Hidden in Plain Sight? The Effects of Content-Evaluative Stance Markers on Readers' Attitudes and Perception of Author Stance in Persuasive Text.

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Abstract

This quasi-experimental study examined readers' perceptions of content-evaluative metadiscourse—linguistic and rhetorical signals that indicate an author's willingness (or lack thereof) to "own" the claims discussed in a text. Specific elements investigated in the study included hedging and boosting (markers of doubt or certainty), attitude markers, and attributions. Fifty-three participants were randomly assigned one of two versions of an article about "technophobia," the first expressing a concerned, "technophobic" stance and the second expressing an optimistic, tech-enthusiast stance. Analysis of participants' written responses plus twenty-eight retrospective text-based interviews revealed the relative saliency of specific linguistic cues on participants' *own* personal attitudes regarding the topic, and on their perceptions of the *author's* stance. The results are analyzed in terms of pedagogical implications, with particular emphasis on practices of rhetorical reading.

Hidden in Plain Sight? The Effects of Content-Evaluative Stance Markers on Readers' Attitudes and Perception of Author's Stance in Persuasive Text.

A popular metaphor in studies of Rhetoric and Composition, proposed by Kenneth Burke, likens the participation in academic discourse to participation in an ongoing oral conversation:

> Imagine that you enter a parlor. You come late. When you arrive, others have long preceded you, and they are engaged in a heated discussion, a discussion too heated for them to pause and tell you exactly what it is about. In fact, the discussion had already begun long before any of them got there so that no one present is qualified to retrace for you all the steps that had gone before. You listen for a while until you decide that you have caught the tenor of the argument; then you put in your oar… (qtd. in Carillo, 2017)

As noted in the above scenario, we must listen carefully in order to "[catch] the tenor of the argument" before speaking, dipping in our "oar." We need to understand others' stances before we are able to enter the conversation. But what if would-be conversants cannot discern the attitudes or levels of commitment expressed by other participants about the ideas they are discussing? Or, what if they find a position to be persuasive, but, not recognizing the speaker's embedded biases and strategic choices, simply accept their assertions unquestioningly? Full participation in the conversation will depend on understanding the subtle cues embedded in other speakers' messages. Similarly, full participation in academic writing will depend on close critical reading. "Listening" to the author's nuanced thoughts, perceiving their attitudes will be foundational to effective source-based writing.

In the absence of face-to-face contact, when we cannot see who is talking, observe their body language, or hear the pitch or loudness of their utterances, we as readers rely heavily on the

pragmatic rhetorical cues provided by stance markers. Skillful writers leave clues about how to interpret their messages, but making effective use of these clues requires that we perceive them and assess them accurately, which in turn requires both familiarity with such clues and mindful attention to them, without which effective communication may easily break down.

My desire to study the effects of stance markers on readers took root during my experience as a master's student at San Francisco State University. Fascinated with how subtle language choices can significantly alter a message, I found my niche at the intersection of linguistics and rhetoric. As an English/TESOL student focusing on academic reading and writing pedagogy, I added the Postsecondary Composition Graduate Certificate sequence to the standard MA curriculum, which allowed me to develop a broader pedagogical expertise that would be applicable to students from all linguistic backgrounds, whether English was a first or additional language.

Two core lessons from this cross-disciplinary MA training have been foundational in my teaching over the past 15 years; the same two lessons are also foundational to this dissertation research. First, I learned that awareness of linguistic structure can enhance effective reading and writing practices. At both the macro and micro levels, successful writers select and arrange linguistic components in identifiable, patterned ways. Just as readers develop as they learn to recognize and interpret lexico-grammatical patterns, writers develop as they take productive ownership of a genre's recurring vocabulary, linguistic patterns, and genre structures. Despite trends in Rhetoric/Composition that have moved away from direct study of language (Connors, 2000; Peck MacDonald, 2007), the Post-Graduate Composition curriculum at San Francisco State during the years I attended (2002-2005) incorporated pedagogy for guiding students to

become better readers and writers by analyzing texts not only holistically, but also at the mid (paragraph) and micro (sentence) levels.

The second foundational lesson gleaned from my MA training is that reading and writing are inextricably linked. While practice in writing may enhance reading capacity, the most powerful reading/writing connection operates in the reverse order. That is to say, the receptive skill of reading largely precedes, and serves as a foundation for, proficiency in writing. The primacy of reading was emphasized in both sub-areas of my MA education—TESOL and Composition. It was believed that pedagogy in active, strategic reading would serve multiple purposes. Explicit reading instruction would not only facilitate students' comprehension of textual content, but would also facilitate their writing development. Reading pedagogy thus incorporated a variety of scaffolding techniques—some guiding students toward the efficient acquisition of content, others toward developing sensitivity to an author's point of view, some for investigating the rhetorical impact of particular styles, and others toward connecting readers' personal opinions to authors' arguments. Thus, the centrality of reading and the value of developing multiple reading strategies to match various purposes and text types was a salient theme in my MA education, and a core insight that I carried into my teaching career.

Upon completion of the master's degree, I began teaching at De Anza College in Cupertino, CA. My experience as an instructor at the community college reaffirmed and deepened my understanding of strategic reading as the core of academic literacy. At that time, in fact, De Anza had an independent Reading department—separate from the English department that housed writing and literary studies. The Reading department employed some of the most dedicated and effective teachers I have ever met. I became intimately aware of Reading instructors' expertise when I team-taught Language Arts (LART211), an intensive, 10-unit

course, with one of these instructors. Recognizing the foundational nature of reading, I carried over the techniques learned from my LART211 co-instructor into the courses I taught independently. One such technique was sensitizing students to the subtleties of author stance, using resources such as Birk and Birk's (1994) article "Selection, Slanting and Charged Language," in which the authors outline how texts may contain markers of opinion that are easy to miss for a casual reader. For example, an author's word selection among apparent "synonyms," (e.g. "officer" versus "cop," or "undocumented immigrant" versus "illegal alien") could significantly impact a reader's impressions of actors, events and issues addressed in a text. Students' awareness of lexical or linguistic clues indicating writer stance could be accomplished through practice in rhetorical analysis, especially through comparing the "same" story as told from multiple perspectives. Thus comparative rhetorical analysis became a staple assignment in my first year writing courses.

While maintaining employment at De Anza College, I also had occasional opportunity to teach within the University of California system, first at UC Berkeley and later at UC Santa Cruz. Through these experiences, I discovered that attention to reading strategies also benefits students at highly selective universities. It became apparent to me that reading will always be difficult for anyone navigating a new literacy milieu as I observed my UC students who were diving into new disciplines and navigating new genres. Even those who have proven themselves abundantly proficient in previous contexts would experience pitfalls of confusion and misinterpretation despite inordinate hours of attention to written material. In fact, the same rule has revealed itself to be true for me as well, as a second-time graduate student; while my master's degree program excelled in preparing me for the day-to-day challenges of teaching, it did not require me to synthesize massive amounts of original research. As a PhD student for the

past several years, I have faced challenges similar to those encountered by the undergraduates whom I have taught, despite being a native English speaker with a deep interest in linguistics.

Since beginning my PhD studies in 2016, my primary research has examined multilingual students' incorporation of source readings in argumentative writing on two text administrations of the UC Davis English Language Placement Exam in 2017. While my preliminary study analyzed the use of explicit intertextuality (quotation and attribution), my qualifying study focused on epistemic versus deontic stance markers in source texts and the ways in which those markers were carried over into students' argumentative essay responses. Both of these studies were based on analyses of final written products---essays that students had produced on a high-stakes exam. Thus the results of these studies, unsurprisingly, point to the depth and complexity of reading and writing skills required to excel on source-based argumentative writing tasks.

The present study takes a step back from my previous work to examine the cognitive processes of textual interpretation itself. Instead of analyzing students' final written products to discover how they have incorporated evidence from sources, I explore how readers process a single argumentative reading, illuminating the thought processes that guide their perceptions of the issues discussed in the text, and revealing how certain linguistic cues may be salient while others go unnoticed. This study examines readers' perceptions of one sub-category of stance marking, that which I am labelling "content-evaluative," made up of linguistic signals that serve to either distance or endorse propositional material—that is, indicators of an author's willingness (or lack thereof) to "own" the claims discussed in the text. I observed the impact of these linguistic cues first on participants' *own* personal attitudes toward the claims put forth in the text, and second, on their perceptions of the *author's* stance. Specific elements investigated in this

study included hedging and boosting (markers of doubt or certainty), attitude markers, and attributions.

Written Elements of Stance

Studies in stance begin with the recognition that communication operates on multiple levels, involving not simply exposition (the simple transfer of information) but also pragmatic (and often subtle) social interchange. Applied linguists have developed the concept of "metadiscourse" to describe these often subtle elements of communication. Metadiscourse is comprised of all communicative tools beyond the "propositional." As Hyland (2017) explains, "Propositional material is *what* is talked *about*: what can be affirmed, denied, doubted, insisted upon, qualified, regretted, and so on. Metadiscourse, on the other hand, is what signals the presence of a text-organising and *content-evaluating* author rather than the subject matter" (p. 18) (Emphases mine). Thus "content-evaluating" metadiscourse may affirm, deny, doubt, insist upon, qualify, regret…or express any other stance toward a proposition being presented. Through metadiscourse, authors go beyond the simple transmission of raw information; they embed evidence of "personality, credibility, audience-sensitivity, and relationship to the message" (Hyland & Tse 2004, p. 157). Established members of any discourse community will have acquired familiarity with the conventions of metadiscourse within a given context; they know how to meet their communicative objectives based on their knowledge of that community. They will also be sensitized to the presence of metadiscoursal features in the written prose of other members, and thus perceive and interpret skillfully cues that indicate endorsement or distancing of claims put forward within the text. Throughout this document, "content-evaluative metadiscourse" is used interchangeably with "stance cues." These two terms refer to textual

elements that may help readers infer the author's own viewpoint regarding the topics addressed in a text.

Stance in Intercultural Rhetoric and English as an Additional Language

It is not surprising that the content evaluating metadiscourse identified by Hyland (2017), on which the present study focuses exclusively, can be quite challenging for anyone using English as an Additional Language (EAL). As Abdollahzadeh (2011) mentions, EAL readers may find it difficult, for example, to determine which claims have been generally accepted by a research community, and which views are outliers. Gaining sensitivity to the rhetorical markers that help a reader to distinguish established fact from tentative theories or opinions requires practice and focused attention. Content-evaluative metadiscourse represents the true complexity of language as a social and communicative tool. Readers who are new to any discourse community will inevitably face challenges in grasping not only its structural and lexical conventions, but also the rhetorical and pragmatic dimensions. Amiryousefi and Rasekh (2010) advocate for the teaching of metadiscourse, which entails "sensitizing students to rhetorical effects and features that exist within a given genre and community" (p. 163) Such sensitization must start with instruction in close, critical reading that helps students notice these features in written text.

Citing Shaughnessy (1979) and reflecting on their own observations, Crismore and Vande Kopple (1988) point out that metadiscoursal elements often add to the length and syntactic complexity of sentences, sometimes adding complete clauses and creating potential confusion for less experienced readers. On top of increasingly complex syntactic structures, readers' differing expectations, based on socio-cultural, educational and/or linguistic backgrounds, may contribute to the challenge of accurately interpreting the nuanced messages

contained in content-evaluative metadiscourse. Readers may be accustomed to attending primarily to propositional material, and may struggle in some cases just to ascertain the main topics under discussion.

In Hyland's (2000) study, one class of author stance marker was more salient for readers than another. Boosters (positive content evaluation markers) were frequently noticed by the college student readers, but hedges (distancing content evaluation markers) most often were not, leading the researcher to surmise that Low's (1996) "lexical invisibility hypothesis" could in fact be applicable in the case of hedges. Retrospective text-based interviews in Hyland's study were revealing; when asked to explain how they had reached their interpretations of the text, readers often realized they had misinterpreted a statement based on not having noticed a hedge. Hyland (2000) noted that just asking a participant to re-think their interpretation could sometimes lead them to notice the presence of stance marker in the original text. This suggests that not only familiarity with the relevant vocabulary, but also attention to the possibility of stance cues such as hedging is essential for perception of nuanced understanding.

The present study adopts as a foundation the basic structure of Hyland's 2000 exploration of student reader responses to boosters and hedges in a text; participants in both Hyland (2000) and the present study read a text and responded to questions about the author's stance. The study also expands on Hyland's work in numerous ways: the sample size was tripled, participants were randomly assigned one of *two* text versions instead of all reading the same, multiple types of content-evaluative stance cues were featured in the contrasting text versions, and participants addressed their *own* feelings about propositional content in addition to directly assessing the *author's* stance. This study design and the resulting abundance of data allowed for a comparison of responses to the two text versions and provided complex insights into the effects of content-

evaluative metadiscourse on reading processes, readers' perceptions of propositional content, and readers' perceptions of author stance.

Learning to read closely and evaluatively is a key foundational skill, an element of critical thinking that tertiary educators strive to nurture in their students. The demands of university level reading may be daunting, particularly for students who must navigate complex texts in a non-dominant language. In the effort to comprehend main ideas, readers may not always perceive an author's precise attitude; if readers have not been primed to notice stance markers, they may not distinguish fact from opinion (Hyland, 2000) and/or may attribute ideas inaccurately to the author. The proposed study builds on previous knowledge about the impact of content-evaluative metadiscourse on readers' interpretations of text. By integrating multiple forms of content-evaluative stance cues, the study aims to shed light on readers' processes, ultimately offering clues about effective pedagogies to promote critical reading and thinking practices.

Chapter 2 reviews prominent theories of reading, outlines the linguistic components of content-evaluative metadiscourse, and reviews previous studies addressing readers' perceptions of stance cues. Chapter 3 outlines the procedures for recruitment into the study, data collection, and data analysis, and also reports on participant demographics. Chapter 4 presents findings on how content-evaluative stance cues impacted readers' *personal* responses regarding the controversial topic addressed in the assigned reading, and Chapter 5 presents the findings on how content-evaluative stance cues impacted readers' assessments of the *author's* stance on the topic addressed in the reading. Finally, in Chapter 6, implications of the patterns observed in Chapters 4 and 5 are discussed in light of theoretical implications and potential pedagogical applications.

Chapter 2: Literature Review

In this chapter, I discuss the importance of reading in the university, and outline the prominent theories of reading processes as they pertain to both L1 and L2 readers. I then delineate the major components of linguistic stance markers, including hedging, boosting, attitude markers, and attribution. Finally, I review previous studies that have addressed the impact of stance markers on readers' perceptions and responses to text.

The Importance of Reading in University Education

Carillo (2014, 2015, 2018) has long advocated for the strategic incorporation of reading instruction within college writing courses, promoting the strategy of "mindful reading," which she defines as "paying close, deliberate attention to how you are reading and how each strategy works," to enhance reader's metacognitive awareness (Carillo, 2014, p. 4). The evolution of the internet and concomitant spread of mis/disinformation has fueled broader interest among educators in methods for teaching textual evaluation and interpretation. In March of 2021, The Conference on College Composition and Communication (CCCC) affirmed the centrality of skillful reading for success in tertiary education in its Position Statement on the Role of Reading in College Writing Classrooms. Borrowing Horning et al's (2017) definition of college-level reading as "a complex recursive process in which readers actively and critically understand and create meaning through connections to texts" and referencing the well- documented and growing challenges presented by today's complex information ecology, the CCCC statement urgently advocates for the proactive and systematic integration of explicit reading instruction within higher education.

Pertinent for the present study is the CCCC statement's recognition of the importance of close attention to linguistic nuance in text, as evidenced by the suggestion that instructors guide

readers in "focus[ing] on significant details and patterns," including a "focus on the text's language and vocabulary" (CCCC, 2021). Though the statement does not specifically mention readers' perception of author stance, all of the reading strategies referenced in the statement—"close reading", "deep reading," "active reading," "mindful reading," and especially "rhetorical reading" encourage closer attention to text, which includes the perception of stance marking.

Haas & Flower (1988) identified rhetorical reading-- "an active attempt at constructing a rhetorical context for the text as a way of making sense of it" --as an advanced strategy employed by highly skilled readers. Bean et al (2007) defined rhetorical reading somewhat more narrowly as "pay[ing] attention to an author's purposes for writing and the methods that the author uses to accomplish those purposes" (p4). As they further explain:

> All authors have designs upon their readers; they want those readers to see things their way, to adopt their point of view. But rhetorical readers know how to maintain a critical distance and determine carefully the extent to which they will go along with the writer (Bean, et al, 2007, p. 4).

While Haas and Flower (1988) depicted the skillful academically-oriented rhetorical reading of advanced students who mindfully reconstruct or infer rhetorical contexts from sophisticated texts, Ray and Barton (1989) insisted that less experienced readers also form rhetorical hypotheses, yet tend to present their interpretations of rhetorical context in personalized terms that would appeal to readers similar to themselves. Regardless of how much "rhetorical reading" may be attempted by less skillful readers, it is clear that advanced rhetorical reading entails astute perception of stance cues in a text.

Theories of Reading: Bottom-up, Top-down, and Over the Top

Theoretical literature on reading processes over the past several decades may be characterized as a protracted argument between proponents of "top-down" theories versus those favoring "bottom up" theories (Birch and Fulop, 2021; Hedgcock &Ferris, 2018; Grabe & Stoller, 2019, Kintsch, 2005). Bottom-up approaches to inquiry focus heavily on how readers process the smallest parts of text, such as sound/symbol correspondences and morphological markers, while top-down approaches focus primarily on how meaning can be derived from predictions and contextual clues. When applied to pedagogy, bottom-up approaches tend to emphasize that, unlike spoken language, reading and writing must be taught and learned intentionally, step by step, and sometimes with difficulty. While bottom-up inquiry asks "How does a skilled reader extract meaning from the text, and what barriers may exist to accurate interpretation?" top-down inquiry explores questions such as "What knowledge do readers bring to the interpretation of texts?"

Bottom-up: a collection of micro-skills to interpret texts.

Bottom-up theories presume that meaning is derived primarily from the text itself, rather than from the reader's previous knowledge. Reading is thus understood to be the extraction of a text's meaning through a sequential process of decoding, from the smallest units (letters representing sounds), and on up through words, phrases, and sentences. Koda (2007) outlined the array of components necessary for skillful reading, from the most local linguistic to the most global discourse levels. The list includes four types of linguistic knowledge required for decoding: orthography and phonology to convert graphic symbols to sound, vocabulary for word recognition, morphology for interpreting word forms, text-information building skills (which encompasses knowledge of syntactic structures for interpretation of word order, and familiarity with discourse markers for understanding of textual flow and relationships among elements).

Researchers that emphasize bottom-up processes are often interested in identifying significant bottlenecks –elements or stages within the reading process most likely to impede efficiency and/or accuracy in comprehension. The purest versions of bottom-up theories, with their focus on the smallest components of language and emphasis on linkages between graphic symbols and phonetic realizations, lead to the development of the phonics approach to reading pedagogy (Hedgcock & Ferris, 2018). Bottom-up theorists often emphasize the role of working (short-term) memory in text processing, identifying limitations in working memory capacity as a major bottleneck in the reading process (Nassaji, 2014). Carpenter and Just (2013) explained that working memory stores information so that the reader can then "mentally paste together ideas that are mentioned separately in the text or are only implied" (p. 2). According to the theory, increasing difficulty in text (lexical, syntactic, or semantic) requires more time for processing. Under these conditions, the storage capacity of working memory may be exceeded, causing information to drop away from the reader's accessibility. As these theorists noted, a reader's lower-level linguistic processing will become more automatic with experience, thus freeing up the cognitive resources (especially working memory) for higher order meaning making. This automaticity may be compared to driving or sports activities that, once learned, require very little conscious attention.

Several scholars have expanded on bottom-up approaches to build complex interactive/integrative theories. As Nassaji (2014) explained, contemporary models of reading tend to recognize a complex interplay among lower level (decoding), processes, mid-level (semantic and syntactic) processes, and higher-level (integration) processes in which the reader integrates the content from the text into his prior knowledge base. Kintsch (1988, 2005), for example, outlined a Construction-Integration Model in which "Construction" entails the building

of a mental representation or "textbase," (a rough preliminary representation of the text's meaning), and "Integration" entails the reiterative refinement of that cognitive textbase. Perfetti and Stafura (2014) proposed a complex Reading Systems Framework, which recognizes three classes of essential knowledge: linguistic, orthographic, and general (background knowledge, including familiarity with genres). Drawing from insights in neurobiology, the Framework recognized key neural pathways between short-term and long-term memory and acknowledges limitations in processing resources. Birch and Fulop's (2021) "Linguistic Infrastructure" model similarly recognizes the complex interactions between not only short-term (working) memory and long-term (stored knowledge) memory, but also between micro-linguistic awareness (such as phonetics) and global/contextual knowledge. As the authors explain, "When people read, they need both information flowing upward from the bottom and information flowing downward to the bottom in order to understand meaning" (2021, p. 7).

Top down: schemata and frames in the brain

Haas and Flower (1988) wrote in College Composition and Communication that "There is growing consensus in our field that reading should be thought of as a constructive rather than as a receptive process: that 'meaning' does not exist in a text but in readers and the representations they build" (p. 167). This statement illustrates how top-down theories were on the ascendence among Rhetoric and Composition scholars in the late 1980s, having reached near consensus endorsement. This focus on what readers bring to the reading process, as opposed to what is contained within the text itself, points to a prevalent notion within "top down" theories of reading. A confluence of theories from a range of disciplines including sociology, cognitive psychology, linguistics, education, and literary theory, have fed into the ascendancy of top-down theories. These theories move well beyond Saussure's simple notion of language as the

"signified" [the 'object' being referred to] and "signifier" [the word(s) used to refer to the object]. They take as foundational Charles Sanders Pierce's three-part model of language instead: "The sign is related to its object only in consequence of a mental association" (qtd in Rosenblatt, 1988, p. 2). The purest top-down theories focus heavily on that third element, the "mental association" ---that which the reader already knows before exposure to any given text and which allows them to make meaning from the text.

A specialist in reading pedagogy for children, Kenneth Goodman was an early and prominent proponent of top-down approaches. Goodman (1967) refuted the notion of reading as a "precise process" involving "exact, detailed, sequential perception and identification of letters, words, spelling patterns and larger language units," (p. 126) arguing instead that:

> Efficient reading does not result from precise perception and identification of all elements, but from skill in selecting the fewest, most productive cues necessary to produce the guesses which are right the first time. The ability to anticipate that which has not been seen, of course, is vital in reading (Goodman, 1967, p. 126)

In emphasizing the selectivity of cues based on the reader's expectations, Goodman (1967) thus declared reading a "guessing game." The processing of written text, in this view, is natural and intuitive, as the reader continually draws on their prior semantic and syntactic knowledge to construct meaning.

