.

Ultimately, and thankfully, the warning was finally rewritten and I finally understood it had to do with electrical connection issues!

Cynthia Vann (email received 23 April 2019)

 --I am especially grateful to have been invited to participate in this discussion because I had much experience editing technical writing before I actually began writing technical communications, but not as much in the *writing itself*. That can make one feel, especially when contending with SMEs, as if one is an island, and can lead to some difficulty in being confident of my assertions. Thus, discovering that I was not alone in my beliefs and perceptions about technical writing and the significance of the audience was particularly rewarding to me.

--I was also struck by the variation in our responses to the format and content of the Thule Stacker 830 document. I think what I appreciated about that was, again, I was not alone in my reactions to the layout, content, style, formatting, etc., but I also gained perspective through the other participants' comments. It also confirmed that there is more

than one way to effectively communicate important information, and that in the end, our consideration of audience first is likely to be the most effective governance of what we produce. Because the audience and their perceptions, comprehension, and even stylistic preferences will also vary, so keeping in mind the differences will help us more effectively meet the broadest audience.