Seminal texts contributing to the formulation of top-down theories include sociologist Erving Goffman's (1974) *Frame Analysis* and Schank & Abelson's *Scripts, Plans, Goals and Understanding* (2013). Goffman (1974) described frames as internalized structures that help us to navigate the world by answering the basic question "what is going on here?" In Goffman's conception, our minds contain collections of frames and subframes-- packages of information

which collectively make up our belief systems and shape our worldviews. We then project these frames onto our experiences in order to make sense of them. As these frames serve to guide us, they are resistant to change, and we will generally attempt to fit our experiences into the frames rather than alter the frames substantially. In the direct reference to written language, Goffman noted that popular genres contain "common fund[s] of familiar experience, something writers can assume readers know about" (Goffman, 1974, p. 16).

In the 1970s, computer scientist Robert Schank teamed up with social psychologist Robert Abelson to theorize the nature of human knowledge systems, with the goal of modeling artificial intelligence. Schank and Abelson (2013) asserted that "new information is understood in terms of old information," (p. 67) and that therefore understanding is based largely on the (often unconscious) knowledge an individual brings into a context. As the authors explained, communicators must necessarily be concise, so the interpretation of messages entails filling in the missing (assumed) information. Thus, mental "scripts" and "plans" are what allow us to fill in the gaps. As the authors explain, "a script is made up of slots and requirements about what can fill those slots" (Shank and Abelson 2013, p. 41) The authors proposed various types of mental scripts-- personal, situational, and instrumental (procedural)—which would guide us in navigating new situations, including a written text to be interpreted.

Linguist Charles Fillmore's (1976, 2006) theory of frame semantics linked top-down processing and construction of meaning directly to linguistic cues. Fillmore (1976, 2006) theorized that humans interpret the words in a text according to cognitive frames or cognitive (and semantic) "domains" of meaning. Using as an example "verbs of judgment" such as "blame, "accuse," and "criticize," Fillmore (2006) suggests that "nobody can really understand the meanings of the words in that domain who does not understand the social institutions the

structures of experience which they presuppose" (p. 378). Particular terms may thus "index" or "evoke" complex frames "prepackaged in lexical meanings" which are shared and understood within a speech community (Fillmore, 1976, p. 29). In a similar vein, Vygotsky had declared in the early 20th century that "the sense of a word is the sum of all the psychological events aroused in our consciousness by the word" (qtd in McVee et al, 2005). Inspired by Fillmore's work, Lakoff (2008, 2014) has elaborated on the concept of frame semantics and applied it as an analytical lens to explain sociopolitical mindsets in the United States, as he compellingly detailed the contrasting metaphorical semantic systems that comprise conservative versus progressive communication and thought. In Lakoff's (2016) and Lakoff and Johnson's (1999) view, certain metaphorical semantic frames are so primitive, so deeply held that they contain pre-conceptual meaning-- embodied, visceral knowledge.

More commonly referenced by scholars of reading than the concept of "frames" or "framing" is "schema" or "schemata" (plural); though notably, some authors, including Goffman (1974) and Fillmore (1976, 2006), used the terms "frame" and "schema" interchangeably. Developmental psychologist Jean Piaget used the concept of schema to describe children's learning processes. (Wertsch,1991). Anderson and Pearson (1984) recognize reading comprehension as the "interaction of new information and old information" with the "old information" consisting of schemata –structured knowledge previously embedded in the reader's brain. The authors described the heavy impact of "schema activation" in reading, which can be stimulated through informative titles that frame textual content, and/or pre-reading questions that guide readers' comprehension. In essence, schemata serve as conceptual templates onto which a reader can map a new text; they allow readers to make inferences by assigning logical roles and functions to the words and phrases they encounter.

In a comprehensive review of schema theory, McVee at al (2005) traced the emergence of contrasting conceptualizations of "schema" as formulated within different time periods and across diverse disciplinary paradigms. As the authors explained, early theorists viewed cognitive schemas as inherently embedded in culture. The authors cite Bartlett's (1932) claims that schemas "highlight the reciprocity between culture and memory," suggesting a "transactional relationship between individual knowledge and cultural practice" (p. 535). Borrowing from Cole (1996), McVee et. al. (2005) declared schema a "bio-socio-cultural" phenomenon (p. 533). Attempts in cognitive psychology to operationalize the concept for experimental purposes often resulted in simplified and purely individualistic notions of schema, which was unappealing to qualitatively oriented literary and educational specialists.

The ascendency of schema theory in cognitive sciences co-occurred with its diminishing popularity among strong social constructionists, where it was viewed as overly individualistic (McVee at al, 2005). Thus, the literary scholar and reading theorist Louise Rosenblatt (1988) does not employ the term "schema," as part of her "transactional theory" of reading. And yet, her reference to "inner capital" in the form of a "linguistic-experiential reservoir" would appear to represent a similar concept. In Rosenblatt's (1988) words: "We make meaning…by applying, reorganizing, revising, or extending elements…selected from, our personal linguistic-experiential reservoir" (p. 3). Perhaps a subtle difference in Rosenblatt's conceptualization from that of schema theory proponents is the extent to which schema is considered stable versus dynamic. Rosenblatt (1988) cautions that "The linguistic reservoir should not be seen as encompassing verbal signs statically linked to meanings" but instead "a complex, non-linear self-correcting transaction between reader and text" (p. 4).

This focus on the sociocultural also came with attention to “activity” as the unit of analysis, and on the context and material artifacts involved in literacy. Wertsch (1993) advocated for interdisciplinary approaches to research on communication with language as the medium in “mediated action.” This focus on activity/action as the unity of analysis may also be observed in Rosenblatt’s (1988) Every reading act is an event, a “transaction” involving a particular reader and a particular configuration of marks on a page, and-occurring at a particular time 'in a particular context (p. 4). Rosenblatt (1988, 1995) asserts that readers “compose” their own meaning of the text as they read, emphasizing selective attention, which in turn is "conditioned by multiple personal and social factors entering into the situation’" The "meaning" does not reside ready-made in the text or in the reader, but happens during the transaction between reader and text. Rosenblatt (1988) notes that a reader will bring a different stance to the activity of interpreting fiction vs non-fiction, attending selectively to certain textual components according to purpose.

Over the Top: The Social Turn and Theories of Reading

The “Social Turn” in the field of Rhetoric and Composition beginning in the 1980s drew heavily from theories of children’s language socialization, especially those of early 20th century Soviet intellectuals such as psychologist Lev Vygotsky and philosopher Mikail Bakhtin. Social Turn theorists insisted that meaningful inquiry into language must necessarily consider broad social, cultural, and institutional contexts (Wertsch (1993). This expanded interest in the sociocultural dimensions of language was accompanied by decreasing interest in the cognitive structures or processes by which individuals interpret written material. Critical theorists and rhetoricians such as Judith Butler (1990) conceptualized language as a container of ideologies shared by its speakers, who themselves may be unaware of said ideologies. In this view,

individual agency is barely acknowledged, as the individual is viewed almost as a flow-through for cultural messages. The pure version of this philosophy is described by Longaker and Walker (2011): "We don't speak language. Language speaks us. So we can't look to the individual to find out how ideologies and arguments change because that individual person doesn't exist without those ideologies and those arguments" (p. 198). Observing the frequent misinterpretation of her own theories, Louise Rosenblatt (1993) observed "the recognition that each individual absorbs the assumptions and values of the society or culture—became the basis for seeing the individual as completely dominated by the society, the culture, or 'the community.' (p. 384). Smagorinsky (2001) cleverly questions, "If meaning is constructed, what is it made of?" only to respond that meaning is "enculturated," and that no meaning can be attributed to a text itself, only constructed by a reader according to "how a reader is enculturated to read" (p. 137).

Reading Theories and L2 Readers

Among L2 specialists, top-down theories have piqued interest and mitigated an overreliance on micro-skills instruction. Unsurprisingly, however, top-down theories have not reached near-consensus status as they have among L2 writing specialists. While Grabe & Stoller (2019) declare top-down theories to have been largely discredited, Birch and Fulop (2021) and Hedgcock and Ferris (2018) contend that both top-down and bottom-up theoretical approaches contribute to comprehensive understanding of reading processes and to the development of sound pedagogical practices. While L1 and L2 reading processes may share more similarities than differences (Chodkiewicz, 2016; Grabe & Stoller, 2019), and may be near synonymous at the most advanced levels of L2 proficiency (Grabe & Stoller, 2019), universal application of L1 theories such as Goodman's (1967) "Psycholinguistic Guessing Game" to L2 readers is considered impractical by most specialists (Chodkiewicz, 2016).

None of the various subcomponents of the reading process may be taken for granted if one is to gain a full understanding of the complexity entailed in L2 reading (Nassaji, 2014). Nassaji (2007) criticizes schema theorists for their characterization of schema as pre-existing and unchanging knowledge, and their continual focus on schema activation, without ever addressing how schemata are acquired in the first place. Inasmuch as the origins of schemata ARE addressed, they are conceptualized as deeply embedded cultural associations acquired during childhood along with identify formation and first language acquisition (Wertsch, 1991). Descriptions of reading according to the Construction Integration Model (Kintsch, 1988) outline a more complex and laborious process than that proposed by schema theory. As Verhoeven (2017) notes, adult L2 reading is likely to require greater working memory than L1 reading. Lower-level decoding must proceed rapidly and efficiently—or even "automatically"—in order to serve as the foundation for higher level comprehension. But as scholars of L2 reading point out, lower-level linguistic processes do not always occur automatically. As Koda (2007) explains "because inefficient decoding is resource demanding, it severely restricts readers' involvement in higher order comprehension operations, such as text-information integration, inference and reasoning" (p. 23).

Ongoing research among scholars in Second Language Reading has explored the merits of two contrasting theories: The Linguistic Threshold Hypothesis (LTH) versus the Linguistic Interdependence Hypothesis (LIH). The LTH asserts that "in order to read in in a second language, a level of second language linguistic ability must first be achieved" (Bernhardt & Kamil, 1995) The LIH, also known as Common Underlying Proficiency (CUP) asserts that reading ability in L2 is strongly tied to reading ability in L1, and that much of the skills and processes utilized for L1 reading can be transferred into L2 reading. Although research has

demonstrated some validity to the LIH—showing that indeed to some extent reading skills and processes and strategies are transferrable from one language to another, the extensive body of research supporting the LTH is even more compelling. While proficiency in L1 reading does contribute to proficiency L2 reading, linguistic and lexical knowledge of the second language correlates more highly with L2 reading proficiency (Bernardt & Kamil, 1995).

The inevitable limitation in vocabulary knowledge in all but the most advanced L2 readers has been recognized as a major stumbling block for L2 readers, and a primary reason for rejection of strong top-down, schema-based theories among L2 specialists. Verhoeven (2017) concludes that vocabulary knowledge, or "lexical quality" is an "extremely important predictor" of reading comprehension, "not only the sheer number of words represented…, but also the sematic ties between the words" (p. 225). Chodkiewicz, (2016) argues that the top-down Psycholinguistic Guessing Game theory has been over-applied in L2 reading pedagogy despite evidence pointing to its inadequacy as the basis of a comprehensive pedagogical approach. As the author explains: "It goes without saying…that…the greatest obstacle for L2 language learners in developing fluent reading is insufficient vocabulary knowledge to identify words in an automatic way" (p. 115). Perfetti (2008) and Perfetti and Stafura (2013) similarly highlight lexicon as a major pressure point in the system of comprehension for L2 readers. As the authors explain, knowledge of vocabulary sits at the crossroads between lower-level processes of decoding and word recognition and the higher-level process of constructing complex meaning. In Perfetti and Stafura's (2013) Lexical Quality Hypothesis (LQH), Lexical Quality (LQ) is defined as "the extent to which a mental representation of the word specifies its form and meaning components in a way that is both precise and flexible" (p. 359). According to this theory, readers have different LQs for each word. Perfetti (2008) notes that high lexical quality, or "the ability

to retrieve word identities that provide the meanings the reader needs in a given context" (359). is thus related to automaticity, and therefore reading efficiency.

Applicability of Theory to the Present Study

The wide variety of approaches to conceptualizing reading processes as described above may ultimately be a reflection of the massively divergent backgrounds and needs among different readers themselves. These theories have been formulated with various populations in mind: from children to adults, from L1 to L2, from beginning to advanced, from lower to higher socioeconomic backgrounds. Such a wide range of theories has been outlined here because participants in the present study also represented a wide range of backgrounds. Though all participants attended the University of California and were similar in age, they had grown up in various cultural, linguistic, and socioeconomic environments. Of the US-born or long-term US residents, some claimed English as an L1 and others did not. Some participants had arrived recently to the US, either as international visa students or immigrants. Many participants were residing abroad at the time of the study and were just embarking on their first experiences with English-medium Education. Given this diversity in participants, it was presumed important to explore a broad range of potentially applicable understandings of the reading process.

Linguistic Manifestations of Author Stance

Vande Kopple (1985) outlined the three basic functional categories of stance that will be considered in the present study: validity markers (including markers certainty/uncertainty and some instances of attribution), narrators (author/speaker + reporting verb), and attitude markers (indications of the author's emotional response). Labeling these features collectively as "interpersonal metadiscourse," Vande Kopple (1985) explained that these features "carry essentially social meanings. They allow us to reveal our personalities, to evaluate and react to the

ideational material, to show what role in the situation we are choosing, and to indicate how we hope readers will respond to the ideational material" (p. 86).

Consistently included in taxonomies of interpersonal metadiscourse are what Vande Kopple (1985) classified as "validity markers," including uncertainty markers (also called "downtoners", "backgrounders," "hedges") and certainty markers (also called "emphatics," "foregrounders," "intesifiers," and "boosters"). I adopt the terms "hedges" and "boosters" here, reflecting the most recent and influential research in this area. While hedges soften or downgrade a claim, boosters serve to elevate or highlight a proposition. Hedges in particular have generated an abundance of interest among scholars in Applied Linguistics and the subspecialty areas of English for Academic Purposes and English for Specific Purposes. Much of this interest in hedging may be traced to Lakoff (1972), who outlined the utility of hedges in discussing "fuzzy" concepts or entities that that could not be clearly categorized. Hyland (2005) explained that hedges "indicate the writer's decision to withhold complete commitment to a proposition, allowing information to be presented as an opinion rather than accredited fact" (p. 178). He included in this category adjectives such as *possible*, modal verbs such as *might* and adverbs such as *perhaps*. Swales (1990) pointed out that caution against over-stating one's claims may contribute to a tone of honesty and diplomacy in academic writing. Salager-Meyer (1994) and Vande Kopple (1997) noted that careful use of hedging may help a writer communicate with increased accuracy, and that the care and humility expressed through hedging may enhance a writer's ethos and credibility. Hyland and Milton (1997) classified hedging and boosting as part of epistemic stance, and outline a wide range of structural forms.

Scholars have identified multiple types of hedging devices, and have accordingly proposed sub-categorizations. Vande Kopple and Crismore (1990) distinguished

"approximators" such as *somewhat, approximately, sort of,* and *about*, which infuse referenced concepts or objects with imprecision, from "hedges of plausibility" (also called "shields") such as *I think, perhaps,* and *seemed*, which function to place distance between author and proposition. Shields, in turn, have sometimes been subdivided into plausibility versus attribution (Prince, et al, 1982; Vande Kopple and Crismore, 1990; Theibach, et al, 2015). The inclusion of attribution as a "hedge" is especially interesting here, and will be taken up in more detail below in the section on Attribution.

Attitude Marking and Evaluation

Attitude markers appear frequently in studies of stance, evaluation and metadiscourse, but they are not consistently defined. Hyland (2005) drew a distinction between hedges (which indicate epistemic likelihood or possibility) and attitude markers, which indicate the author's emotional, affective response to an idea under discussion. Salager-Meyer (1994) labeled attitude markers "emotionally charged intensifiers," noting that these are much less common in formal medical communications (editorials and review articles) as compared to research articles and case reports. Hyland (2005) noted that attitude markers may be expressions of surprise, agreement, importance, frustration, and so on. While attitude markers are defined by function, and may thus appear in a wide range of linguistic structures, Hyland (2005) highlights three common structural manifestations of attitude: verbs (e.g. *agree, prefer*), sentence adverbs (*unfortunately, hopefully*), and adjectives (*appropriate, logical, remarkable*). Attitude markers can play a major role in persuasion, may "pull readers into a conspiracy of agreement" without their even realizing they are being influenced by those linguistic choices (Hyland 2005, p. 180). They may not consciously "attend" to these markers, but they can nonetheless have an effect on readers' interpretations.

For ease of analysis, attempts have been made to distinguish attitudinal metadiscourse from core propositional content. For example, Khabbazi-Oskouei's (2013) proposed scheme distinguished between prenominal adjectives (core content) and clause modifying adverbs (attitudinal metadiscourse), as illustrated in examples that follow:

Core Propositional Content:

*The first clue of this emerged when we noticed a quite **extraordinary** result.*

*…the financial crash has made for an **especially** depressing few weeks.*

Metadiscoursal Attitude Markers:

***Sadly**, Richard Lugar has ruled himself out as secretary of state…*

*It was **disappointing** that they received no recognition for their contributions.*

Though this separation can facilitate experimental design and clear analysis, it is not a realistic depiction of how attitudinal markers may actually be distributed within a text. Such boundaries are artificial, as emotionally charged meanings are consistently embedded within vocabulary (Birk & Birk, 1994). Through the elaborate system of Appraisal, Systemic Functional Linguistics accounts for the wide variety of ways in which attitude may be expressed in English regardless of grammatical structures. In the Appraisal system of analysis, a stance that includes evaluation of moral or ethical appropriateness of human behaviors, is labelled as "Judgements of Propriety" (Martin & White (2005). These stance markers may be expressed as modals (i.e. *should, must*), adjectives (i.e. *insensitive, reprehensible, rude*), or adverbs (i.e. *unfairly, inappropriately, unnecessarily*). Propriety may also be strongly implied in verbs (i.e. *bully, pervert)* (Martin & White, 2005 p 44) nouns (i.e. *terrorist, menace*) (Martin & White, 2005 p. 196), or inscribed at the phrasal level (i.e. *absorbed in narrow self-interest, devoid of compassion*) (Martin and White, 2005, p. 203).

Attribution

Another key manifestation of stance is attribution (explicit reference to outside sources, particularly other authors or speakers). Some analyses have considered attribution as a type hedge or "shield," while others include attribution as an epistemological marker alongside hedges and boosters. Attribution to outside sources certainly **can** be used by authors to either align OR distance themselves from the propositional content.

Vande Kopple (1985) differentiated between "attributors," for citations that "try to lead readers to judge or respect the truth value of our proposition," and "narratives" for citations that "function primarily to let readers know who said or wrote something" (p. 84). Vande Kopple (1997) categorizes all citations as "hearsay evidentials," and later as a subcategory of "epistemic markers" (2012). Noting that citations in their study served both to persuade and to inform, Crismore and Farnsworth (1989) and Crismore et. al. (1993) combined Vande Kopple's (1985) "attributor" and "narrator" categories into a single subcategory of "attribution" under the broader heading of "interpersonal metadiscourse," alongside hedging and boosting. Barton (1993) and Dafouz (2008) similarly have considered attribution as an element of interpersonal metadiscourse that may contribute to a writer's expression of stance.

The rhetorical importance of attribution has been broadly recognized. Swales (1990) acknowledged differing conventions in academic writing, distinguishing integral citations (which include phrases such as "*according to*" or "*the author says*) versus non-integral citations (parentheticals). Hyland (1999) explores in detail the variation of attribution practices among 8 different academic disciplines, concluding that while discourses in the humanities (and to a lesser degree social sciences) frequently employed integral citation as a tool of persuasion, STEM disciplines tend to rely much more heavily on non-integral. Thompson and Ye's (1991)

extensive classification of reporting verbs indicated the contrasting functions (endorsing or distancing) that integral attributions may serve. While Barton (1995) pointed out that a writer's attitude may be embedded in a reporting verb, Sawaki (2014) noted that an author's evaluation of claims may be signaled by a reporting verb. As Aull (2015) explained, the highly valued trait of "critical thinking" or "critical evaluation" is often expressed through reporting verbs. Yet, as Liardet and Black (2019) have observed, student writers may tend to over-rely on neutral verbs (i.e. "says," "states") that lack critical evaluative impact. Pecorari (2006) noted that subtle differences in meanings of evaluative reporting verbs may result in difficulty for student writers to use them accurately and with precision, particularly if they are using English as an additional language. Wette (2017b) similarly documented L2 students' difficulty in selecting the most contextually appropriate reporting verbs. Awareness of subtle reporting verb semantics may contribute substantially to skillful citation.

Since the aim of the present study is to explore readers' perceptions of an author's endorsement versus distancing from propositional content, attribution will necessarily need to be considered since, as we can observe in the following examples, attribution may be used with relative neutrality, or (especially in combination with reporting verbs) to strategically endorse or distance a claim.

(Neutral) *According to…, Author X states, says, writes,*

(endorsement) *(As) Author X proves, demonstrates, shows*

(distancing) *Author X misleads, deceives, ignores, misinterprets*

As illustrated above, attributions, and especially those that employ reporting verbs, can signal an author's position toward the propositional material in a text, through evaluation of the claims made by that source.

Previous Studies on the Impact of Stance Markers on Readers

A handful of previous studies in the disciplines of Applied Linguistics and Communications have attempted to assess the effects of stance markers on readers. Much of the research has focused on hedging, while a few studies have combined hedging with attribution. Specific effects measured have been wide-ranging, including reader's simple noticing of, and "attending to" the stance markers themselves, readers' comprehension, reader's interest in the topic, readers' own stances on issues addressed in a text, perception of persuasiveness, perception of bias versus objectivity, judgement of the author's (journalist's) trustworthiness, judgement of author's (journalist's) expertise level, judgment of a scientist's expertise level (when the scientist's work is reported in a news article), and perception of a text's "scientificness."

The earliest studies investigating the impact of hedging on readers were conducted by and Crismore and Vande Kopple (1988, 1990) and Crismore (1990). Crismore and Vande Kopple (1988) observed that their 9th grade study participants demonstrated the greatest learning gains when hedges were presented with first person pronouns (*I believe that*…) , but that hedges presented impersonally (*It is possible that…*) had a negative impact on learning outcomes. The authors surmised that, in the case of hedges presented as personal opinion, discourse familiarity played an essential role in text accessibility, and thus comprehension. Hedges in the unfamiliar impersonal form, by contrast, made sentences more complex and likely distracted students from full comprehension. In a study of sixth graders' response to social science textbook passages, Crismore (1990) observed that "attitudinal metadiscourse" (hedging, emphatics and evaluatives) was correlated with increased interest in the topic of the reading, but only for the more advanced readers.

Low (1996) and Hyland (2000) have explored the possibility that readers may fail to notice metadiscoursal stance markers altogether, a phenomenon they have labelled "lexical invisibility." Low (1996) observed that the 9 undergraduate study participants attended to the intensifiers (*very extremely far full, consistently*, and *never*) about half of the time, but they consistently ignored the hedges (*tend,* and *seem*) in questionnaires. In Hyland's (2000) study, boosters were frequently noticed by the college student readers, but hedges most often were not, leading the researcher to surmise that Low's (1996) "lexical invisibility hypothesis" could in fact be applicable in the case of hedges. Retrospective text-based interviews were revealing in that, when asked to explain how they had reached their interpretations of the text, readers often realized they had misinterpreted a statement based on not having attended to a hedge. Hyland (2000) noted that just asking them to re-think their interpretation lead to their noticing the presence of interpersonal metadiscourse in the original text. This suggests that not only familiarity with the relevant vocabulary, but also attention to the possibility of hedging while in the process of reading is essential for perception of nuance.

Research on readers' response to stance markers has also been published in the field of Communications. Two studies (Jensen, 2008; Mayweg-Paus and Jucks (2017) explored the effects of hedges and attributions on readers' responses to journalistic reports on health-related issues. Jensen (2008) observed the independent and combined effects of hedging and attribution on readers of media stories about cancer research. The results indicated that readers processed information in more depth and rated journalists as more trustworthy when the reports included hedges, and especially when the hedges were attributed to the primary research scientists (as opposed to scientists unaffiliated with the particular study under discussion). Mayweg-Paus and Jucks (2017), measured the effects of hedges and attributions on readers' attitudes about

vaccination. Surprisingly, the inclusion of attributions (a combination of references to specific scientists and general statements such as "according to the latest studies") correlated with readers being **less** likely to support the claims presented. Inclusion of hedges, on the other hand, was correlated with readers being more likely to support the report's conclusions.

A few studies have explored reader responses to stance markers in stories addressing controversial issues outside of the health and science fields. Thiebach et. al. (2015) explored the effects of attribution and hedges in stories about computer use by children. The presence of attribution was correlated with perceptions of stronger arguments, higher credibility and a higher level of "scientificness." The presence of hedges, on the other hand, was not correlated with any of the same effects. When Dafouz-Milne (2008) asked study participants to read 6 newspaper opinion pieces and rate them for levels of persuasiveness, their responses showed that texts containing medium levels of both textual and interpersonal (including content-evaluative) metadiscourse were rated as the most persuasive. Cramer and Eisenhart (2014) asked readers to assess authors' bias versus objectivity in two reports, one published in the Wall Street Journal and the other in the New York Times, and to explain their responses in writing. Participants identified certain elements of interpersonal metadiscourse —those associated with stance—as evidence of bias.

Processing Metadiscoursal Information

Reading may often be thought of as simple extraction of meaning from text. Yet we may observe frequently that different readers derive different meanings from the same text. Texts often contain multiple layers of meaning, not only core propositions but also content-evaluative metadiscourse markers. These stance cues may often impact how a reader understands the text, possibly even at a subconscious level. And since readers also themselves bring their past

experiences and knowledge into the reading activity, the process is necessarily a complex interaction between the specific reader and the multiple layers of meaning encoded in the text.

Previous studies on the impact of stance marking on readers have been limited both in quantity and scope. Those conducted within the field of Communication tended to follow strict experimental and quantitative design; they have explored only one or two linguistic structures and have include little insight into the readers' processes. Studies on content-evaluative metadiscourse in Applied Linguistics have focused primarily on writing (comparing student versus professional texts, for example), and on genre analysis (identifying types and frequency of metadiscourse in particular genres). A quasi-experimental design that examines and compares reader responses to versions of a text that differ only in stance markings will allow for detailed analysis of how stance cues impact readers, thus lending insight into the processes and challenges of rhetorical reading.

Chapter 3: Methods

In my years of experience teaching and studying language, I have observed several interrelated phenomena in the reading process. First, I have seen evidence of readers seemingly being persuaded by certain elements of text—sometimes taking passionate ownership of the author's stance, perhaps even repeating the author's exact wording in their own argument---and yet all the while not consciously recognizing the textual elements that presumably have contributed to their interpretations of the text. Secondly, echoing Hyland's (2000) findings, I've seen evidence of readers misinterpreting an author's message because of inattention to hedging and/or attribution markers. It would appear, from my observation, that readers tend to link by default any idea contained in a text to the author, even when the author has attributed that idea to someone else, and/or expressed doubt through hedging or other distancing stance cues, a tendency which can result in serious misunderstanding. This study was designed to explore these perceived patterns systematically---first to determine the extent to which such patterns may exist at all, and secondly to consider how language arts instructors might address whatever reading challenges may be identified. The purpose of the study may be encapsulated in the two research questions below; while the first addresses the relationship between textual features and readers' *personal* responses regarding issues discussed in the text, the second addresses the relationship between textual features and the reader's explicit understanding of *author* stance.

Research Questions:

How might stance cues influence readers' personal responses to persuasive text?

How might stance cues influence readers' perceptions of author stance in a persuasive text?

The study consisted of two major parts. Part one, completed remotely online through Qualtrics, consisted of a short demographic questionnaire, followed by a reading and response

activity. Upon completion of Part 1, participants could opt-in to Part 2 by leaving their name and contact information. Part 2 consisted of a follow-up interview with the researcher conducted remotely through Zoom.

Participants and Recruitment

Participants were recruited during the summer and fall quarters of 2020 from three lower division University Writing Program Courses at UC Davis: UWP 21 **(**Introduction to Academic Reading & Writing for Multilingual Students)**,** UWP 7M **(**Entry Level Writing: Practices in College Reading & Writing for Multilingual Writers) and UWP1 (Introduction to Academic Literacies). A large proportion of the students enrolled in the two courses designed for multilingual students (UWP 21 and UWP 7M) were international visa holders. Because of pandemic travel restrictions and the implementation of remote learning at the UC Davis, most of these Freshman students were still residing in their home countries during their participation in the study. Students enrolled in UWP 1 included both multilingual and monolingual English speakers. The majority of these UWP 1 participants were California residents and first generation and/or low-income students in the Freshman cohort of the Special Transitional Enrichment Program (STEP).

Instructors of the 3 courses listed above shared with their students a short video briefly introducing the "Readers' Response" study and inviting them to participate. Provided along with the video was an anonymous link by which students could access and complete Part 1 of the study. The final question on Part 1 asked participants to leave their contact information if they were interested in continuing to Part 2, the follow-up interview. Fifty-three participants completed Part 1, and 28 of them volunteered for Part 2. All 28 students who volunteered for Part 2 were interviewed.

Participants who opted into Part 2 were contacted by the researcher within a week to schedule an appointment for the follow-up interview. Interviews took place anywhere from two days to three weeks after the completion of Part 1. Some University Writing Program instructors offered extra credit in their courses for participation in the study. Those who completed both Parts 1 and 2 also received a $50 gift card.

Selection and Modification of Text

The text chosen for this study was Are you Suffering from Technophobia?, an opinion piece by Sam Bocetta published in TechNewsWorld.com on October 31st, 2019 (See Appendix A). Several characteristics made this text suitable for this study. First, it was written for a general audience and addressed a topic with which young students just entering college would typically have some familiarity. The article was substantive and complex enough to present some interest and challenge, yet accessible enough so that one could reasonably expect a first-year university student to comprehend the main ideas. Additional characteristics that made this text ideal for exploration of readers' responses to content-evaluative metadiscourse are elements of persuasion (Abdi, 2002; Khabbazi-Oskouei, 2013) and elements of controversy (Crismore and Vande Kopple, 1990), as these traits naturally contribute to the use of hedges, boosters, and especially attitude markers. The text was also ideal in length (the original version is 1,045 words), long enough for numerous instances of content-evaluative metadiscourse to appear without seeming unnatural, yet brief enough for participants to read and respond to within an hour.

Modification of Text

In order to more effectively analyze the effects of specific metadiscoursal features, numerous modifications were made to the original text for the purpose of reducing possibly

confounding factors. The first of these modifications was the deletion of all external weblinks. The original version, published online, contains 14 links to outside sources. Had these links remained accessible, some participants would have opened them, and their perceptions of the issues addressed in the target article would have been influenced. The effects of participants' choices regarding weblinks could be a fascinating exploration in itself, but this was outside the scope of the current study.

Further modifications included the alteration of titles, deletion of recognizable names, and deletion of propositional content whose presence would automatically convey a particular author stance. Titles were simplified to convey a more neutral tone so as not to sway the reader toward any particular belief or convey any particular stance. For example, language implying emotion, such as the word "suffering" in the original title, was omitted to avoid possible influence on reader perception. Commentary in the original text that linked technological advancements in the private sector to the military's development of weaponry was deemed impossible to present without conveying a negative charge. These sentences were thus omitted. The original version also included commentary from Elon Musk, undoubtedly a familiar name to many participants. Since the impact of celebrity opinions was beyond the scope of this study, this content was removed.

Another major modification was the substantial reduction in the usage of first person pronouns (I, we, us). The decision was made to reduce the use of personal pronouns because they are heavily associated with stance, and their effect on readers has already been studied extensively. The original text contains one instance of the first-person singular pronoun "I"; this was removed. Instances of the first-person plural subject pronoun "we," were reduced from

nine in the original to three in the modified text. Finally, instances of the first-person plural object pronoun "us" were reduced from 15 in the original to 11 in the modified text.

In addition to the general modifications specified above, further modifications were made to create two contrasting versions of the text. Version 1 (See Appendix B) maintains a stance similar to that of the original article, in which fear of technology is strongly validated. This version contains numerous linguistic cues that slant in favor of the propositional content. These stance cues could lead a careful reader to determine that the author believes people's fears of technology are indeed justified. In contrast, Version 2 (See Appendix C) was modified with stance cues that distance the author from the propositional content, thus creating a stance that contrasts with that of Version 1. The content-evaluative metadiscoursal cues in Version 2 could lead a careful reader to conclude that the author does NOT believe people's fears of technology are justified. Table 1 shows a side-by side comparison of each contrasting sentence, first as it appears in Version 1, and then as it appears in Version 2. As may be observed in Table 1, a broad range of linguistic components have been altered between the two versions; these include hedges, adverbial attitude markers, evaluative adjectives and verbs, and attribution markers. In a few cases, sentence structure was altered along with word choice in order to create the contrasting stances. Aside from the 18 sentences included in Table 1, the two versions were identical.

Table 3.1
Side-by-Side Comparison of Altered Sentences in Text Versions 1 and 2

Version 1 Stance: Text justifies technophobia, emphasizes concern regarding technology	**Version 2 Stance:** Text shows little justification for technophobia: emphasizes enthusiasm regarding technology
1 _____ Americans are more afraid of technology than death, suggests research conducted in 2019	Strangely, Americans are more afraid of technology than death, suggests research conducted in 2019

2 Perhaps the first sophisticated critique of technology's impact on the world was articulated by the Romantic poets in the late1800s.	Perhaps the first major criticism of technology's impact on the world was launched by the Romantic poets in the late 1800s.
3 That might seem like ancient history, but looking at what those poets feared can give us valuable insight into how -- and why -- people fear technology today.	That's practically ancient history, but looking at what those poets feared might give us clues about how -- and why -- people fear technology today.
4 The Romantics thought, specifically, that the____. technologies the Industrial Revolution unleashed upon the world might _____destroy the "true essence" of man.	The Romantics thought, specifically, that the productivity-enhancing technologies the Industrial Revolution introduced to the world might somehow destroy the "true essence" of man.
5 Machines and factories drew people away from the fields and forced them to work long hours on production lines.	Machines and factories drew people away from the fields and lured them to work _____ on production lines.
6 The machines, in short, were forcing humans to become machines themselves.	The machines, they thought, were forcing humans to become more machine-like themselves.
7 Take, for example , the thought experiment put forward by Oxford professor Nick Bostrom.	Take, for example, the far-fetched story put forward by Oxford professor Nick Bostrom.
8 Rather than new technologies being anti-human, and eliminating the species, modern humans fear that technologies are too human, too good at mimicking human beings.	Rather than viewing new technologies as anti-human and threatening the species, modern humans fear that technologies are too human-like, too good at mimicking human beings.
9 It is tempting to write-off this kind of fear as the product of naivete or old-fashioned values, but that would be a mistake.	This kind of fear may be just the product of naivete or old-fashioned values.
10 Even some at the forefront of the Artificial Intelligence (AI) revolution worry that machines soon could be better at being human than humans themselves.	_____Those at the forefront of the AI revolution question whether machines could ever get better at being human than humans themselves.
11 A McKinsey Global Institute study indicates that nearly 70 million people could lose their jobs to automation by 2030, requiring a wholesale reconfiguration of the world economy.	But a McKinsey Global Institute study suggests that nearly 70 million people could lose their jobs to automation by 2030, requiring some restructuring of the world economy.
12 In many ways, the technologies we use have become us, and we rely on them to an unprecedented degree	In many ways, the technologies we use have taken on more human-like roles, and we rely on them to an unprecedented degree.
13 Take, for instance, the very modern fear that tech companies exploit us, and that the government is watching us.	Take, for instance, the very modern fear that tech companies could exploit us, or that the government might be watching us
14 While a majority of Americans oppose this type of surveillance, in reality most are totally	Of course a majority of Americans oppose this type of surveillance, and most enjoy using

dependent on smartphones created by tech companies and mobile networks overseen by governments	smartphones created by tech companies and mobile networks overseen by governments.
15 In fact, most of us rush toward the convenience these devices offer, and increasingly seek to hand over our everyday tasks to technology at the workplace.	In fact, most of us rush toward the convenience these devices offer, and increasingly benefit from handing over our everyday tasks to technology at the workplace.
16 When it comes to modern customer service, chatbots do the talking for us.	When it comes to modern customer service, chatbots can talk for us.
17 You might not need a Web designer anymore, because today's top website builders are powered with various AI algorithms that work cheaply enough to price human designers out of the market.	You might not need a Web designer, because today's top website builders are powered with various AI algorithms that work with an efficiency surpassing that of human designers.
18 If the equivalent were to happen today, humanity might not fare as well.	The reader is left to wonder whether humanity would fare as well if the equivalent were to happen today.

The two text versions were finalized following a pilot test conducted with 14 advanced readers (English writing instructors or Linguistics graduate students). Pilot study participants were presented 1 of 3 different versions of the text: one justifying technophobia (prototype of Version 1), one downplaying technophobia (prototype of Version 2), and one presenting the issue with as close to complete neutrality as possible (Version 3). The pilot study revealed that the targeted linguistic cues may not be uniformly perceived or interpreted, even by expert readers. In particular, participant responses to Versions 2 and 3 could not be clearly differentiated. It was thus determined that Version 3 (containing a neutral stance) should be eliminated and that greater semantic distance between Versions 1 and 2 should be attained through amplification of content-evaluative language.

Online Reading Response Activity

Participants completed Part 1 of the study independently and remotely through Qualtrics, having accessed the activity through an anonymous link provided by their University Writing Program instructors. The first section welcomed participants, introduced the study, and outlined

the parameters of voluntary participation. The second section asked five demographic questions. The third section randomly presented either Version 1 or Version 2 and then prompted participants to write a personal response paragraph. The final section presented five focus questions pertaining to author's stance, and lastly, prompted participants to leave their contact information if they chose to opt-in to Part 2 of the study. All four sections outlined above may be viewed in their entirety just as they were presented on Qualtrics (see Appendix D)

Introduction

The introduction informed participants that they would be reading a non-fiction text and responding to a series of questions inviting them to practice in close critical reading. Participants were advised of the minimal risk associated with the study, and reminded that participation was completely voluntary, with no negative consequences for choosing not to complete the study. The introduction page also included the advice NOT to complete the study activities on a phone, given that ample screen space would be required.

Demographic Data Collection

Participants were asked to provide the following demographic data: current writing course enrollment, major, native language(s), years of English-medium education, and self-assessment of reading skill (excellent/good/fair).

Presentation of Text and Personal Response Paragraph Prompt

Participants were randomly assigned one of the two text versions described above. The assigned version was provided as a Word document accompanied by instructions to download and save it to the desktop to allow for frequent referencing. Participants were instructed to write a personal response paragraph of approximately four to five sentences regarding the topic presented in the reading. As suggested by Mayweg-Paus and Jucks (2015), the prompt for this

writing consisted of one simple, direct question: “Do you have technophobia?” The instructions further prompted the writer to explain how they either did and/or didn't fear technology, including whatever thoughts and examples came to mind.

It was important that participants completed the personal response paragraph before viewing and responding to the follow-up focus questions (discussed below). The first written task was meant to capture a glimpse of participants’ most immediate reactions, based on their own feelings, thinking processes, and interpretations of the source text, uninfluenced by the ideas that would be highlighted in the follow-up focus questions. Participants were thus advised that personal response paragraph submissions were final. Once having moved on to the focus questions, they would no longer be able to edit their personal response paragraphs.

Focus Questions

The final section of Part 1 consisted of five questions to assess participants’ perception of the author’s stance on technology and technophobia. While focus questions were modelled roughly on Hyland’s (2000) study, some modifications were made. Hyland (2000) posed a combination of true/false and multiple-choice questions, each pinned to a specific sentence in the source text and targeting a particular metadiscoursal element. Question types in the present study included two questions containing both a Likert scale and open-ended written response components plus and three questions eliciting open-ended written responses only. While questions 2-4 targeted specific topics (relevant only to small sections of the text), questions 1 and 5 addressed the entire text holistically. All five questions prompted students to refer back to the text and explain how they had reached their answers. In this manner, the study was designed to yield information on the impact of both: a. narrowly targeted content-evaluative metadiscourse and b. the combined effect of the various stance cues that were distributed throughout the text.

Retrospective Text-Based Interview

Part 2 consisted of a follow-up interview with the researcher via Zoom, in which participants were invited to reflect further on their own relationship to "technophobia" and further explore and explain their perceptions of author stance in the text they had read for Part 1. Participants who chose to opt in to Part 2 (by leaving their contact information at the end of Part 1) were contacted by e-mail within a week to schedule an interview.

While several studies on readers' perceptions of metadiscourse have employed qualitative analysis of participants' written responses, (Dafouz-Milne, 2008; Low, 1996; Mayweg-Paus and Jucks, 2015), only Hyland (2000) asked participants in person to explain their own thinking processes orally. This procedure allowed the researcher to investigate how participants had arrived at their understanding of the text. The retrospective text-based interview structure used by Hyland (2000) was adopted for the present study. As discussed by Hyland (2000), the retrospective interview format is likely to yield more valuable information than a think-aloud protocol likely could, since the task of having to think aloud while performing the reading and writing tasks could overload and/or distract participants.

While the original plan had been to conduct interviews in person immediately after participants had completed the reading and written responses, by necessity during the Covid-19 pandemic, interviews were conducted remotely via Zoom. With participants' oral permission, 27 of the 28 interviews were recorded. The entire interview process lasted between 25 and 70 minutes depending on each participant's interest in. These semi-structured interviews proceeded as follows:

Having established connection via Zoom, the researcher took the first 5 to 10 minutes to establish rapport with the participant and briefly outline the interview procedures. Participants

were then given 10 minutes to review the same text (Version 1 or Version 2) they had read during Part 1, which had been e-mailed to them just before the interview start time. This step was determined to be necessary to ensure that respondents did not simply rely on their memories of the text they had read several days or weeks earlier. Participants were informed that the purpose of the study was not to understand how readers remembered text, but rather to explore how they interpreted the text when encouraged to re-read carefully. During this 10-minute interval, the researcher stepped away from the camera and allowed them time and space to refresh their memories.

Upon returning to the camera, the researcher first checked in to see if the interviewee wanted more time to continue reviewing the text. Once the reader had taken all the time they desired for review, they were instructed to keep the source text ready on their desktop for easy access throughout the process. The researcher then shared her screen, which displayed a document containing the participant's written responses from Part 1, including the personal response paragraph, the 5 focus questions, and their responses to those 5 questions. Having confirmed that the document was visible to the interviewee, the researcher then asked permission to begin recording.

As indicated in the rough script (see Appendix E), the interviews were semi-structured and heavily text-based. The researcher first reminded the interviewee of how Part 1 had been structured, with a personal response paragraph about the issue at hand first, followed by 5 questions focused closely on their interpretation of the reading itself. The researcher then read the interviewee's personal response paragraph back to them exactly as written. After reading the given response, she asked if they had any additional thoughts related to the topic, assuring them that any kind of free association such as personal experiences, movies or book references, or

other thoughts that occurred to them while re-reading the text would be a legitimate answer. Interviewees were also assured that they could simply leave their answer as is if they had nothing to add or could express a view that differed from what they had written in Part 1.

A similar process continued for each of the five focus questions. The researcher first read the question and then the interviewee's response before asking what more the interviewee might like to add or change about what they had written. While Questions 1 and 5 were global in nature, pertaining to overall impressions of the entire reading, Questions 2, 3, and 4 pertained to specific sections. In order to guide interviewees toward detailed and carefully considered responses to the later three questions, the researcher directed interviewees back to the relevant section for each question, encouraging them to take a moment to reread it in light of the question at hand. Participants varied greatly in the time they took to review these sections, some choosing to answer the question almost immediately, and some pausing for several minutes before responding. They were allowed to take as much time as the wanted to reread and to rethink their responses resulting in long pauses during some interviews. Throughout the process, the researcher posed a wide variety of follow-up questions to increase clarity and encourage elaboration.

Participant Demographics

As may be viewed in Table 2, fifty-three students participated in Part 1, the online reading response activity. Twenty-four of these were randomly assigned Version 1, and 29 were assigned Version 2. While all 53 participants completed the personal response paragraph, four (two who had received Version 1, and two who had received Version 2) did not continue on to respond to the focus questions. Thus a total of 49 participants completed the Focus questions.

Table 3.2
Data Collected

Text Version	Part 1, Personal Response Paragraph	Part 1, Focus Questions	Part 2, Follow-up Interview
Version 1	24	22	14
Version 2	29	27	14
Total	**53**	**49**	**28**

As may be observed in Tables 3 and 4, the two groups (those receiving Version 1 and those receiving Version 2) were demographically similar along every dimension surveyed. More than half of participants in each group were enrolled in UWP 1, the most advanced of the three writing course levels. Both groups included participants from a wide variety of majors, with Neurobiology, Physiology and Behavior (NPB) and Psychology topping both lists. Language backgrounds differed slightly between groups, with only three Version 1 participants reporting multiple first languages, while ten Version 2 participants did so. The majority of participants in both groups had completed eight or more years of English-medium education. Self-assessment of reading ability varied slightly between the two groups, with most Version 1 participants choosing "Excellent" and most Version 2 participants choosing "Good."

Table 3.3
Demographics of Participants Who Read Version 1

Class Level	Major	First Language(s)	Years of English Medium Education	Self Assessment of Reading Level
UWP 21 (5) UWP 7M (5) UWP1 (14)	Neurobiology, Physiology and Behavior (4) Psychology (4) Biological Sciences (3) Chicano Studies (2) Computer Engineering (2) Mathematics (2) Animal Biology Applied Mathematics Cognitive Science Environmental Science Environmental Toxicology Genetics and Genomics Managerial Economics Statistics Sustainable Environmental Design Undeclared	Chinese (8) English (7) Spanish (4) English + Chinese English Punjabi English + Spanish English + Telugu Mandarin	0 (5) 3-5 (3) 8+ (16)	Excellent (13) Good (10) Fair (1)

Table 3.4
Demographics of Participants Who Read Version 2

Class Level	Major	First Language(s)	Years of English Medium Education	Self-Assessment of Reading Level
UWP21 (3) UWP7M (8) UWP1 (18)	Neurobiology, Physiology, & Behavior (3) Psychology (3) Anthropology (2) Biological Sciences (2) Aerospace Animal Science Applied Chemistry/Forensic Science Applied Physics Biochemistry and Molecular Biology Chemical Engineering Chemistry Genetics and Genomics History Human Development Managerial Economics Mathematics Mechanical Engineering Nutritional Science Philosophy Political Science Statistics Undeclared	English + Spanish (7) English (6) Chinese (5) Spanish (3) Cantonese English + Tamil English + Vietnamese Mandarin Mandarin + Cantonese Pashto Tamil No Response	0 (5) 1-2 (1) 3-5 (2) 8+ (21)	Excellent (11) Good (16) Fair (2)

Data Analysis

Preparation of Online Reading Response Data

Data were exported from Qualtrics as an excel spreadsheet, which was then separated into 2 sub-sheets, the first containing responses from participants who had received Version 1, and the second containing responses from those who had received Version 2. Each participant was coded by number, 101-124 for Version 1, and 201-229 for Version 2. Division into sub-sheets allowed for in-depth observations of each group's responses without distraction from the other. It was hoped that this concentrated focus in each area independently would facilitate a deeper understanding and more nuanced characterization of trends within each set, which in turn might illuminate any possible differences in responses elicited between the two sets.

The resulting two sets of responses were then subdivided once more; Personal Response Paragraphs were separated from Focus Question responses. This separation mirrored the process by which participants had completed Part 1 of the study, for once having submitted their Personal Response Paragraphs, they no longer had access to those responses after continuing to view the Focus Questions. The separation of sections was thus implemented to facilitate accurate and nuanced analysis of participants' opinions about the issues presented in the text before they had been asked explicitly to direct their attention toward the author's stance. This process served to facilitate careful analysis of the first research question (How might content-evaluative metadiscoursal features influence readers' personal responses to persuasive text?) independently of the second research question (How might content-evaluative metadiscoursal features influence readers' perceptions of author stance in a persuasive text?).

Interview Data

Interviews were recorded into the cloud via Zoom and automatically transcribed by Otter.ai. Each interview was then subsequently replayed in its entirety and each transcription edited as necessary. Edited interview transcriptions were then exported from Zoom as text documents and integrated with written responses from Part 1.

As outlined above, the interview protocol mirrored the structure and sequence of the online reading response activity completed in Part 1. Therefore, participants' interview responses could be readily integrated into the excel spreadsheets containing responses given in Part 1. Interview responses were color-coded to differentiate them from the online reading response activity responses. The interviewer's words were deleted where possible to create a continuous stream of participant commentary, though occasionally, it was necessary to include interviewee wording for context. In these cases, the interviewer's words are clearly labelled and

bracketed to differentiate them from participants' commentary. Once the data from all 28 interviews were integrated with participants' written responses, the four resulting spreadsheets were uploaded into MAXQDA for qualitative analysis.

Coding

The following codes were determined through an inductive and reiterative process. Single responses sometimes contained multiple codes in succession, but no items were double coded.

Table 3.5
Personal Response Paragraph Coding

Prompt	Code	Description	Example
Do you personally suffer from technophobia?	Yes + Reasons	Respondent expresses fearfulness of technology	*Personally, I do have technophobia. I fear that technology will continue to develop to great heights that will result in humans no longer being needed for any sort of workforce. I believe technology may demand more than it gives to us as humans. (205)*
	No + Reasons	Respondent expresses a lack of fearfulness of technology	*I personally don't have technophobia. On the contrary, I feel like technology is amazing. We can do so many amazing things with technology. Technology saves millions of lives, doctors astronauts, etc use technology. Maybe someday we'll be able to have flying cars. (223)*

Table 3.6
Focus Question Coding

Question Number and Prompt	Code	Description	Example
FQ1: Does the author believe that people SHOULD be afraid of technology? FQ5: Overall, how would you describe the author's attitude toward technology and technophobia?	FQ1/FQ5 Justifies Technophobia	Respondent indicates the author seems afraid and/or that the author believes other people should be afraid	*The author emphasizes that people should be afraid of technology since it is taking over the workplaces. Although technology is making everything seem easier, it makes it seem useless towards humans. For example, "Today, they fear that technology is too human." In a way, it makes it seem as if the author wants to emphasize to the audience that the technology can be a bad thing to all of us, making us useless in the jobs people are in. (113)*

FQ1/FQ5	FQ1/FQ5 Pro-Technology	Respondent indicates that the author does not seem afraid, and/or the author does not believe other people should be afraid, and/or points to author's enthusiasm for technological conveniences.	*At the end of the reading, the author mentions, " That, perhaps, is the irony of technophobia today -- that while people may fear the technologies that surround them, they fear the absence of those technologies even more." The author is concluding that despite the fears that people have about technology taking over or eliminating us, people's truest fear is not having technology at all in their lives. Therefore, there is no point of being afraid of technology if people will be afraid if they isn't technology. The author views technophobia as an irony rather than an issue itself which is why he believes people should not be afraid of technology. (210)*
FQ1/FQ5	FQ1/FQ5 Neutral/Unsure	Respondent attributes ambiguity or neutrality to the author's stance.	*The author takes a more neutral stance in this piece. He explains why people might be afraid of technology now, but, is also skeptical as to what might happen if technology ceased to exist today. His last sentence encapsulates what is trying to be conveyed, perfectly - "the irony of technophobia today (is) that while people may fear the technologies that surround them, they fear the absence of those technologies even more."* (214)
FQ2: Does the author think the Romantics had good reason to fear technology?	FQ2 Fearfulness	Respondent indicates the author believes the Romantics had good reason to be afraid, and/or indicates that they themselves are afraid.	*I believe that the author thinks that the Romantics did have a good reason to fear technology. He believed that the Romantics thought that someday, technology will "destroy the true "essence of man"." The Romantics also believed that maybe someday we might be machine-like. "The machines, they thought, were forcing humans to become more machine-like themselves."* (223)
FQ2	FQ2 Lack of Fearfulness	Respondent indicates the author does NOT believe the Romantics had good reason to be afraid, and/or indicates that they themselves are not afraid.	*His undertone still suggests that their fear was outdated. He uses words such as "classic" to describe their fears which implies that he/she thinks these are primitive beliefs. He also summarizes their beliefs using an implausible theory put-forward by an Oxford Professor (Nick Bostrom), which shows that he's not taking their fears seriously nor is he trying to seriously convince us that those fears were rational. (214)*
FQ2	FQ2 Neutral/Unsure	Respondent attributes ambiguity or neutrality to the author's stance regarding the Romantics.	*The author's purpose of those two paragraphs is just to describing Romantics' opinion and consider about the connection between technophobia from different time in history: "-looking at what those poets feared might give us clues about how -- and why -- people fear technology today." (219)*

Chapter 4

Personal Response Paragraphs: Top-Down Processing Cued and Delivered

This chapter addresses the first research question: "How might linguistic cues of author stance influence readers' *personal* responses to persuasive text?" Comprehensive analysis reviewed in this chapter aims to discern any qualitative differences between Personal Response Paragraphs (henceforth PRP) written in response to text Version 1 (henceforth V1) versus those written in response to text Version 2 (henceforth V2). Any differences observed between the two groups may shed light on participants' reading processes; analysis of their responses offered clues about the interplay of bottom-up versus top-down reading strategies along with relevant sociocultural factors that came into play.

As may be recalled from the methodological outline in Chapter 3, V1 presents a tech-critical stance. Numerous textual cues signal the author's own concern about potential negative impacts of technology on individuals and societies. V2, in contrast, presents a more tech-friendly stance. Stance cues have been altered or added in V2 to play up the potential benefits of technology and/or downplay the potential dangers. The following analysis explores the extent to which the tech-critical stance markers of V1 and/or the tech-friendly stance markers of V2 may have impacted participants' PRP responses. Since participants reported on their *own* feelings and experiences in the PRP, patterns of response to V1 and V2 might be expected to look quite similar. Nonetheless, the differing stance cues in each version could evoke contrasting frames or activate different schemas in readers' minds, which could thus transfer into their written and/or interview responses.

Overview of PRP Task and its Purpose

Participants were presented with the following prompt:

In the text that you have just read, the author describes "technophobia"-- a fear of technology.

Do you personally have technophobia? Please write a short paragraph (about 4-5 sentences) explaining how you do and/or don't fear technology. In this informal response, you may include whatever thoughts and examples come to mind. PLEASE NOTE THAT YOU WILL NOT BE ABLE TO RETURN TO THIS QUESTION ONCE YOU HAVE SUBMITTED YOUR RESPONSE.

As noted in the prompt above, participants could not return to the PRP once having submitted it. This design was implemented to maintain a clear division between the PRP and the explicitly stance-oriented questions that followed, thus preserving the integrity of the PRP by preventing participants from being primed to notice specific textual cues of author stance regarding technophobia. The personal response paragraphs thus represent participants' own thoughts and attitudes when presented only with the reading and a simple invitation to reflect on the topic's relevance in their own lives. Participants still had access to the text while responding to this question but were not explicitly instructed to refer back to it in the PRP prompt. They were thus free to interact with the text in any way they chose, either by memory or direct consultation. This prompt invited a top-down processing of text. As discussed in Chapter 2, top-down reading processing entails readers' bringing of their own previous knowledge, experiences, and associations to their understanding of a text.

Overview of Methodology

As outlined in Chapter 3, PRP response data were initially coded broadly as either "Yes + Reasons" and "No + Reasons," reflecting the simple yes/no structure of the prompt. The present chapter specifies and analyzes the reasons given by respondents to fear technology (subcategorized under "Yes"), and then specifies and analyzes the reasons given NOT to fear technology (subcategorized under "No"). Because responses were similar for readers of the two text versions, the data for both versions are first presented side by side in chart form for

preliminary comparison of the frequencies with which each reason was mentioned by readers of V1 and V2.

Beyond comparison of frequency, this chapters aims to deepen understanding of stance cue perception by analyzing the data through various lenses. Close reading and comparison of the two data sets took into consideration each of the following stance-related elements.

1. Participants' own stance markers: the degree of certainty versus ambivalence expressed in their responses.
2. Participants' own reflective commentary of how the text has impacted them, including participants' direct references to the text itself.
3. Contrasts between initial written responses to the same participants' later responses elicited by text-based interviews.
4. Patterns of response based on participant demographics: (native language(s), number of years in English-Medium education, course level, major, self-evaluation of reading proficiency), and/or participants' own mention of their own identity and/or course of study in written and/or interview responses.

Analysis of PRPs

The following analysis examines five reasons mentioned by participants for fearing technology and five reasons mentioned for NOT fearing technology. As outlined in Table 4.1, and illustrated in the sections that follow, abundant similarities and some differences were found between PRPs written in response to V1 versus V2. Though minimal, the differences are examined and discussed in light of their potential significance. Also observed and discussed are differences that corresponded to participants' academic majors, which were found to be equally (or perhaps *more*) significant in their impact on PRPs.

Reasons for Fearing Technology

Major reasons mentioned by respondents for fearing technology were Job Loss, Loss of Essential "Human-ness," Loss of Privacy, Addiction/Overdependence, and Human Capacity for Meanness. Mention of these five reasons was distributed similarly for V1 and V2, with the exception of Loss of Privacy, which was cited more frequently by readers of V2. Responses

within Job Loss and Loss of Privacy varied by participant demographics, indicating a difference between STEM vs Non-STEM majors.

Table 4.1
Reasons to Fear Technology

Reason and Description	Number of Participants mentioning this fear		Examples
	Version 1 N=24	Version 2 N=29	
Job Loss Mention of workers losing access to wages and/or meaningful work due to technological advances.	**7**	**7**	*Jobs are being taken over by bots and machines…that is scary since it is wiping out people's incomes" (121)*
Loss of Essential "Human-ness" Mention of people losing some core part of the human essence, and/or losing some basic human skills.	**6**	**6**	*I fear that technology will reduce the everyday humanity of our lives. (218)*
Loss of Privacy Mention of people losing privacy due to their use of advanced technologies.	**3**	**8**	*I am slightly wary of the camera on my phone being used to spy on us citizens (112)*
Addiction/Overdependence Mention of people becoming addicted, distracted from more meaningful pursuits, or otherwise unhealthily over-reliant on current technologies.	**3**	5	*The fear that technology can affect my life in a negative manner as well as the absence of technology both fill me with dread as I am heavily reliant on technology (105)*
Human Capacity for Meanness Mention of fearing the human beings who create and control the technology, as differentiated from the technology itself.	**3**	**4**	*I may have technophobia and it stems from people taking advantage of the technology to do bad things…sometimes I wish I never knew what cyberbullying was, or what blackmailing was. (206)*

Job Loss.

Overall, Job Loss was mentioned by more respondents (14) than any other single reason for fearing technology. Few of these mentions, however, revealed a strong personal fear for the participant's own future employment. On the contrary, most respondents who mentioned job loss addressed the issue in a more distanced way, recognizing only its global impact, and/or

impact on others. Some even explicitly excluded themselves from those likely to be impacted. Commentary on job loss was comparable for readers of V1 and V2, and among participants from all demographic backgrounds, with the exception of college major. Perhaps unsurprisingly, most participants expressing personal concern about job loss were non-STEM majors.

Only three respondents expressed personal vulnerability to job loss in relation to advancing technology. This fear was expressed most poignantly by an international student from China majoring in Statistics who had personally struggled to select a course of study that might shield them from future job loss. Similar fears were mentioned by two US resident participants majoring in, respectively, in Psychology and Human Development:

Actually, when I think of which major I should choose, I am also considering whether it is possible that future career related to a major I am willing to choose can be totally replaced by AI robots. I even had considered nursing though I did not think I was good at caring others because I believe nursing is not negatively impacted by future technology. (Statistics, 109)

I want to choose a job that will be around a lifetime. I don't want to go into a profession and end up not having a job later because of technology (213, Psychology)

As an undergraduate about to enter the real world, I fear that my skills and experiences might not be enough and be replaced by technology which could force me to work a low-paying job. (221, Human Development)

In contrast to those reported above, responses that mentioned job loss more typically expressed only a broad awareness, and perhaps concern regarding the issue, without mention of personal vulnerability. Many respondents used third person references while expressing concern for others who may experience technologically-driven job loss.

I fear the statement about many people losing their jobs because the outcome of it would be a disaster. Without jobs for those who need it, more people will be in poverty and unhealthy (111, Undeclared)

It may be noted that most respondents cited thus far were pursuing studies in NON-STEM disciplines. Since a majority of students in the overall sample ARE pursuing STEM

majors, this data point may be significant. In several other responses, ambivalence could be observed. These respondents recognized how disruptive technology can be to the employment of certain sectors of society. Yet, their responses still indicate more enthusiasm than fear regarding technological developments. It may be noted that the vast majority ambivalent responses regarding technology and job loss were produced by STEM majors. The following response from an Environmental Science major illustrates the ambivalence.

I do agree that technology is taking over a lot of jobs, particularly retail and manufacturing-related jobs. As I'm not in those work field, I don't think I can truly understand the feelings of the people affected. I personally don't fear technology but I think it is pushing us towards a higher standard, where people now must have higher qualifications to be beneficial in this society. This has its pros and cons. Pros being more people will be motivated to get a higher education. However, people will lower-income might not be able to afford this education. (106, Environmental Science and Management)

Some respondents appear to have been prompted toward greater awareness of potential job loss simply thorough exposure to a text that mentioned this topic (either V1 or V2, with no observable differentiation between the two). Several respondents reflected directly on the text's impact in raising this awareness. Some made no mention of job loss in their original written responses, but added this concern during the interview upon re-reading the text and being asked if they wanted to add anything.

Before reading the text on technophobia, I did not have any previous fear of technology. However, now the thought of computers and robots replacing people in the future actually worries me. I'm not fond of the idea of technology putting people out of jobs and acting more human-like than humans themselves. (226, Managerial Economics)

Yeah, so like when I was like reading again, it reminded me of something like my dad says. Yeah, he refuses to use self check out machines because he believes that eventually, people won't be needed, you know, to like work…that's like what came to my mind was like, oh yeah, my dad and the new self checkout machines. (211, Biochemistry)

As the data above reveals, readers of both V1 and V2 were likely to mention job loss as a reason to fear technology. While the data suggest a stronger level of *personal* concern among

Non-STEM majors as compared to STEM majors, it also suggests that exposure to *either* V1 or V2 raised participant awareness of job loss due to technological advances.

Loss of Essential "Human-ness."

Commentary on this topic was comparable among participants from all demographic backgrounds. Six readers of V1 and six readers of V2 mentioned people potentially losing some core part of their human essence, and/or losing some basic human skills. However, when this category is subdivided, there is evidence of differentiation between the readers of the two versions. Whereas more readers of V1 mentioned "loss of humanity" in a vague and generalized way, or referred to a loss of foundational skills, readers of V2 expressed concern more specifically for the consequences of artificial intelligence. It is instructive to note here the precise wording of V1 and V2 in relation to this topic. As may be observed in Table 4.2, the Romantics' concerns were presented in V1 as "sophisticated critique" and "valuable insight," as the technologies "unleashed" on them "might destroy the 'true essence' of man." In contrast, V2 mentioned that the Romantics' "major criticism" of technology "might give us clues" about technophobia, as they thought the "productivity-enhancing" technologies "introduced" to the world might "*somehow* destroy the 'true essence' of man."

Table 4.2
Alternate Text Versions Related to Loss of Essential Human-ness

Version 1	**Version 2**
Perhaps the first sophisticated critique of technology's impact on the world was articulated by the Romantic poets in the late1800s.	Perhaps the first major criticism of technology's impact on the world was launched by the Romantic poets in the late 1800s.
That might seem like ancient history, but looking at what those poets feared can give us valuable insight into how -- and why -- people fear technology today.	That's practically ancient history, but looking at what those poets feared might give us clues about how -- and why -- people fear technology today.
The Romantics thought, specifically, that the____. technologies the Industrial Revolution unleashed upon the world might _____destroy the "true essence" of man.	The Romantics thought, specifically, that the productivity-enhancing technologies the Industrial Revolution introduced to the world might somehow destroy the "true essence" of man.

In the following excerpts, readers of V1 echoed the source text in expressing a general concern about losing some core part of our humanity. While the first respondent below only vaguely referenced this fear, the second borrowed exact wording from the text, citing how technology threatens our "true instincts," and the third conceded a small amount of fear related to the "loss of humanity."

It is scary to think about the loss of humanity and having technology take over. (103*,* Biological Sciences)

One thing I fear about technology is how it is distancing us from our true instincts (116, Cognitive Science/Computer Science)

"when I first read the title and introduction of the text I thought to myself, I do not have a fear of technology because I have been born in an era where I have always had it…I feel I can say I do not have technophobia but there is still some part of me that... It is scary to think about the loss of humanity and having technology take over. (103, Biological Sciences)

A related concern, also expressed more often by readers of V1, was that technological advances would cause humans to lose touch with foundational skills or valuable traditional activities. Of note is that the first and third respondents below expressed detailed and impassioned concerns regarding Chinese character writing and abstract poetry in their written responses and extensive interviews comments.

I used Pinyin more than write the characters down, …my handwriting became strange. I seldom used notebooks, pencils. I started to forget how to write some frequently used characters which shocked me...Chinese characters have a long history, and I realized that I can't rely on the typing, I think almost every Chinese international student…we use pinyin or we just type not…write it down….It's quite different than our handwriting…And I can learn the calligraphy…I learned that before and I did some competitions for that. This is why I started to write everything down now. (102, Applied Mathematics)

I'm afraid of losing basic skills as a result of using technology too much, such as the ability to spell, count, memorize phone numbers… (112, Biological Sciences)

What makes me have technophobia originated in a kind of literature called "zombie literature" which is written by AI and has come into our vision in China. This kind of literature is made up of…a wonderful poem style of surrealism and absurdness. Although sometimes they have

problems of logics and literacy, it still means a lot. I am afraid it will do harm to those poets with similar style and I regard this tech as unfair (108, Managerial Economics/Philosophy).

Finally, the three excerpts below illustrate how some respondents, mostly readers of V2, expressed concern that humanity would be endangered by the increasing "human-ness" of artificial intelligence. They imagine a dystopic future in which robots threaten, overrule, and control us.

Technology evolves much more quickly than human evolution…I can imagine that the near perfect technology products like robots will consider us as inferior products if they have self-awareness. (222, Mathematics)

Technology is like a baby without a sense of self. We are awakening his sense of self. Maybe technology has a sense of self long ago, just to fool us into thinking we're controlling it. (228, Anthropology)

*…on the question of AI and if it were to become conscious, the potential existential dangers it may pose to humanity (*212, Philosophy*)*

While the present sample is much too small to verify quantitatively impact of the differing text versions on responses, the modest data at hand does suggest a possible link between V1 and the first 2 subcategories (vague/generalized mention of "loss of humanity" and loss of essential and/or culturally relevant skills), and a link between V2 and the final subcategory (Fear of AI capacity vis-à-vis humans).

Loss of Privacy.

While Loss of Privacy was mentioned by only three readers of V1, eight readers of V2 mentioned this reason to fear technology. Commentary on Loss of Privacy was comparable for readers participants from all demographic backgrounds, with the exception of college major. In a reversal of the results seen previously for mentions of Job Loss, the majority of respondents expressing personal concern about privacy were STEM majors. While many respondents expressed pressing personal fear regarding loss of privacy, others expressed mild fear, or merely

recognized the legitimacy of this fear among others. It is instructive to note here the precise wording of V1 and V2 in relation to Loss of Privacy. As may be observed in Table 4.3, V1 presents a "fear that tech companies exploit us, and that the government *is* watching us," while V2 presents the hedged claims that they "*could* exploit us" or "*might* be watching us." While V1 states that we are "totally dependent on" our devices, V2 states that we "enjoy using" them and "benefit" from them.

Table 4.3
Alternate Text Versions Related to Loss of Privacy

Take, for instance, the very modern fear that tech companies exploit us, and that the government is watching us.	Take, for instance, the very modern fear that tech companies could exploit us, or that the government might be watching us
While a majority of Americans oppose this type of surveillance, in reality most are totally dependent on smartphones created by tech companies and mobile networks overseen by governments	Of course a majority of Americans oppose this type of surveillance, and most enjoy using smartphones created by tech companies and mobile networks overseen by governments.
In fact, most of us rush toward the convenience these devices offer, and increasingly seek to hand over our everyday tasks to technology at the workplace.	In fact, most of us rush toward the convenience these devices offer, and increasingly benefit from handing over our everyday tasks to technology at the workplace.

Numerous respondents, mostly readers of V2 expressed significant personal fear of privacy loss in connection to technology use, as exemplified by the following excerpts:

I fear technology for all the data that it captures and stores. I value my privacy a lot and have taken measures to prevent myself from being a victim of data breaches. I don't believe it's possible to be completely anonymous on the internet. (204, Biological Sciences)

I fear the government is watching me, with no consent. This means there is not real freedom because I am being constantly monitored…I always think about how the government, or whoever can hack my electronics, can watch me through my camera in my vulnerable moments which is extremely scary. Technology can be hacked into by anyone who has the skill to do so…I can be stalked without my knowledge. (217, Nutritional Science)

A few readers mentioned loss of privacy but downplayed these fears. While the first respondent below admits to being just "slightly wary," the second qualifies their fear as being "unrealistic."

I am slightly wary of the camera on my phone being used to spy on us citizens. My fear is more of a note in my head, since I do nothing to cover up my phone or laptop camera. (112, Biological Sciences)

I have an unrealistic fear of being watched through my camera or listened to through my microphone. (229, Genetics and Genomics)

Loss of Privacy was mentioned by only three readers of V1, and one Non-STEM major, but it was mentioned by *eight* readers of V2 and *nine* STEM majors. While the present sample is much too small to verify quantitatively impact of the differing text versions and/or academic major on responses, the modest data at hand suggest a possible influence of text version and/or student course of study.

Addiction/Overdependence/ Unhealthy Distraction.

Three readers of V1 and five readers of V2 mentioned people becoming addicted, distracted from more meaningful pursuits, or otherwise unhealthily over-reliant on current technologies. Respondents expressed a sense of unease with their own and/or rothers' over-reliance on technology, expressing sentiments such as "dread," "fear of ourselves," and concern with how technology can "consume" them. Commentary on Addiction, Overdependence and Unhealthy Distraction was comparable for readers of both text versions, and among participants from all demographic backgrounds. While some respondents mentioned excessive distraction, others echoed the irony discussed in the text of being caught in the middle—fearing both technology itself, and the loss of that same technology.

I can consume myself with technology which is not good for me. For instance, I spent 5 hours on TikTok one day when I was supposed to be studying. (202, Neurobiology, Physiology, and Behavior)

The fear that technology can affect my life in a negative manner as well as the absence of technology both fill me with dread as I am heavily reliant on technology. …these fears are not something I think about on a constant daily basis…I am often busy with everyday concerns that I do not really take into count this fear until it is mentioned to me or I see it on a paper or article." (105, Chicano Studies)

Two respondents expressed concern based on background knowledge of the mechanisms of the attention economy, and the psychological effects of social media that is engineered to hold our attention at all costs. Coincidentally (or possibly not?), the respondents expressing this concern were both engineering majors.

They develop strategies for us to become addicted to their products in an endless but void loop that delivers momentaneous pleasure. (203, Mechanical Engineering)

Especially my generation, the younger generation, the dependency on social media. I feel like it can be very toxic…I feel like…it controls our mind and prevents us from doing other things, focusing on other things…99% of us …don't use social media in a productive way… It's pretty detrimental. (214, Chemical Engineering)

As the data above indicate, readers of both V1 and V2 and from all academic majors mentioned concerns with similar frequency. Two engineering majors offered responses that suggested some awareness of users' vulnerability in relation to digital platform design.

Human Capacity for Meanness.

Three readers of text V1 and four readers of text V2 mentioned fear of the *human beings* who create and control the technology, as differentiated from the technology itself. Commentary regarding Human Capacity for Meanness was comparable for readers of V1 and V2, and among participants from all demographic backgrounds. As observed in the excerpts below, some respondents were skeptical of the human capacity to manage technology wisely. One expressed distrust of "investors" overzealous to "protect their creations," while another imagined the terrifying weaponry that could be created with emerging technologies by naturally selfish humans.

Whether it be for power or greed, the ones who make this technology are what concern me the most because I don't' know what the future will be if technology endangers lives. It is also the unknown of these future technologies that concerns me because I don't know how far these inventors will go to perfect their creations. It is the fear that one day I will wake up and find the world ending because someone of power decided to destroy the world… (209, Animal Science).

It's the misuse that I fear. What is existentially dangerous to us is nuclear bombs. We're basically like monkeys with the power of the sun, extremely territorial and all of that. We now possess the weapons capable of destroying the planet, so knowing our nature, that's pretty dangerous, our nature is selfish, I think. (212, Philosophy)

The following two respondents reference the socio-cultural damage that can be caused by misuse of technology, naming human trafficking, cyber-bullying, and blackmailing.

Using technology has made it easier to locate and sell trafficking victims and ruin someone else's life over a different opinion or misunderstanding. It's not the technology that necessarily scares me…It's just what people can do with the technology that scares me. (101, Animal Biology)

I may have technophobia and it stems from people taking advantage of the technology to do bad things…sometimes I wish I never knew what cyberbullying was, or what blackmailing was. The abundant amount of things I've seen…does make me fear how much worse it can get 20 years from now. …technology gives people this anonymous disguise, and therefore, bad intentions/actions are easier to do without punishment. (206, Applied Chemistry and Forensic Science).

As indicated in the data presented above, readers of both V1 and V2 and from various academic majors expressed similar concern about the Human Capacity for Meanness in relation to emerging technologies.

Reasons NOT to Fear Technology

Major reasons mentioned by respondents for NOT fearing technology were Appreciation of Resources, Enjoyment, Confidence in Human Capacity, Exclusion of Self from Vulnerable Class, and Optimism given Inevitability. Mention of these five reasons was distributed similarly for V1 and V2, with the exception of Appreciation of Resources, which was cited more frequently by readers of V2. No differences were observed in relation to respondent demographics, including college major.

Chart 4.4 Reasons NOT to Fear Technology

Reason	Number of participants mentioning this fear		Examples
	Version 1 N=24	Version 2 N=29	

Appreciation of Resources Mention of people benefitting from the practical advantages provided by current technological advances.	**8**	**10**	*Technology has lightened the roles of humans such as self check out machines that do the hard work for us. Technology exists only to make our life easier and is not something to be feared. (211)*
Enjoyment Mention of people enjoying advances in technology or the activities facilitated by technology.	**5**	**5**	*I don't think I have technophobia because I really enjoy how technology is making my life more convenient and fun. (227)*
Confidence in Human Capacity Mention of human ability to endure and cope positively with changes brought about by technology, and/or act wisely in relation to technology.	**4**	**3**	*I will choose to avoid it if I am not fully aware of its uses and drawbacks…I simply do not stray into the areas of the unknown if there is a potential hazard. (104)*
Optimism given Inevitability Mention of respondent's decision to be optimistic given the inevitability of technological advancement and/or admission that one rarely considers negative outcomes in relation to new technologies.	**4**	**3**	*There's no point in fearing the inevitable (104)* *I embrace it as technology will only keep growing so trying to resist would be futile. (212)*
Exclusion of Self from Vulnerable Class Mention of non-belonging to categories of people most likely to experience negative impact from technological advancement.	**3**	**2**	*I'm not like scared of it at all because it doesn't affect like, my job is not one of the people whose job is taken away. (207)*

Appreciation of Resources.

Appreciation of Resources was the most common reason mentioned for not fearing technology. Eight readers of V1 and 10 readers of V2 mentioned how people benefit from the practical advantages provided by current technological advances. Participants expressed their belief that these benefits outweighed the risks and thus mitigated their fears. While this topic was mentioned with similar frequency by readers of V1 and V2, readers of V2 expressed appreciation for a wider variety of technologies. Commentary on Appreciation of Resources was similar among participants from all demographic backgrounds including college major. It is instructive to note here the precise wording of V1 and V2 in relation to Appreciation of Resources. As may

be observed in Table 4.5, V1 includes no direct mention of our benefiting from technologies, but instead focuses on how workers may be "price[d]…out of the market." By contrast, V2 refers to the same technologies enthusiastically by emphasizing potential "benefit" and "efficiency."

Table 4.5 Alternate Text Versions Regarding Appreciation of Resources

Version 1	Version 2
In fact, most of us rush toward the convenience these devices offer, and increasingly seek to hand over our everyday tasks to technology at the workplace.	In fact, most of us rush toward the convenience these devices offer, and increasingly benefit from handing over our everyday tasks to technology at the workplace.
When it comes to modern customer service, chatbots do the talking for us.	When it comes to modern customer service, chatbots can talk for us.
You might not need a Web designer anymore, because today's top website builders are powered with various AI algorithms that work cheaply enough to price human designers out of the market.	You might not need a Web designer, because today's top website builders are powered with various AI algorithms that work with an efficiency surpassing that of human designers.
If the equivalent were to happen today, humanity might not fare as well.	The reader is left to wonder whether humanity would fare as well if the equivalent were to happen today.

The general sentiment of this category is summed up by a psychology major:

No, I don't suffer from technophobia…because I believe that technology is very advantageous to us and the further we progress the better society will be. (124, Psychology)

The most common subcategory under Appreciation of Resources was the usefulness of technology for studying, obtaining information, and/or staying connected. This advantageous function was mentioned by

Personally, I do not have technophobia because having technology has been such a good thing to all of us. Technology has helped us gather information for research, … It has made things much easier for us. For example, I can look up the definition of a word… Taking classes online has become the new normal, It might not be the same as in person, but having those office hours on Zoom has really helped. (113, Mathematics)

I think that technology is so important to keep us connected and for me to be able to do my schoolwork. I'm taking a few summer classes and without tech I don't know what would have happened to school –like it would have just stopped. (202, Neurobiology, Physiology, and Behavior)

On the positive side, technology has helped us tackle emergency situations quickly. In addition it has also made the world a small place as we are connected with people throughout the world within a click. (118, Computer Science and Engineering)

Two participants mentioned that technology would have the positive impact of pushing people to become more highly educated, as low-tech jobs get replaced by high-tech jobs. The second participant below explicitly denied that technology could "snatch away people's work."

I personally don't fear technology. I think it's pushing us towards a higher standard, where people now must have higher qualifications to be beneficial in this society… more people will be motivated to get a higher education. (106, Environmental Science and Management)

I think technology only benefits humans. Artificial intelligence has great advantages in some jobs like high risk occupations or manual labor. AI technology doesn't snatch away people's work, but replaces some low-tech jobs to high-tech jobs. (201, Undeclared)

Eight additional participants (seven of whom were readers of V2) mentioned appreciation for a wide range of functions (potentially) provided by technology, including algorithmic "targeted aid," healthcare applications, renewable energy, aerospace, and refrigeration.

I believe the way machines hear what we are saying and give us targeted aid is actually quite helpful (207, Aerospace)

On one side, we have technological advancements in fields like healthcare, renewable energy, et, which are all beneficial to humanity. (214, Chemical Engineering)

Technology saves millions of lives—doctors, astronauts, etc, use technology. Maybe some day we'll be able to have flying cars. (223, Psychology)

Technology is the reason I am able to keep my food fresh, so that I am able to eat. Technology is the reason I am able to complete this survey right now. Technology is the reason many people are alive right now. Hospitals wouldn't be able to perform as efficiently and effectively as they do without the use of modern technology. (225, Neurobiology, Physiology, and Behavior)

Although the present sample is much too small to verify impact quantitatively, it would appear based on the results above that the tech-enthusiastic stance presented in V2 may have impacted on readers. They mentioned a wider range of useful functions that technology does or could fulfill, expressing their appreciation for these technologically-facilitated advantages.

Enjoyment.

Five readers of V1 and five readers of V2 mentioned enjoying advances in technology or the activities facilitated by new technologies. Commentary on Enjoyment of technology was comparable for readers of text V1 and text V2, and among participants from all demographic backgrounds. Numerous respondents expressed a general sense of enthusiasm and excitement around the emergence of new technologies.

I think I value the temporary happiness tech gives me much more than the ways it could negatively affect me. (110, Sustainable Environmental Design)

I do not fear technology because I consider myself someone who loves technology. I love that the world is evolving technologically every year, I love the use of technology in our daily basis…I do not fear technology, I admire it. (215, Genetics and Genomics)

I don't think I have technophobia because I really enjoy how technology is making my life more convenient and fun. (227, Statistics)

Two readers of V1 reflected on how their personal situations impacted their ability to enjoy technological advances. While the first respondent below connects their feelings about technology to their young age, the second mentions their enjoyment of technology in relation to their Computer Science and Engineering major.

I do not fear technology because I have been born in an era where I have always had it. Technology has changed and developed so much as I have grown so it is so common for me to be around it and enjoy new developments…There's like different parts…there's the parts that I enjoy…the computer aspects are like the phone and internet things. (103, Biological Sciences)

As someone who is pursuing a computer science major, I think it's actually cool that technologies are getting smarter and smarter. (118, Computer Science and Engineering)

As the data above illustrates, readers of both V1 and V2, and across academic fields mentioned their Enjoyment of technological advances with similar frequency. While no patterns were observed according to demographic data collected for all participants, two respondents explicitly reflected on how their personal situations impacted their viewpoints.

Confidence in Human Capacity.

Four readers of V1 and three readers of V2 mentioned confidence in human ability to endure and cope positively with changes brought about by technology, and/or act wisely in relation to technology. Mention of Confidence in Human Capacity was comparable for readers of V1 and V2, and among participants from all demographic backgrounds.

Two respondents noted their own personal capacity to manage technology effectively

I do not fear technology because I consider myself someone who loves technology, I love that the world is evolving technologically every year, I love the use of technology in our daily basis. I feel very comfortable with technology around me all the time and I am very good and handling technology, I do not fear technology, I admire it.
(215, Genetics and Genomics)

I will choose to avoid it if I am not fully aware of its uses and drawbacks but I am not scared… I simply do not stray into the areas of the unknown if there is a potential hazard. (104, Biological Sciences)

Four respondents discussed our collective capacity as human beings to manage technology wisely. As may be observed in the excerpts below, some respondents situated our present moment within a long-term historical trajectory and expressed hope in our collective capacity to enact wise policies based on our past successes.

Perhaps it is intimidating to consider the questions or topics discussed in the passage, but I think humanity could still thrive. If our ancestors were able to begin their journey will little knowledge about the world and themselves, I believe we can as well. Since we have recorded data and knowledge in books, recordings, and printed photographs, we have the potential to recreate a world where we do not depend so much on technology. (208, Neurobiology, Physiology, and Behavior*)*

I believe that with regulations, professionals, and education we will be able to truly understand and explore what technology can do. Even though technology can be used for evil and may at some point become self-aware, we should be able to control and predict if the right people are at the forefront… I do believe that with deeper societal and structural reframing we should be able to create a safety net for those who will be affected…I do believe we are capable of ensuring our most vulnerable are safe and protected in case of an economic hardship that technological advancements may bring. (115, Chicano Studies)

As may be observed in the data presented above, readers of both V1 and V2 and from a variety of academic majors mentioned with similar frequency expressed Confidence in Human Capacity, either on a personal or societal level, as a reason not to fear technology.

Optimism given Inevitability.

Four readers of V1 and three readers of V2 mentioned a decision to be optimistic given the inevitability of technological advancement and/or admission that one rarely considers negative outcomes in relation to new technologies. Commentary on was comparable for readers of text V1 and text V2, and among participants from all demographic backgrounds.

I do not have technophobia. Although, I do not fully understand some technology I would not say I am afraid of it. There's no point in fearing the inevitable. (104, Biological Sciences)

I don't fear technology itself, I embrace it as technology will only keep growing so trying to resist would be futile. It all boils down to being responsible and careful with technology Yeah, so Technology and growing is inevitable and it's the best thing to embrace it, for sure. (212, Philosophy)

I think on the bright side of it, like right now, we can't really do much in person because of the whole stuff that's going on [Covid]. So, looking on the bright side, it does help us a lot. (113, Mathematics)

As shown by the data above, readers of both V1 and V2, and from a variety of academic majors, mentioned Optimism given Inevitability of technological advances with similar frequency and conviction.

Exclusion of Self from Vulnerable Class.

Three readers of V1 and two readers of V2 mentioned their own non-belonging to categories of people most likely to experience negative impact from technological advancement. Commentary on one's exclusion from a vulnerable class was comparable for readers of text V1 and text V2, and among participants from all demographic backgrounds. Reasons given for exclusion from vulnerability included age, law-abiding behavior, and professional ambitions.

Two respondents mentioned the advantage of their particular age in relation to the timing of technological advances.

I do see other people's views in which they believe if we stray too far that AI will become too powerful. However, I believe this is out of my lifetime, so I don't fear it. (124, Psychology)

As a younger person, I've been like growing up with technology and so I've been like really used to it…maybe in the older ages…are not used to technologies like robots or cell phones with them…In the past, people used to communicate with each other like physically and right now we can just use cell phones and we don't have to physically communicate with people and I think there's a fear in that because people can't tell… others body language and stuff. (106, Environmental Science and Management)

One respondent mentioned that, although surveillance could happen, they were not personally concerned because they would always be law-abiding (and presumably, no law abiding person would ever have anything to fear).

Some people might be afraid that the government can see what we did online, and that is totally true and it is one of the cons for technology, but to me, I think it is not really important because I will never do anything illegal online. (227, Statistics)

Two respondents mentioned that, although others may lose their jobs due to technological advances, they were not personally vulnerable to this fate.

personally I don't work, but I know fellow peers that work and stuff … I kind of see why they would have a fear for technology. (113, Mathematics)

In general though I actually enjoy technology and I'm not scared of it at all because it doesn't affect like, my job is not one of the people whose job is taken away. (207, Aerospace)

As indicated by the data above, readers of both V1 and V2, and from a variety of academic majors excluded themselves groups of people who might be vulnerable in regards to technological innovation.

Discussion and Conclusion

It was hypothesized that differing textual cues of V1 and V2 might result in differing personal responses, and there was some evidence (though minimal) that this may have been the

case. As may be observed in Table 4.2, three of the five reasons for fearing technology, and four of the five reasons for NOT fearing technology were mentioned by readers of both V1 and V2 with similar frequency and no discernable qualitative differences. However, there did appear to be some differences between responses to V1 versus V2 in relation to two reasons for fearing technology—Loss of Human-ness and Loss of Privacy—and one reason for NOT fearing technology—Appreciation of Resources. This prompt invited a top-down processing of text. As discussed in Chapter 2, top- down reading processing entails readers' bringing of their own previous knowledge and experiences to their understanding of a text. Given that explicit invitation to reflect on one's own feelings, experiences and circumstances, some may be surprised to see ANY evidence of textual influence on PRPs. Yet that evidence, though minimal, is present.

Table 4.6
Patterns Observed in PRPs Based on Version and Demographics

	Reasons to Fear Technology					Reasons NOT to Fear Technology				
Patterns Observed in Relation to:	Job Loss	Loss of Essential Human-ness	Loss of Privacy	Addiction, Over-dependence, Unhealthy Distraction	Human Capacity for Meanness	Appreciation of Resources	Enjoyment	Confidence in Human Capcity	Optimism given Inevitability	Exclusion of Self from Vulnerable Class
V1 vs V2	none	**V1:** general concern and basic skills. **V2:** AI focus	**V1:** fewer mentions **V2** more mentions	none	none	**V1:** general and communications focused. **V2:** diverse, expansive	none	none	none	none
Participant Demographics	**STEM:** Less personal concern **Non-STEM:** More personal concern	none	**STEM:** More mentions Non-STEM Fewer mentions	none	none	none	none	none	none	none

The author's stance in V1 stressed the legitimacy of technophobia, the real threats felt by past generations in the face of industrialization, and the risks associated with our increasing reliance on new inventions. These stance elements may have had some impact on V1 readers'

text processing and PRPs, as suggested by their increased mention of concerns regarding "loss of humanity" both generally and in terms of losing basic skills such as handwriting. Some readers of V1 may have been compelled, given the overall pessimism and concern expressed in the text, to internalize and echo the sense of threat to "the 'true essence' of man." V1 seemed to have opened space for some readers to contemplate impactful losses of a cultural and artistic nature that might be incurred due to technological advancements, as illustrated by the impassioned stories of Chinese character writing and absurdist poetry.

Similarly, it appears that the V2 stance markings indicating enthusiasm for technological innovation may have prompted readers of V2 to express appreciation for a more expansive range of technological innovations as compared to readers of V1. For some readers, V2 appears to have been an invitation to celebrate the numerous uses of technology, an unsurprising result given that technologies are introduced in V2 as "productivity-enhancing" and it is noted that we "increasingly *benefit* from handing over our everyday tasks to technology at the workplace."

More difficult to interpret would be the observation that readers of V2 appeared to focus MORE on the dangers of AI as causing a "Loss of Human-ness" and express MORE concern about loss of privacy compared to V1 readers. Why would this be when V2 was crafted to downplay fear of technology? It could be simply coincidence, given the small sample size. An alternate hypothesis might be that the V1/ V2 stance cue differences were more impactful in the earlier portion of the text, where the historical relationship between humanity and technology was discussed, than the cue differences in the latter portion of the text, where privacy and AI were discussed. This could help explain why respondents to V1 tended to mention fears that mirrored those discussed early in the source text while readers V2 ignored these fears, opting instead to mention the fears discussed in the latter half instead.

Also influencing participants' responses was respondents' own backgrounds, particularly their academic majors. This was observed in the apparent correlations between participants' majors (as recorded in the demographic data) and their mentions of Job Loss and Loss of Privacy. Notably, none of the other recorded demographic data points (course level, first language, years of education in English, and self-evaluation of reading proficiency) showed any relevance to the content of PRPs. It is not surprising that STEM majors would be less likely to express personal concern about Job Loss, and perhaps also not surprising that STEM majors might express more concern about Loss of Privacy.

In addition to the patterns that could be observed by matching PRPs to demographic data collected from all participants, some PRPs included explicit mention of participants' own status in (in terms of personality, majors, career plans) That is to say, they consciously linked their responses to who THEY were, rather than linking their responses to the text they had read. Strategies tended to emphasize the participant's own relative safety from the dangers of technology. They emphasized aspects such as age: "I'm young, so I can adapt," "it's not happening in my lifetime," "it's not going to affect MY career path." Others completely avoided mentioning the dangers and focused only on the advantages provided by technologies. Advantages mentioned included convenience for schoolwork (mid-Covid lock-down). There appears to have been a conscious choice for many to remain upbeat and optimistic despite the dangers outlined in the text. Some particpants acknowledged the dangers but downplayed the threat of these dangers on their own personal well-being. This result may be viewed as unsurprising, and perhaps even reassuring. Participants overall were not unduly persuaded by an author's stance. They were asked to process the text from their own perspective, in light of their own experiences, and they did precisely that.

What is not clear from these results is the extent to which participants may have noticed or understood the stance markings at all. Were they unimpacted by them because they didn't notice them, or because they misinterpreted them? Or did they accurately perceive them, but nevertheless remain unimpacted by them when expressing their own relationship with technology and technophobia? These are the questions to be explored in the following chapter.

Chapter 5
Focus Questions: The Challenges of Rhetorical Reading

In this chapter, I explore findings related to the second major research question: "How might stance markers influence readers' perceptions of the author's position in a persuasive text?" Unlike Chapter 4, which explored possible impacts of author stance cues on the readers' personal responses (reflecting their OWN feelings and experiences regarding the topic addressed in the text), the present chapter directly explores readers' ability to perceive the AUTHOR'S point of view and to identify and discuss specific cues within the text that have impacted their understanding of that viewpoint. Unlike the Personal Response Paragraph, the Focus Questions explicitly invite metacognitive awareness and rhetorical reading; they cue participants to engage in the close reading necessary for hypothesizing how the author's intentions might be manifested in the text. The present chapter examines participant responses to three Focus Questions (henceforth, FQs).

As described in Chapter 3, participants were presented with five FQs designed specifically to investigate readers' perception of author stance on the topic of technophobia. FQ1 and FQ2 included both Likert scale and open response components while the remaining FQs included open responses only. In the present chapter, the Likert responses to FQ1 are presented first, followed by analysis of open responses to FQ1 and FQ5 (jointly), and to FQ2.

FQ1 and FQ5

As seen below, FQ1 and FQ5 were similar in that they both asked participants to assess the writer's attitude holistically.

FQ1. *Does the author believe that people SHOULD be afraid of technology?*

FQ5. *Overall, how would you describe the author's attitude toward technology and technophobia?*

Because participants' open responses to FQ1 and FQ5 overlapped substantially, they will be presented and discussed jointly following the presentation of Likert scale results for FQ1.

FQ1 Likert Scale Results

The present section compares the FQ1 Likert scale responses of participants who read Version 1 (henceforth V1) to those of who read Version 2 (henceforth V2). FQ1 read as follows:

Does the author believe that people SHOULD be afraid of technology?

Yes, very much so. Yes, a little bit. No, not very much. No, not at all. I can't tell.

Please explain HOW you determined your answer—referring directly back to the text.

As may be observed in Table 5.1, About two thirds (68%) of the 22 participants who read V1 responded either "yes, very much so" or "yes a little bit" to FQ1. By contrast, only one third (33.3%) of the 27 participants who read V2 responded with "yes, very much so" or "yes a little bit." While a majority (51.3%) of V2 readers responded to FQ1 with "No, not very much" or "No, not at all," only a small minority (13.6%) of V1 readers did so. The widely divergent patterns of Likert responses to V1 versus V2 indicate that readers perceived more fearfulness in V1 than in V2. This result suggests that many (perhaps most) readers were indeed impacted by the differing stance cues in V1 and V2.

Table 5.1
FQ1 Likert Scale Responses

Response	Text Version 1 (N=22)	Text Version 2 (n=27)
Yes, very much so	5 (22.7%)	1 (3.7%)
Yes, a little bit	10 (45.5)	8 (29.6%)
Split (2 answers marked)	(Yes, a little bit/No, not very much): 2 (9.1%) (No, not very much/I can't tell): 1 (4.5%)	(Yes a little bit/No not very much): 2 (7.4)
No, not very much	2 (9.1%)	10 (37%)
No, not at all	1 (4.5%)	4 (14.8%)

I can't tell	1 (4.5%)	2 (7.4%)

Analysis of Open Responses to FQ1 and FQ5

Close examination of V1 and V2 readers' open responses to FQ1 and FQ5 revealed the thought processes behind the Likert scale results and pointed to the particular textual features that had the most impact on readers' perceptions of author stance.

Almost all readers of V1 perceived at least some sense of fear in the author's stance, and many noted what they interpreted as a pronounced fearfulness in the author's textual voice. Most readers of V1 interpreted the text as a strong warning about the dangers of emerging technologies and claimed that the author was justifying technophobia. A smaller proportion of readers perceived the author's stance as somewhat mixed, conflicted, or mostly neutral. None of the open responses to V1 indicated a firm belief that the author was unconcerned about technology.

Readers of V2 overall expressed less certainty about the author's stance. A vast majority expressed some doubt about the author's viewpoint or pointed to a perceived conflict or ambiguity in the text, which they interpreted as balance, objectivity, or ambivalence on the part of the author. A smaller proportion of V2 readers expressed a strong impression that the author was either clearly justifying technophobia, or clearly NOT justifying it.

The section that follows outlines the patterns observed in readers' combined responses to FQ1 and FQ5. Five major elements were identified as having influenced both V1 and V2 readers' perception of stance: selection of topic, selection of information, inclusion of Forster's "The Machine Stops," lack of 1st person singular, and one key stance cue containing the phrase "naivete and old-fashioned values." Following discussion of those five elements, notable patterns of response pertaining only to V2 are addressed.

Selection of Topic

In the except below, a reader of V1 describes their processes of grappling with the complexities of author stance as they re-read the text. This reader comes to a recognition that it is possible for an author to write about topic that doesn't pertain to them personally, thus separating topic from stance:

Since he took the time to write this article there must be some sort of connection to his personal feelings…I started thinking… maybe he really ***does*** *fear technology… It occurred to me that people, frequently, write about topics they don't always agree with…So that got me thinking deeply, does he or does he not fear technology? By the time I got the last sentence, for the third time, I realized that you cannot really tell. The last sentence is almost like a contradiction of the ideas he talked about… Then again, I also thought…this could just be a stylistic choice. I was really on the fence.* (107)

Unlike the respondent above, who separated topic from stance, a few readers of V2 mentioned the article's topic itself as having factored into their perception of author stance. As seen in the following excerpts, these respondents surmised the simply addressing the phenomenon of "technophobia" indicated that the author himself likely experienced this himself, or at least wanted to validate that viewpoint. In the following excerpts from readers of V2, we can observe the thinking process by which these readers linked the concept of technophobia as a topic to the author's stance regarding that topic.

…the author did decide to write about technophobia, instead of other topics…the author knew that writing this paper was meant to at least bring awareness to what and where technology is heading. The fear aspect is the main focus of the paper which proves that people should be concerned about where technology will go and affect the future. (209)

…since he did a piece about the negatives of technology it leads me to believe he thinks people should be afraid…it's hard to get a feel for his attitude. If I had to take an attitude…he chose to write something negative, that he has to have a negative attitude towards it. (207)

The excerpts above may point to the phenomenon that Lakoff (2014) describes in *Don't Think of an Elephant.* According to Lakoff's analysis, when a communicator evokes a particular frame in the audience's mind (and a frame can be evoked by a single word), the audience will

tend to adopt that frame, even if the communication is intended to NEGATE or eschew it. Some readers of V2, which contained heavy pro-technology, anti-technophobia stance cues, may nonetheless have gravitated toward attributing technophobia to the author simply because they the author addressed the topic at all.

Selection of Information

While many readers of V1 pointed to an imbalance of information (examples, stories, and data) as having determined their perception of the authors own fears, readers of V2 most often interpreted the selection of information as fairly balanced.

The following excerpt reveals one V1 reader's thoughtful exercise in rhetorical analysis as they imagine themselves in the position of the author, attempting to convey a feeling and deciding to use the powerful strategy of storytelling:

The author provided many examples of how technology might take over humans… (Interview) *Wait, can I change my answer? Yes, like the author seems* really *afraid… He said that …a paperclip company creates… robots really effective in…using all the resources and humans won't be as…quick and effective... If that happens,…all the jobs will be lost… When I want someone to understand how I feel, I just tried to make up a scenario to give that person sort of how I feel. So with the…paperclip and the Terminator …, I probably include an example or something from pop culture so they can understand why I'm feeling this way. …at first I didn't know how the author really like felt, because it kind of gave me mixed messages…it's bad, technology is scary…but even though it's scary, we still depend on it…I read it a second time. I feel like the author is…trying to show the audience…that although technology in the past …was something that a lot of people feared…we grew accustomed to it, but there is still underlying fear that they…become us, or replace us.* (105)

Several additional readers of V1, as illustrated in the three excerpts below, explicitly commented on what *might* have been included if the author *had wished to discourage* technophobia. These readers astutely noted the *absence* of what they *would have expected* to see in a balanced text.

I think if they did not want people to be afraid, they would have gave more positive aspects of technology … They give so much evidence about the fears… it is difficult to believe they would also not feel this way. (103)

The author doesn't propose any ways to solve… The author's attitude is…progression is unstoppable…past and current negative conditions are described…just there is a fear. That's all. (109)

He… does little to communicate the possible positives of technology… a brief mention of statistics showing how technology has helped in the medical, personal, and/or social field would help in communicating some of the positives. The lack of this reinforces the message of fear from technology. (115)

Readers of V2, in contrast, tended to perceive the selection of information as reasonably balanced. As may be observed in the excerpts below, many V2 readers perceived the evidence provided as reliable, unbiased, factual, and informative. These assessments contributed to their overall positive perception of the author's authority, whom they assessed as appropriate, credible, and well-educated.

He does not seem to sway too much one way or the other. I think he does this to establish more credibility to his audience. (202)

The author is simply informing us of the issue, wants the reader to be aware of this phobia. He uses a lot of research to explain this point (213)

The author did not show any preference…for either side. The author was just giving out fact…The article considers both pro and con of technology, so I cannot really determine if the author hold positive or negative attitude. (227)

The author seems well-educated on the topic…He gives reasoning for both sides without seeming too biased…(226)

The author doesn't necessarily seem afraid because he is providing the reader…examples and reported studies…the author has to act appropriate in order to allow the reader to understand the author's points without feeling bias. (209)

The responses cited above may be interpreted using Birk and Birk's (1994) concept of "slanting by selection of facts." Most V1 readers perceived the text as "slanting for" technophobia, observing that the stories, studies, and data included in the text consistently instilled fear in a reader. Most readers of V2, by contrast, perceived the text as balanced, since they could not detect a greater abundance of evidence either for or against technophobia. It may

be noted here that evidence (stories, examples, data) presented in V1 and V2 remained constant. Only the *manner* in which this evidence was presented (stance cues) were altered.

Lack of 1st Person Singular as Evidence of Objectivity.

As described in Chapter 3, *neither* V1 *nor* V2 contained any usage of the first-person singular pronouns. Omitting this obvious stance cue was a key part of the study design as it allowed exploration of how other types of cues might impact readers. This absence itself was taken as evidence of neutrality by three readers of V1 and numerous readers of V2.

Three readers of V1 mentioned the writer's avoidance of explicit first-person singular stance-taking. The excerpts below indicate an understanding of the author's stance as "universal," "objective," "based on every human, not himself."

He always uses "they" as narrative angle. He should say "I am" blah, blah, blah. And not "they" blah, blah, blah. …… people do think so, but not himself. It's a universal value, but not him. (108)

The writer mostly uses third-person perspective to write this article, and the writer does not mention personal thoughts or perspectives about whether should people be afraid of technology or not. (119)

The author continuously stated the objective view of human to the technology, The author did not give his opinion. He mentioned that "There was also a fear that the machines were too efficient, and that they would make humans obsolete" and "Rather than fearing that machines will eliminate us, many now fear that they will become us." The author's point of view is based on every human, not himself…we cannot use the objective claim to get author's feeling. (120)

Given the abundance of stance cues validating technophobia in V1, it could be argued that an interpretation of neutrality based on the absence of a direct first-person statement such as "I believe that…" would indicate an overreliance on first person usage to detect stance. Of note is that the first two respondents cited above were international students with no previous English-medium educational experience. They were each enrolled in the most beginning level writing course and rated their reading comprehension ability as "fair" and "good" respectively (on a

scale of excellent/good/fair). The third respondent above was a resident multilingual student with 3-5 years of English-medium education who rated their reading skill as "good."

Numerous readers of V2 also perceived the use of third person as a technique exployed by the author to distance himself from those who suffer from technophobia. As demonstrated in the excerpts below, these readers noted that the author seemed not to be "speaking from his own voice." In these respondents' understanding, use of third person allowed the author to establish an "impartial," "formal," "monotone," "academic," "honest," "informative" voice. They perceived that the author's aim was to educate readers through others' (cited) ideas (as discussed in the previous section on selection of information), while withholding his personal opinion.

The author does not make it clear if they themselves have technophobia, this article just explores what is technophobia… The author seems to hold an impartial attitude towards technology. (212)

He's not speaking from his own voice. He's talking like "Many Americans' greatest fears" like "It is them. Not me." I mean, "I'm just Trying to tell you what other people think. It's not my opinion" …it's like more formal. It relates to many people's fears, but it also uses specific points... more academic, like he says here with the professor Nick Bostrom…So yeah, I think that's a good quality of this essay. (203)

The author merely states the facts and opinions of others… The author begins his introduction explaining the perspective of the people and ends the introduction similarly. The author's attitude was rather informative. His own opinion was not truly expressed. He wants us…to reflect, so he did not input much of his personal opinions…The author mainly described and educated readers…with other opinions and a factual background story. (205)

*Throughout his article, he keeps a monotone kind of unbiased tone…He doesn't say what side he is on.. he just states facts… he also tends to just be really brutally honest. He just wants you to know this is that, this is that, and this is why***.** (206)

For less experienced readers of both V1, and for many readers of V2 across all levels, the lack of any first person singular statements appears to have played a role in interpretation of author stance. It is notable, however, that this textual feature remained constant between V1 and V2, and thus could not in itself contribute to the differences in responses to V1 and V2 overall.

Rather it seems to have pulled some readers of both groups (and especially readers of V2) toward the center. That is to say, it bolstered their claims that the text was relatively neutral, despite the presence of other cues indicating a stance toward technophobia in V1 and against technophobia in V2.

A Key Stance Cue: "Naivete and Old-fashioned Values."

Numerous readers of both V1 and V2 quoted a sentence containing the phrase "naivete and old-fashioned values." As may be noted in Table 5.2, the precise sentence in V1 differed substantially from that contained in V2, as this was easily the most significantly differentiated passage between the two text versions. While V1 contained a rather explicit stance cue, V2 contained a more subtle and ambiguous cue. In both V1 and V2, the "naivete and old-fashioned values" sentence stood alone as an independent paragraph, thus serving as a major transition in the text. The explicitness and visual prominence of this single-paragraph stance cue likely contributed to its salience for readers of both V1 and V2.

Table 5.2
Alternate Versions of Stance Cue "Naivete and Old Fashioned Values"

Version 1	**Version 2**
It is tempting to write-off this kind of fear as the product of naivete or old-fashioned values, but that would be a mistake.	This kind of fear may be just the product of naivete or old-fashioned values.

Five readers of V1 quoted the sentence seen on the left of Table 5.2. In addition to the quote itself, four readers offered explanations of its significance. The following excerpts reveal respondents' perceptions of the importance and strength of this sentence as an indicator of stance.

…that one quote,…[is] the dead giveaway for me… (101)

I feel like that right there…is alluding to…him being afraid. (107)

There is one sentence which obviously shows his attitude… (108)

In this sentence, the author clearly shows that they feel that technology is a threat. (104)

Several readers of V2 referenced the ambiguous stance cue copied on the right side of Table 5.2. As may be observed in the excerpts below, V2 readers' commentary was necessarily more detailed on this topic (as compared to that of V1 readers), as they attempted to interpret the precise meaning of this ambiguous passage in light of the entire text. Overall, V2 readers referencing this stance cue interpreted it as a subtle distancing device, a signal to readers that the author did not think the fears were warranted. This interpretation of distancing may be observed in the respondents' assessments that the author was eschewing an "'old' type of behavior," an "aged way of thinking," and that he treated the fears as "kind of a joke," arising from "irrationality." The understanding of this cue as a distancing device was also apparent in the commentary linking it to the "ridiculous" paperclip story and an "over dramatic" research finding.

The author believes that the fear of technology is an "old" type of behavior. The author writes "This kind of fear may be just the product of naivete or old-fashioned values" (p.2). The author sees technophobia as an aged way of thinking. In a way, I feel like the author is really trying to tell us to get rid of those those ways of thinking. He knows that is real, but having fear over it is pretty much not gonna help us either way, because we're going to have to live with technology, whether we like it or not… he just knows the progression of how people used to think. (213)

…some parts he looked at people's fear of technology as kind of a joke --he kinda gives the connotation that…these fears are not very valid…there are some elements which suggest that he thinks these fears have risen from naivety and irrationality. He directly mentions this by saying, "This kind of fear may be just the product of naivety or old-fashioned values",… and indirectly, by mentioning the ridiculous paper clip company... He also finds it strange that Americans, nowadays, are more scared of technology than death itself, as per research conducted in 2019…I feel like that …[is] a little bit over dramatic…(214)

He does give a bit of opinion from time to time, for example when he mentions that people fear technology is becoming more human, he adds the comment, "This kind of fear may be just the product of naivete or old-fashioned values"…He says, like the "immortality," or it's "naïve" or stuff like that. he does stay a little bit of opinion, from time to time --like unnoticeable--…(206)

Interestingly, it would appear that the linkage of technophobia to "naivete and old-fashioned values" in V2 may have influenced additional readers who did not specifically identify that passage has having impacted their perceptions. These readers perceived the author's lack of support or experience of technophobia, but couldn't name specific textual features evoking those perceptions. In the two excerpts below, respondents characterized the author's attitude but did not identify what textual elements had lead them to these characterizations. Where did the first commenter below get the idea that the author thinks technophobia is "quite weird and unnecessary?" Where did the second commenter get the idea that the author is "nonchalant?" or that he's "belittling" technophobia? These readers don't point to the most persuasive evidence for that, which would have been the "naivete and old-fashioned values" sentence.

The source says that "fear of technology become something more like fear of ourselves". Maybe he also think that if we can overcome the fear of ourselves and the fear of technology…I think the first part just describes the fear of others… So people just fear about technology, they use technology. You get the same attitude of the author is seeing that it's quite weird and unnecessary. Just we use that technology and we live better. (201)

In the text, the writer is almost nonchalant about this topic. The author even uses different examples of fear like "the modern fear of companies" exploiting people, to prove there is really nothing to be afraid of. This means that by providing other examples of fear, the author is belittling technophobia. (216)

It is unsurprising that a direct stance cue, which differed substantially between V1 and V2, had a significant and observable impact on respondents' interpretations of author stance in both versions. Because this stance cue stood alone in both versions as a one-sentence paragraph, it was salient to many readers of both V1 and V2. While V1 readers interpreted it as a clear indicator of author's own concerns about technology, V2 readers reasoned that it most likely indicated a distancing between the author and fears of technology. As may be observed in the final excerpts above, it appears likely that even V2 readers who did not mention the passage in their responses may have been impacted by this stance cue.

Inclusion of Forster's "The Machine Stops"

Of all the evidence (stories and data) included in the texts, by far the most commonly mentioned by readers of both V1 and V2 was the story contained in the final two paragraphs, E.M Forster's "The Machine Stops." For ease of reference, these 2 paragraphs are copied below. The first paragraph was exactly the same in both V1 and V2. In this entire passage, only one sentence differs between V1 and V2 (see Table 5.3).

With this in mind, here is a thought experiment. What if technology ceased to exist tomorrow? This is precisely what happens in one of the oldest pieces of science fiction -- and to my mind, one of the most prophetic -- The Machine Stops, by E. M. Forster. Forster imagines a world in which everybody is totally reliant on technology, living in small, isolated "cells" with their every desire provided by "The Machine." One day, it stops.

In the story, the citizens of Forster's world are freed from their daily routine, and eventually work out how to live without technology. (Alternate Versions of this Sentence Indicated in Table 5.3) *That, perhaps, is the irony of technophobia today -- that while people may fear the technologies that surround them, they fear the absence of those technologies even more.*

Table 5.3
Alternate Commentary Regarding Forster's "The Machine Stops"

Version 1	**Version 2**
If the equivalent were to happen today, humanity might not fare as well.	The reader is left to wonder whether humanity would fare as well if the equivalent were to happen today.

Heavy reliance on the final two paragraphs was observed among readers of both V1 and V2. While readers of V1 who mentioned the Forster story believed it had been included to evoke fear for the future, readers of V2 who cited from those final two paragraphs did so as evidence that we should NOT be afraid of technology.

The following excerpts illustrate how readers of V1 interpreted the inclusion of Forster's story as a stern and urgent warning from the author about the extent to which technology is controlling us. According to one respondent, the author "slaps in the face" to wake us up and force us to reckon with our overdependency on technology.

The author refers to E.M.Forster's words: a world in which everybody is totally reliant on technology…the author wants readers to know that technologies are gradually taking…control…

he makes the examples: in the past, and today, [and] "what if it stops?". The author wants us to really think about how[to]not be controlled as much. (102)

The author gives the audience a question, "here is a thought experiment. What if technology ceased to exist tomorrow ?" ...wants the audience to think and whatever they think of, he wants them to be afraid of that thought ...what would happen?-- How would our lives change?- just thinking about not relying on…technology to help us or anything, it's just scary…I think he wants us to be more afraid of the future. (111)

He's highlighting…how dependent we are on it and how it helps us, but it's still dangerous…the author poses, "What if technology ceased to exist tomorrow?" ... this whole article is like a warning sign. the story of… "The machine stops" like there…like he slaps us in the face, like if this happened, what would you do? (112)

Numerous readers of V2 also drew from the final two paragraphs of the text in their responses to FQ1 and FQ5. Five readers of V2 cited the final sentence specifically. As may be observed in the following excerpts, respondents read the concluding passage as evidence that the author did NOT believe we should fear technology. Each of the three respondents cited in the following excerpts quoted the final sentence of the text: *"while people may fear the technologies that surround them, they fear the absence of those technologies even more."* In reference to this quote, they then offered the commentary copied below:

…This line leads me to believe he isn't that scared of technology since he hints that it's ironic how people are scared of technology since they would be more scared without it. (226)

…In my mind, this interpretation means, while we as society fear what is to come of it, we also aren't as afraid of it as we think, but more so afraid of how society will act with out it. So the narrator doesn't want you to fear technology, they want you to be well rounded with the fact that fear can also mean fear of our own self, not just technology. (206)

…The author is concluding that despite the fears that people have about technology taking over or eliminating us, people's truest fear is not having technology at all in their lives. Therefore, there is no point of being afraid of technology if people will be afraid if there isn't technology. The author views technophobia as an irony rather than an issue itself. (210)

The excerpts above illustrate how readers of both V1 and V2 relied heavily on the final two paragraphs in assessing the author's stance. Yet the story told within these final paragraphs was assigned different significance depending on which version of the text the reader was

exposed to. These different interpretations may be in part due to the penultimate sentence in each passage—the one sentence that differed between the two versions, though not dramatically. It may also be that readers had been primed by what they had already read earlier in the text, to interpret the final story either as evidence of fear (in the case of V1) or lack of fear (in the case of V2).

Special Issues in the Reading of V2.

Based on a close comparison of V1 and V2 readers' responses to FQ1 and FQ5, it would appear that V2 was overall more challenging, ambiguous, and potentially confusing for readers as compared to V1. Responses to V2 revealed additional challenges and reading strategies that were not observed in V1 responses. At the micro (word/sentence) level, some V2 readers appeared to either misread or ignore certain stance cues, and/or attempted to analyze word choice patterns without placing those particular words in context. At the macro-level, several readers looked to the overall structure/organization of the text for clues about author stance.

Misreading or Ignoring Stance Cues.

A few readers of V2 attributed certainty to the author's stance when the actual text had been more subtle. For ease of comparison the relevant passage from V2 is copied below, followed by two excerpts from V2 reader responses.

The Romantics thought, specifically, that the productivity-enhancing technologies the Industrial Revolution introduced to the world might somehow destroy the "true essence" of man. Machines and factories drew people away from the fields and lured them to work on production lines. The machines, they thought, were forcing humans to become more machine-like themselves… This is a kind of technophobia that we could call the "classic" form. The fear is that technology is an inherently antihuman force, and eventually will wipe us out.

In the following excerpt, the respondent does not account for the precise framing of information in the original text; instead of noting attribution to the Romantics (*The Romantics*

thought, they thought, the fear is that), they link the fear directly to the author. It's certainly a stretch to claim that the author "establishes" that technology "is" taking away our humanity.

He [the author] *establishes that technology is taking away our humanity and may soon replace us. I believe that the author is fearful of technology*... (218)

The following excerpt similarly points to an interpretation of V2 that does not fully account for distancing cues. In V2, the author does not explain how technology "can" take over, but rather how the Romantics believed it might.

…the author explains how technology can someday take over…The author explains how the machinery/ technology may one day evolve and we'll be gone. He might be trying to induce fear into us. (223)

In the following excerpts, we can see readers attempting to determine stance by zeroing in on particular words that are repeated throughout the text. In the following excerpt, the reader notes repetition of the term "fear," and the presence of certain negative phrases-- but without mention or consideration of the full sentences in which the words and phrases appear.

I noticed how he uses the word "fear" a lot. That kind of repetition…when he uses"humans"-- he includes words like "forcing humans" or "wiping out humanity"… some of the words… fear technology… fearful… the word "fear" stood out a lot while I was reading it over and over again…He also tries to justify or clarify why exactly people have technophobia…Using…words like "Anti-human" "force," "wipe us all out". His word choice for me. (208)

The excerpts cited above suggest that for some readers, distancing devices (attributions such as "they thought" and hedges such as "might" and "somehow") may not have been very salient. This resulted in the readers concluding that the views presented by the author were being espoused by the author himself. These examples may lend some legitimacy to the "invisibility" hypothesis offered by Hyland (2000).

Macrostructure as Evidence of Neutrality.

Seven readers of V2 mentioned the macrostructure of the text as evidence of the author's objectivity. The division into sections focused on past, present, and future (which remained constant between V1 and V2) was mentioned by many V2 readers as evidence of author intention to educate with neutrality. As may be observed in the four excerpts below, the macrostructure was evidence for each these readers of an unbiased, informational, descriptive, and balanced "report" style.

I would mention the general structure of the paper…I believe this is an informative text or a description…first giving a little background about…the past, but it does not give me any personal opinion. And then in the present…another statistics,… information about a survey. And finally he gives a prediction of why people would fear in the future...(203)

… he's just trying to tell the reader about how technophobia has developed …I feel like in each section,… it wants to inform us more by just telling us, in the past-- how people felt about technology. And now, this how people feel now…those were the type of things that made me feel like he was trying to inform instead of trying to make us scared. (213)

…he explains…this is what they feared in the past, this is what they feared now, then gives a brief explanation… The author is reflective towards technology and technophobia…analyzes both the fears of the past and the fears of today and the reasons behind them… The way it was organized the past, the present, the pros and cons, I can infer the author says…there's no true point of being afraid if you actually benefit…they don't actually take a stand…The author's informing us, but at the same time, trying to make his readers understand whether…if you have technophobia, is there a point to it, when you actually benefit from [technology]? (210)

… it just seems like pretty much a report. Like you have a past, today and in the future…it's hard to even put a bias in it for me personally. (207)

The frequency of reference to macrostructure as evidence for author neutrality of V2 was an unexpected finding. It is interesting to note that the macrostructure was identical in V1 and V2, and yet readers of V1 did not refer to macrostructure in their analyses. It appears that, when faced with a more ambiguous text and asked directly about author stance, many readers of V2 looked to macro-organization as a way of discerning the author's viewpoint. And those who did invariably associated the chronological organization (made especially salient by chronologically-oriented subheadings) with neutrality.

FQ2

FQ2 asked readers to focus on the first half of the text, in which the author discussed technophobia in the historical context of the Industrial Revolution:

2. Does the author think the Romantics had good reason to fear technology?

Yes, very much so. Yes, a little bit. No, not very much. No, not at all. I can't tell.

Please explain HOW you determined your answer—referring directly back to the text.

FQ2 Likert Scale Results

As may be observed in Table 5.4, a vast majority (86.35) of the 22 participants who read V1 responded either "yes, very much so" or "yes a little bit" to FQ2. By contrast, only a slim majority (51.8%) of the 27 participants who read V2 responded with "yes, very much so" or "yes a little bit." While only one reader of V1 responded to FQ2 with "No, not very much" or "No, not at all," 40.4% of V2 readers did so. The widely divergent patterns of Likert responses to V1 versus V2 indicate that readers tended to perceive more fearfulness in V1 than in V2. This result suggests that many (perhaps most) readers were indeed impacted by the differing stance cues in V1 and V2.

Table 5.4
FQ2 Likert Scale Responses

Response	Text Version 1 (N=22)	Text Version 2 (n=27)
Yes, very much so	9 (40.9%)	4 (14.8%)
Yes, a little bit	10 (45.45%)	10 (37%)
Split	0	0
No, not very much	1 (4.5%)	9 (33%)
No, not at all	0	2 (7.4%)
I can't tell	2 (9.1%)	2 (7.4%)

Analysis of Open Responses.

As observed in open responses to FQ1 and FQ5, most FQ2 responses from readers of V1 indicated a strong presence of fearfulness in the text, while responses from readers of V2 were more evenly split in their perception of fearfulness. However, close analysis of the open responses to FQ2 revealed a major complication that could not be observed in the Likert responses. An astute response to FQ2 required 2 layers of meta-analysis. Navigation of these multiple layers appeared to be quite difficult for many readers of V1, many of whom deferred to their own personal opinions and fears. Readers of V2, on the other hand, more consistently addressed the precise question that was posed, but their responses varied more widely; while many V2 readers cited evidence to illustrate the author's empathy for the Romantics, others offered evidence suggesting that the author did NOT believe their fear was justified.

FQ2 was a relatively complex question in that it asked readers to assess the *author's* stance toward the *Romantics*' fears of technology. The question was thus two layers removed from the PRP task (which asked for readers' *own* opinions about technophobia) and one layer removed from FQ1 and FQ5 (which asked for the *author's* opinions about technophobia).

In the section that follows, three patterns observed in open responses to FQ2 are discussed. First is the failure of numerous V1 readers to respond directly to the question as posed. Second is respondents' recognition of the author's purpose for including the Industrial Revolution as a historical example of socioeconomic change fueled by technology. Finally, the impacts of three specific phrases, each of which was identified as having influenced readers' perception of stance, are discussed one by one.

Difficulty Answering the Question.

Several respondents had some difficulty misunderstanding the question, either partially or completely. Misinterpretation of the question was far more common among readers of V1 as compared to V2.

V1 Readers Answering* Their Own *Questions.

Numerous readers of V1 failed to respond directly to the question posed in FQ2 "*Does the author think the Romantics had good reason to fear technology?"*

As the excerpt below indicates, one reader of V1 completely misunderstood the question when responding in writing. The confusion was cleared during the interview when the reader realized they'd answered the question in regards to contemporary people's current beliefs, not the past beliefs of people during a historical time period (whom they refer to as "old people").

Current worry for technology has exceeded the old worry. Actually I have a question….This question is for modern people or old [historical] people? Romantics had a good reason to fear technology. For old people or modern people? It means for old people? Now, my answer is, Yes, I think Romantics maybe had good reason….The two paragraphs "In the Past." the author just describes the condition…when the fear of technology happened… (109)

The following excerpt illustrates what appears to be a partial misinterpretation of FQ2, as the reader responded as if answering a standard comprehension question (e.g. Were the Romantics afraid of technology?) rather than a question about author stance.

The author directly pointed out the word "fear" when he/she mentioned the Romantics or poet. The author stated that "The Romantics thought, specifically, that the technologies the Industrial Revolution unleashed upon the world might destroy the "true essence" of man". " From the word "destroy","true essence" of man", we can infer that Romantics afraid of technology in large extent. (120)

Instead of hypothesizing about *the author's* stance regarding the Romantics, as prompted by FQ2, several additional respondents apparently commented on *their own* perspective about this historical period, as influenced by the text. These respondents, as illustrated by the following

excerpts, did not attempt to address the author's views; rather, they removed that layer of complexity and answered in the first person.

I believe they had a good reason to fear technology because, as the author wrote, "70 million people could lose their jobs to automation by 2030," it is scary to think about what would happen to those 70 million people who lose their jobs…, they need money to survive, which they earn by working. This may raise poverty levels and put the working class in more danger than they already are. The data kind of struck me because it's… putting the working class in a lot of danger…my family's part of working class …a lot of people around me are working class --many jobs can be away from them. (101)

When technology, something new and unfamiliar, took over them, I think they had the reason to fear it. They are not used to it and when something just takes over and pushes them to work a different job… they feel fear… I think they had a reason to fear it. (106)

In the text, "Machines and factories drew people away from the fields and forced them to work long hours on production lines". Romantics have a good reason why to fear technology, they think that Machines will take over the humans. And it is true, technology cost less and high efficiency than humans. For the Industrial Revolution I think the machines give a humans big step…So it might just be a shock how machines can bring people into a different level…before… humans [were] just very simple. (114)

The following example is especially interesting, as the commenter included information about the hardships related to agricultural work in their response. That information was not contained in the reading and would not have logically fit there, since the emphasis of the article was on the disruption caused by technology *displacing* workers from the fields. This respondent may have been relating the text to current events in California at the time of the study. Agricultural workers facing the dangers of "fires and heat" while working in the fields was certainly relevant in the summer and fall of 2020, as this Chicano Studies major would have been well aware.

In the article the Romantics feared that humans would become more like machines. In some way, their fear came true. People are put in sweatshops and forced to work themselves sick and get underpaid and others are placed on fields to work in the midst of fires and heat. So this fear is for good reason. (105)

While a vast majority of V1 readers indicated in their Likert scale responses that the author believed the Romantics had good reason to fear technology, many of their corresponding open responses failed to directly address FQ2.

Historical Context

Many readers of both V1 and V2 addressed FQ2 by noting the author's strategy to examine the evolution of technophobia throughout time. These readers recognized the two paragraphs about the Romantics' fear of technology during the Industrial Revolution as part of the author's attempt to examine technophobia in the past and set a foundation for understanding today's challenges. While most (but not all) V1 readers pointed to the historical information about the Romantics as a starting off point for a story of continuous threats and fear, many V2 readers struggled to understand the significance of this part of the text.

Many readers of V1 emphasized the continuity of fear throughout different ages, some claiming that the fears had remained essentially the same over the centuries.

When technology came, especially the Industrial Revolution, a lot of people fled… they moved away from farming and went into the cities to look for work... I'm sure…people worried about famine and such…, it says there's also feeling that the "machines were too efficient…and make humans obsolete." That kind of fear still exists today…That…translates-- it's a fear that's carried on for centuries. The author is trying to state that we still have that same fear that the Romantics had That humans are going to be obsolete to machines. (104)

The author wanted to explain how back then… they just didn't have the resources to figure out the things that we know now… and then later they're able to say oh, we still have those views…just on a different scale …there is a fear that…there's going to be… a loss of jobs and everything (103)

Since the Romantics talked about how machines took away jobs back in the Industrial Revolution, it has done the same in the present day which led to history repeating itself. (121)

Readers of V2 also attempted to understand the author's mention of the Romantics within the framework of the whole text, but their conclusions were much more tentative, as they were forced to examine more ambiguity in the text that they read. While some focused on continuity

in the nature of technophobia across eras, others were uncertain how to compare the Romantics' challenges with new technologies with our contemporary challenges. In the following excerpt, a V2 reader interprets the author's inclusion of the Romantics' similarly to how V1 readers did.

When the author is talking about the Romantics, he states the reasons why the Romantics feared technology could give insight on why people have technophobia today. Since he thinks the reasons from back then and now could be correlated, he probably doesn't think they are irrational for thinking what they did back then. (226)

By contrast, the following excerpts shows how three readers of V2 struggled to make sense of the relationship between past and present forms of technophobia as presented in the article, and to infer the author's stance regarding the Romantics. It may be noted that the first two of the three respondents below actually changed their answers during the interview.

On one hand, the Romantic poets of the 1800s did have an interesting and plausible philosophy for the impact technology would have on humans. However, in the next section, it's presented that the fears the Romantic poets had weren't predicted to be the case, and instead, the fear has shifted to something else. At the time of their prediction, the Romantics definitely had a great reason to fear technology. Now, it would seem that what they said isn't very true of modern society…Well, I mean, already reading the first two paragraphs,… My response could be altered –He might have thought that the Romantics they'd have a good reason…there's what seems to be a small correlation between what the Romantics feared and…the fear we have now…they both conclude in humans being obsolete…in the past day…automation came in the form of humans becoming too much like machines, so I see the correlation… (204)

In this portion of the reading, the author describes the Romantics' views as "practically ancient history". Since this perspective was so old, the author may have felt that the Romantics were completely outdated. However,… the author still manages to connect the views to modern-day…I think the author thought the romantics have GOOD reason to fear technology, my bad…I think I kind of took it out of context… "practically ancient history"… I may have…thought of it as a different tone… "those fears might give us clues about how and why people fear technology today." (205)

The narrator comes to acknowledge that it was a "classic" reason for why people were afraid of technology back then, however he does refer to some point that as years go by, we have discovered more relevant fears for technology. For example he states, "As technology has developed, so have people's fears". The Romantics…had the fear that machines will take over us, or they will take over our jobs… When it started…[they] *didn't know how to handle it. Fear of not knowing … they really didn't know it…to the extent that we know it now…We use it all day our daily lives…the people back then didn't really know what technology was or how to handle it.* (206)

The excerpts from V2 readers above illustrate their confusion or ambivalence expressed in response to FQ2, in contrast to the relative clarity expressed by the V1 readers.

The Impact of Evaluative Language.

Certain phrases were mentioned by multiple readers as having impacted their responses to FQ2. This section examines how specific evaluative word choices factored into readers' conscious understanding of the author's stance toward the Romantics. The first evaluative phrase discussed below was present only in V1, the second was present in both versions, and the final phrase was present only in V2.

"Valuable insight"

Several readers of V1 noted the key phrase "valuable insight" in connection to the author's stance toward the Romantics. As may be observed in Table 5.5, this phrase was present only in V1, which stated that the Romantics' "sophisticated critique" might offer "valuable insight," while V2 stated merely that their "major criticism" "might give us clues."

Table 5.5
Alternative Introductions to the Romantics

Version 1	**Version 2**
Perhaps the first sophisticated critique of technology's impact on the world was articulated by the Romantic poets in the late1800s.	Perhaps the first major criticism of technology's impact on the world was launched by the Romantic poets in the late 1800s.
That might seem like ancient history, but looking at what those poets feared can give us valuable insight into how -- and why -- people fear technology today.	That's practically ancient history, but looking at what those poets feared might give us clues about how -- and why -- people fear technology today.

In the excerpts below, V1 respondents drew on the phrase "valuable insight" as evidence for the author's sympathy for the Romantics' view.

When the author writes about the Romantics, it doesn't seem like he is criticizing their reason to fear technology, instead he refers to it as "valuable insight" as to how and why "people fear technology today." (118)

I think the author believes the Romantics had a good reason to fear technology since they refer back to them as a good reason why people started being afraid. They say "That might seem like

ancient history, but looking at what those poets feared can give us a valuable insight into how -- and why -- people fear technology today." (112)

The excerpt below presents an especially contemplative response to V1, wherein the reader picked up on the positively charged evaluative tone in the phrases "sophisticated critique" and "valuable insight" and yet cautiously concluded only that the author wished for us to accept the Romantics' ideas as a "fundamental base" for further conversations on the topic.

The author uses phrases such as "sophisticated critique" and "valuable insight" to convey the importance of the Romantic poets' early perspective on technology. I am unsure if this suggests the author approves of the fears. Yet, through the use of this…vocabulary we can only assume he deems their ideas as a fundamental base for conversations regarding technology. (115)

Destroying the "True Essence" of Man

A key phrase mentioned many times by readers of both V1 and V2 in response to FQ2 was " 'true essence' of man." As may be observed in Table 5.6, the V1 stated that the Industrial Revolution "unleashed upon" the world technologies that "might destroy the 'true essence' of man" while V2 stated that the "productivity enhancing technologies" had been "introduced" that "might *somehow* destroy" man's "true essence."

Table 5.6
Alternative Commentary about the Romantics' Fears

Version 1	Version 2
The Romantics thought, specifically, that the technologies the Industrial Revolution unleashed upon the world might destroy the "true essence" of man.	The Romantics thought, specifically, that the productivity-enhancing technologies the Industrial Revolution introduced to the world might somehow destroy the "true essence" of man.
Machines and factories drew people away from the fields and forced them to work long hours on production lines.	Machines and factories drew people away from the fields and lured them to work on production lines.
The machines, in short, were forcing humans to become machines themselves.	The machines, they thought, were forcing humans to become more machine-like themselves.

Readers of V1 tended to take seriously the threat to the "true essence of man" posed by technology during the Industrial Revolution. In the excerpts below, we may observe how these respondents accepted the premise of this existential threat, confirmed that the author believed this threat, and elaborated on the nature of that threat.

The Romantics thought the technologies the Industrial Revolution unleashed upon the world might destroy the "true essence" of man. Machines and factories drew people away from the fields and force them to become machines themselves… true essence of humans, anything that might destroy the true essence. (102)

The author does think the Romantics had a good reason to fear technology because they were afraid that technology would destroy the "true essence" of man. The author mentions that the Romantics also feared technology because the machines would force them away from the fields making them work in long hour production lines. Machines can be more powerful than humans, so it isn't fair that machines are forcing humans to become machines themselves. Humans have feelings, machines don't…machines are able to do lots of work…you may…feel tired, exhausted…machines don't, so I just think of it like that, really like taking away their humanity in some way (111)

Several readers of V2 also noted the mention of the Romantics' fear of machines based on a perceived threat to the "true essence" of man, but did not automatically assume that the author was necessarily empathizing with them or justifying their fear. The excerpts below illustrate how V2 readers grappled with ambiguity in the text while deciding how to assess author stance regarding the Romantics. Each of the three readers in the responses excerpted below came to a different conclusion.

The author uses examples that show exactly why the Romantics were afraid…Their fears turned into realities. …when it says "true essence of man." …They…were no longer needing people to do the work for them. They were building machines that were able to produce products more efficiently…And where it says…machines in fact drew people away from the field… to work on production lines… (213)

He lightly touches on the Romantics' reasons for being afraid. If he had elaborated some more, I think it would indicate the Romantics had good reasons. I'm kind of posing my answer by what he says: But looking at what those codes fear might give us clues about how and why people… I feel like he doesn't feel sure…he uses the word "might" a lot. He says he says the Industrial Revolution… might somehow destroy the true essence, man. (208)

I think the thing that stands out to me is a "true essence" of man. Yeah, because I think There is no true essence to man. Just because technology can do the same thing as men doesn't mean it could take away the true essence of men, because we have the ability to create, we have the ability to make ideas… and just grow from them. I don't think… technology can be that advanced (206)

As indicated in the excerpts above, V2 readers did not all assign the same significance to the passage regarding the Romantics' fear of losing their "true essence." While V1 readers

consistently cited this passage as evidence for the author's empathy with the Romantics, only some V2 readers who mentioned this phrase derived that meaning from it. Other readers of V2 perceived in that phrase a distancing between the author and the fear of the Romantics (as the second excerpt above) or were otherwise unpersuaded that the threat was valid at all (as in the third excerpt above).

"Far-Fetched" Stories from "Ancient History"

As may be noted in Table 6.4, the evaluative phrase "far-fetched" was used to introduce a fictional story only in V2, while in V1 the same story was presented as a "thought experiment." The phrase "far fetched" and concepts associated with it, were noted in numerous V2 responses to FQ2, often in conjunction with the terms "classic" and/or "ancient history." Interestingly, the story introduced as "far-fetched" in V2 was not directly attributed to the Romantics, but rather introduced in a subsequent paragraph as another example of "classic" technophobia. As seen in Table 5.7, the passage defining " 'classic' technophobia" remained constant between V1 and V2.

Table 5.7
Alternative Passages Leading up to and Including "Far-Fetched Story"

Version 1	Version 2
That might seem like ancient history, but looking at what those poets feared can give us valuable insight into how -- and why -- people fear technology today.	That's practically ancient history, but looking at what those poets feared might give us clues about how -- and why -- people fear technology today.
Take, for example, the thought experiment put forward by Oxford professor Nick Bostrom.	Take, for example, the far-fetched story put forward by Oxford professor Nick Bostrom.
This is a kind of technophobia that we could call the "classic" form. The fear is that technology is an inherently antihuman force, and eventually will wipe us out.	This is a kind of technophobia that we could call the "classic" form. The fear is that technology is an inherently antihuman force, and eventually will wipe us out.

Many readers of V2 detected specific evaluative language unique to V2 that distanced the author from technophobia. Some respondents cited (or in one case, borrowed without attributing) the author's assessment of Bostrom's story as "far-fetched." They characterized the example stories included in the text as "superficial," "unrealistic," "absurd," and "weak."

The author is aware of how superficial this sounds, claiming that how the Romantics feared technology was the "classic" definition of technophobia. The author also mentions the "far-fetched story put forward by Oxford professor Nick Bostrom," indicating how absurd the idea of machines taking over the world for one goal is unrealistic. Though it is a part of technophobia, it is unlikely to happen compared to other fears about technology. (209**)**

The examples he's using about paperclips seemed far-fetched. Giving a weak example like that makes the audience not side with the Romantics. (221)

Other V2 readers didn't mention the phrase "far-fetched," but it would seem that, based on their characterizations of the examples included in the reading, they might have been influenced by that wording. They use descriptors such as "implausible," "comedic," "exaggerated," "unrealistic," "fake," and "ridiculous," in explaining how the author invalidates or makes light of the "outdated," "primitive" beliefs of the past. Some readers of V2 directly mentioned stories from the section "In the Past" (Bostrom's paperclip story, and The Terminator) that weren't directly attributed to the Romantics in order to evaluate the author's stance toward the Romantics.

His undertone… suggests that their fear was outdated. He uses words such as "classic" to describe their fears which implies that he/she thinks these are primitive beliefs. He also summarizes their beliefs using an implausible theory… which shows that he's not taking their fears seriously nor is he trying to seriously convince us that those fears were rational. It's a bit comedic the examples that he gives…he relates it to the Skynet in Terminator,… the robot company that tries to take over the world or something. And the other one… about all the world's resources going towards something very trivial… paper clips. He gives those very exaggerated examples. (214)

The author compared the Romantics' beliefs if technology to unrealistic things. That makes me believe that the author doesn't think there is a valid reason to believe such things…there was… a line that made me change my answer…that's "practically ancient history". So to me it's like him saying…it's not relevant now.. And then he talks…about the paperclip company. And, the fact that he compared history to a movie,… a fantasy movie. And a lot of times we think of fantasy is fake …it's like…he doesn't believe in it. (211)

…the Romantics… didn't have any good reason,… He says: That's practically ancient history, but looking at what they feared…might give us clues about how and why people fear technology today," Right… It is not giving validity of why they thought that… Like that's kind of ridiculous, but it might give us some understanding… why we fear of technology today. I think it's just like background information to understand…more ourselves today. (203)

Discussion and Conclusion

The Likert scale and open responses to FQ1, FQ2 and FQ5 together demonstrate how different stance cues in V1 and V2 impacted readers' perceptions of author stance. Almost all readers of V1 perceived at least some sense of fear in the author's stance, while readers of V2 tended to express more doubt about the author's point of view. This chapter has reported on the specific textual features that appear to have most impacted readers' assessments of author stance. While responses varied substantially within each group (V1 and V2), comparisons between the two groups revealed some distinct patterns as well. Salient features that influenced readers' understandings of stance included evaluative language, selection of information (data and stories), use of third person instead of first person, and the macro-structure of the text including titles, subtitles, and section divisions.

Interestingly, some of the factors cited most commonly by readers of both V1 and V2 were textual elements that remained constant between V1 and V2: All pieces of evidence (stories, examples, data) presented in V1 and V2 were identical, with only the *manner* in which this evidence was presented (stance cues) having been altered. Yet, while readers of V1 overwhelmingly perceived the selected evidence as biased toward technophobia, readers of V2 tended to perceive it as well balanced. Neither V1 nor V2 contained any usage of first-person singular pronouns. Some of the less experienced V1 readers interpreted this lack of first-person pronoun usage as evidence of neutrality, and many V2 readers across the three course levels did as well.

References to the concluding two paragraphs, which contained the example of Forster's fictional story "The Machine Stops," figured prominently in both V1 and V2 readers' responses to FQ1 and FQ5. While only one sentence within those two paragraphs was altered between V1

and V2, and even though that alteration was relatively minor, V1 readers ascribed fear-inducing significance to the story while V2 readers ascribed fear-mitigating significance. Similarly, the open responses to FQ2 revealed how many readers of V1 felt that the discussion of the Romantics' fear was provided to demonstrate legitimacy of technophobia in both the past and present eras while readers of V2, on the other hand, expressed greater difficulty in understanding why the writer had discussed this historical period. Some struggled to make sense of what they saw as contradiction or ambiguity in the text, sometimes even changing their interpretations during the interview process.

Evaluative, or "charged" (Birk & Birk, 1996) language was explicitly noted by some respondents, and may have also impacted some readers who did not explicitly mention it. One overt stance cue, which differed substantially between V1 and V2 and stood alone in both versions as a single paragraph, contributed heavily to the differences in V1 and V2 readers' interpretations of stance. This stance cue, containing the phrase "naivete and old-fashioned values," guided many readers of V1 to believe that the author was quite concerned about technology and empathetic to those who suffer from technophobia. The alternative and much subtler cue encountered by V2 readers was interpreted by those who commented on it as a distancing device between the author and those who fear technology. The evaluative phrases "ancient history" and "the 'true essence' of man," similarly appeared in both texts, but were often assigned different levels of significance by readers of the two versions, possibly due to the differing stance cues that surrounded them. The phrase "valuable insight," which appeared only in V1, and the phrase "far-fetched stories," which appeared only in V2, were frequently mentioned, also having apparently contributed to the divergence in responses to V1 versusV2.

It would appear from the FQ1 and FQ5 responses that V2 was a more difficult text, as evidenced by the more evenly split Likert scale results (as compared to V1) and the abundant expressions of doubt observed in the open responses. Although V2 had been crafted to represent a pro-technology viewpoint, only a slim majority of readers perceived it that way on the Likert scale, and many appeared to struggle when attempting to assess the author's overall stance. Faced with an ambiguous text, many V2 readers were able to tap into distancing stance phrasing (such as the sentence containing "naivete and old-fashioned values") while others defaulted to more familiar (but perhaps less effective) reading strategies, such as noting the macrostructure of the text, or the absence of first-person pronouns, or noting the use of charged vocabulary or presence of strong claims while ignoring or misreading the stance cues that *frame* those textual elements and offer clues about the author's stance.

Perhaps the most interesting pattern observed in the open responses to FQ2 was the frequency with which V1 readers avoided responding directly to the question as posed. In one case, it became clear during the interview that the reader (an L2 international student with no prior English-medium Education) had simply misunderstood the question, and could begin updating her response following clarification. Additional readers who did not answer the question directly appeared to have dropped one or both layers of meta-awareness necessary for a full response. While one V1 reader responded as if to a comprehension question about the Romantics' feelings, several others responded by expressing their *own* stance about the plight of the Romantics. Possible reasons for this pattern in response to V1 along with theoretical and pedagogical implications will be addressed in the following chapter.

Chapter 6
Discussion and Conclusion

Advanced proficiency in academic discourse develops when readers attend not only to basic propositional meanings of texts, but also to metadiscoursal cues that convey nuanced meaning beyond that core. Entering the "conversation" in Burke's metaphorical parlor entails careful "listening" to textual clues. In the absence of sound or body language, a reader must learn to listen for the textual elements of tone, which may be subtle and can take numerous forms, some of which are addressed in this study. Developing sensitivity to content-evaluative metadiscourse can empower readers in their pursuit of full membership in a discourse community.

The challenges of perceiving and interpreting nuanced textual cues effectively are always present, especially for readers encountering a discourse community. Regardless of socioeconomic, linguistic, or educational background, and regardless of ultimate academic and professional goals, students can benefit from cultivating mindful reading, as recognized by Carillo (2017), and from close attention to linguistic detail, as recognized by Conference on College Composition and Communication (2021). Content-evaluative metadiscourse in particular presents challenges to readers as it may add complexity and compound difficulty level. Some elements may go unnoticed (such as hedges and attributions), while other elements (such as attitude markers) may be processed at a subconscious level. This study has explored the impact of content-evaluative stance cues (including hedging, boosting, attribution, and attitude markers) on a diverse set of readers from both L1 and L2 backgrounds and across three academic levels. The study aimed to shed light on readers' strategic and cognitive processes, ultimately offering clues about effective pedagogies to promote critical reading and thinking practices.

The impact of differentiated content-evaluative metadiscourse was analyzed through comparison of Personal Response Paragraphs (PRPs) and explicitly stance-oriented Focus Questions (FQs). Respondents had continual access to the text throughout the study activities and were explicitly prompted in each written question (and again orally with each interview question) to review the text and connect their responses to specific elements contributing to their interpretations. This methodology facilitated a thorough exploration of relative saliency of various stance markers, and also revealed patterns of strategy employed in the pursuit of determining stance.

Personal Responses

The PRPs were designed to elicit responses that could help answer the research question: "How might linguistic cues of author stance influence readers' personal responses to persuasive text?" Unlike the Focus Questions that followed, the PRP prompt did not instruct participants to review the text and link their response explicitly to the author's claims, but simply asked them to write a paragraph answering a yes or no question: "Do *you* have technophobia?"

The PRPs explicitly invited top-down processing as participants were encouraged to draw from personal experiences and to free associate with stories they'd heard or read, both real and/or fictional. And participants inevitably did so at length. Many found the topic to be extremely relatable and wrote (and talked) effusively about their experiences with technology, expressing a wide range of concerns and enthusiasm. The prompt asked them to report on their *own* feelings and experiences regarding technology and technophobia, and thus patterns of response to Version 1(V1) and Version 2(V2) looked quite similar. Participants' own goals and interests (as noted by academic majors reported in the demographics questionnaire, and as discussed directly within PRPs) were important factors in the responses. As Schank and Abelson (2013) asserted,

"new information is understood in terms of old information" (p. 67), and textual interpretation is thus based largely on the (often unconscious) knowledge an individual brings into a context. The PRPs responses illustrated, in the words of Rosenblatt (1988) how we as readers draw on our own "inner capital" to "make meaning…by applying, reorganizing, revising, or extending elements…selected from, our personal linguistic-experiential reservoir" (p. 3).

Yet despite the influence of readers' personal backgrounds and the overall similarities in responses to V1 and V2, the contrasting stance cues in the two versions did appear to exert some influence on PRP responses. Close analysis of the two sets of responses suggested that in subtle ways, the tech-wary stance cues in V1 and the tech-enthusiast stance cues in V2 may have activated different schemas in readers' minds which then transferred into their written and interview responses. Of the common themes that emerged as reasons for fearing technology (Job Loss, Loss of Essential "Human-ness," Loss of Privacy, Addiction/Overdependence, and Human Capacity for Meanness), two categories (Loss of Essential "Human-ness," and Loss of Privacy) contained diverging patterns between V1 and V2. Of the common themes that emerged as reasons for NOT fearing technology (Appreciation of Resources, Enjoyment, Confidence in Human Capacity, Exclusion of Self from Vulnerable Class, and Optimism given Inevitability), only Appreciation of Resources revealed any discernable difference between V1 and V2 responses.

The evidence gleaned from intensive comparative analysis suggests that the generalized sense of dread and threat to humanity expressed in V1 may have transferred into some V1 readers' personal responses. In the same manner, the enthusiasm put forth in V2 about the benefits and efficiency of new technologies performing various functions in a wide range of settings appears to have manifested in some V2 readers' personal

responses. Though these differences were subtle, they do raise questions about the cognitive processes behind them and raise questions about the boundaries between the thoughts and attitudes we consider to be "our own" and our (lack of) awareness about why, when, or how such beliefs have arisen.

While it is impossible to trace every influence on one's perceptions regarding a particular topic, advanced readers can develop the habit of consciously considering how a particular source may be impacting their own perceptions. As Bean et al (2007) declare, "All authors have designs upon their readers; they want those readers to see things their way, to adopt their point of view. But rhetorical readers know how to maintain a critical distance and carefully determine the extent to which they will go along with the writer" (p. 4). If the reading process consists of "a complex, non-linear self-correcting transaction between reader and text" (Rosenblatt, 1988, p. 4), a careful reader will have cultivated an awareness of that transaction that allows them to actively monitor the process of how new information gets integrated into the old.

Focus Questions: Advanced Challenges of Rhetorical Reading

The FQs were designed to elicit responses that could help answer the research question: "How might stance markers influence readers' perceptions of the author's position in a persuasive text?" This section of the study analyzed participants' rhetorical reading as defined by Bean et al (2007) as: "pay[ing] attention to an author's purposes for writing and the methods that the author uses to accomplish those purposes" (p. 4). To connect rhetorical purposes with textual "methods," each Focus Question prompted readers to link their responses directly back to the text itself. Those who participated in the follow-up interview were prompted yet again to consult the text when answering each FQ.

Collectively, the numerous stance markings that differed between V1 and V2 significantly impacted many (perhaps most) readers, as indicated by the Likert scale responses to FQ1 and FQ2. The open responses further revealed that some stance cues were far more salient than others. One feature, noted especially by V2 readers, was the use of third person (as opposed to first person) pronouns. Pronoun usage remained constant from V1 and V2; first person singular forms were completely absent from both versions. In the case of V2, the absence of direct "I" statements was successfully noted by numerous respondents as one stance cue among many that served to distance the author from the claims of fearing technology. In the case of V1, a smaller number of readers mentioned the lack of first-person singular, and those who did were among the less experienced readers in the sample. These participants appeared to have over-relied on that cue while missing the abundance cues in V1 suggesting the author's fearfulness.

Attitude markers in the form of evaluative or "charged" language had mixed impact on readers. Certain phrases, such as "valuable insight" and "far-fetched" were mentioned frequently in readers' assessments of stance. While some participants noted explicitly how particular phrases in the text had impacted their interpretations, others failed to indicate what specific wording had influenced their perceptions, even as they mirrored the author's sentiment in their own responses. This suggests the possibility of automatic and subconscious processing of some textual cues. As Fillmore (1976, 2006) theorized, readers interpret words according to cognitive frames or cognitive (and semantic) "domains" of meaning, which may help explain why readers in these cases could perceive and describe the general sentiment of a text without recalling or even consciously noticing the exact wording within the text at hand that contained a particular meaning they attribute to the text.

Another pattern observable across FQ responses to V1 and V2 was a tendency to use stance cues from *one* section of the text to guide interpretations of *other* sections. This pattern became visible in two major ways: the use of modern stories from later sections to analyze of the previous section about the Romantics, and the differing interpretations by V1 and V2 readers about the significance of the final two paragraphs. In the latter case, the cumulative impact of numerous stance cues throughout the earlier sections of the text had likely impacted readers' interpretations of the final two paragraphs, which themselves remained nearly identical. In the former case, readers identified a pattern in the author's purpose in connecting contemporary stories with historical information. This holistic reading process of using one part of the text to reflect on a different part may not have been a conscious strategy, but it nonetheless proved to be an effective process, and perhaps illustrative of Kintsch's (1988, 2005) Construction-Integration model, which describes reading as a process of building a mental representation or "textbase" (a rough preliminary representation of the text's meaning) into which new information may be integrated gradually in the refinement of understanding.

Interestingly, some passages that contained alternate stance cues were never mentioned by any reader of V1 or V2. Table 6.1 illustrates one such passage. While both versions presented an attribution, V1 incorporated boosters (even, soon) and emotionally charged language (worry), V2 incorporates hedges (question, ever). As may be observed in Table 6.1, the two versions differed substantially.

Table 6.1: Alternate Versions of an Attributed Claim—Boosting versus Hedging

Version 1	Version 2
Even some at the forefront of the Artificial Intelligence (AI) revolution worry that machines soon could be better at being human than humans themselves.	Those at the forefront of the Artifical Intelligence (AI) revolution question whether machines could ever get better at being human than humans themselves.

Of course, lack of direct mention does not necessarily mean that these modifications had no impact. They may well have contributed to the reader's thoughts and feelings about the topic at hand, and/or their perceptions of author stance but simply did not rise to the conscious awareness as readily as other cues did.

Version 1: Bypassing the Meta to Embrace Ownership

Overall, participant responses to Version 1 indicated a high level of receptivity to the stance cues which indicated a fear of technology. That receptivity took two major forms: first, most readers of V1 recognized the tone of fearfulness that ran throughout the text, as indicated in their Likert scale responses to FQ1 and FQ2. Second, many adopted a similar tone in their written responses, sometimes answering questions about the text and the author's intent in terms of their *own* feelings and experiences. These respondents bypassed the textual meta-analysis prompted by FQ2 and took direct personal ownership of the propositions put forth in the text.

As Crismore and Vande Kopple (1988) have noted, metadiscourse can add syntactic complexity and potentially create confusion for less experienced readers. Multiple layers of the metadiscourse in FQ2, particularly the double attribution structure, might have affected comprehension and message processing:

Do you think the author believes the Romantics had good reason to fear technology?

Some respondents offered naïve rhetorical hypotheses, as described by Ray and Barton (1989), presenting their interpretations of rhetorical context in personalized terms that would appeal to readers similar to themselves. As Rosenblatt (1988, 1995) explains, readers "compose" their own meanings of the text as they read, based on selective attention, which in turn is "conditioned by multiple personal and social factors entering into the situation" The heavy impact of schema activation, that is, the activation of a readers' personal thoughts and

experiences in connection to a textual topic, manifested most vividly in the FQ2 response excerpted below, which injected contemporary circumstances into a response about the author's portrayal of forced transition from field to factory work in the late 1800s. Both layers of attribution were removed, and the topic shifted from representation of historical people to the more general plight of working people in both sweatshops and fields.

People are put in sweatshops and forced to work themselves sick and get underpaid and others are placed on fields to work in the midst of fires and heat. (105)

Version 1 deployed a consistent set of stance cues that conveyed fearfulness, both on the part of the author himself and also of the people mentioned and cited within the text. It would appear that these stance elements resonated strongly for some readers, which may have facilitated their "adoption" of the author's stance into their own responses. Perhaps congruity of topic and stance (the topic being "technophob*ia*" and the stance "technophob*ic*") allowed for reading fluency and confidence, thus facilitating reader ownership of the content.

Version 2: Muddling through Ambiguity

Overall, V2 readers expressed much less certainty than V2 readers regarding author stance. Although the text was crafted to downplay fear of technology and emphasize its benefits, many V2 readers from the different academic levels expressed ambivalence in their own assessment of author stance, and/or pointed to ambiguity or contradiction within the text itself. Unlike V1, V2 was characterized by incongruity of topic (technophobia) and stance (NOT technophobic), which may have elevated the difficulty level. While some skillfully discussed the confounding factors and compared the merits of possible interpretations, others grasped confusedly in search of clarity resorting to shortcuts toward that end, while still others appeared to mostly have ignored the numerous stance cues that downplayed any reason to fear technology.

Several V2 readers demonstrated remarkably advanced rhetorical reading as they weighed the impact of various stance cues and pondered what additional information might be needed to interpret the text with more certainty. Others appeared to rely on shortcuts to reconcile ambiguities, which resulted in more shallow readings of the text. These shortcuts included judging stance based on topic selection, based on the macro-structure of the text, or based on the presence of particular words without consideration of the full semantic and syntactic context (such as hedges and attributions) in which those words appeared.

A few readers reasoned that an author would only address a topic like "technophobia" if they themselves shared that fear and thought others should be fearful as well. In some reading contexts, the central topic of a text itself may be ample and valid evidence to assume a particular stance, but a reader who automatically jumps to that conclusion could miss the presence of more nuanced ideas. Similarly, macro-structure (organization) can provide legitimate clues about genre conventions which may in turn be linked to stance. In this case, the text was organized into three major sections with subtitles based on chronology, which gave many readers the impression of a formal (and thus bland and neutral) report. The assumption of neutrality associated with the macro-structure may have diminished the impact of non-neutral stance cues on some readers.

Judging stance based on the presence of particular word choice is not unreasonable, but failing to take into account the semantic and syntactic contexts in which those words appear may result in faulty assessments. The limitations of this reading shortcut manifested in the responses of a few V2 readers who noticed negative sounding words and concluded that the article overall must be negative (and thus anti-technology), without considering factors such as hedges and attributions, which signal distance between author and content. These responses bring to mind

the results likely to be yielded by artificial intelligence sentiment analyses and may lend validity to the lexical invisibility hypothesis as proposed by Low (1996) and observed by Hyland (2000).

Pedagogical Implications: Explicit Instruction in Rhetorical Reading

If tertiary educators are justified in providing explicit instruction in reading strategies, as advocated by Carillo (2017) and CCCC (2021), this study may point toward a few areas within reading that may be addressed. As a foundation, students may benefit from introduction to the craft of mindful reading, which entails developing multiple strategies according to purpose and "paying close, deliberate attention to how you are reading and how each strategy works," continually "tracking how *well* you are reading" (emphasis mine) and adapting accordingly (Carillo, 2017, p. 9). With this foundation of meta-awareness, students can select the most useful strategies in each context, gradually expanding and refining their repertoires along with increased exposure to research, reports, and other essential genres across disciplines and especially within their chosen academic and professional fields.

Participants' responses both to the relative simplicity of V1 and to the complexity of V2 point toward the need to facilitate meta-awareness of reading processes. When author stance intuitively matches topic, readers may connect easily to the author's claims and find it difficult to maintain critical distance when responding to the text. Instructors may guide students in pre-writing and other schema-activation to focus awareness on what readers know about a topic beforehand so that they can later reflect intentionally on how their views have changed as a direct result of exposure to new information. Students may also benefit from mapping or charting out the claims of the various voices represented in a nonfiction text, including the author and all entities mentioned and/or cited, thus making explicit for them the conversational nature of reading, and of participating in a discourse community more broadly. Metacognitive awareness

may also be facilitated by some basic orientation to the different ways in which we process information both on the cognitive and emotional levels. Awareness of how messages could impact readers beneath the conscious level and of how particular words could unlock unexpected chains of associated meanings can empower readers to engage in deeper learning processes. In approaching more complex texts such as V2, helpful scaffolding might include guiding the process of multiple readings through the same text—through a different lens each time. Thorough processing of complexity requires approaching the task from various angles, but no reader can attend to everything at once. Guided narrow-purpose readings can expand the readers' toolkits and help prevent over-reliance on a small set of default strategies. Responses to V2 suggest that it may be especially useful to support students in alternating attention between macro-structural features (overall organization of the text) and micro-elements such as attribution, hedges, and the implications of specific word choices. In this way, students may develop sensitivity to an author's point of view as a whole and to the numerous components through which those views have been communicated.

Limitations and Directions for Future Research

The limitations of the present study point to an abundance of opportunity for expanded research. As it was necessary to narrow the scope of this study to enhance feasibility, several complicating elements were eliminated from the text, including the website context with its graphics, author information, and links to external articles. Future research on content-evaluative language may incorporate these typical online elements with the goal of analyzing how readers process an article's wording along with these accompanying factors and how the various lexical and other textual and/or visual elements interact in the interpretation process. Alternatively, an element of comparative reading could be incorporated in a very controlled way,

with participants first responding to one version of a text then being exposed to a contrasting version as another layer of discovery. Research could also be designed as classroom intervention that feeds directly into pedagogical approaches to enhance meta-awareness in reading.

My intention with this study has been to explore how variation of one linguistic and rhetorical category might alter readers' personal thoughts regarding an article's topic and/or their perceptions of author stance. The participants' responses suggested that the adjustments made to content-evaluative metadiscourse had impacted the ways in which they related to the content along multiple dimensions, perhaps not only cognitively and intellectually, but viscerally and subconsciously. As our information ecology increases in complexity, the imperative to practice and teach strategic rhetorical reading will continue to expand. As content creators compose and design with persuasive goals that may not match our interests, the power of readers (and listeners and viewer) to reflect, question, and compare will remain essential.

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Appendix A (Original Text)

Are You Suffering From Technophobia?

By Sam Bocetta
Oct 31, 2019 4:00 AM PT

The fear of technology has been around for as long as technology itself, and like technology itself, this fear is always changing.

There is evidence of "technophobia" -- the technical name for this affliction -- in every age and in every part of the world. However, it is perhaps reaching a peak in modern society. Americans are more afraid of technology than death, suggests research conducted in 2019. Specifically, they fear what technology will do in the future.

Many of Americans' greatest fears -- economic collapse, another world war, not having enough money for retirement -- concern the state of tomorrow, according to a 2017 survey.

While some technology-related fears are rational and visceral -- like someone spying through your webcam, your smart speaker eavesdropping on you, or losing your home Internet of Things network to the next DoS attack -- others are of a more general form.

In the past, people feared that technology would take them away from their "true" selves. Today, we fear that technology is too human.

Technology as Anti-Human

Perhaps the first sophisticated critique of what technology's impact on the world was articulated by the Romantic poets. That might seem like ancient history, but looking at what those poets feared can give us a valuable insight into how -- and why -- people fear technology today.

The Romantics thought, specifically, that the technologies the Industrial Revolution unleashed upon the world might destroy the "true essence" of man. Machines and factories drew people away from the fields and forced them to work long hours on production lines. The machines, in short, were forcing humans to become machines themselves.

There was also a fear that the machines were too efficient, and that they would make humans obsolete. This fear is the same one that informs SkyNet in the *Terminator* films, but it has a longer history than that. Take, for example, the thought experiment put forward by Oxford professor Nick Bostrom. He invites us to imagine a paperclip company that creates an artificial superintelligence and tasks it with the single goal of making as many paperclips as possible. The company's stock soars, and humanity enters the golden age of the paperclip.

Then something unexpected happens. The artificial intelligence surveys the natural resources needed to survive and decides they could go a long way toward paperclip manufacturing. It

consumes those resources in an effort to fulfill its prime directive, "to make as many paperclips as possible," wiping out humanity in the process.

This is a kind of technophobia that we could call the "classic" form. The fear is that technology is an inherently antihuman force, and eventually will wipe us out.

Technology as Too Human

As technology has developed, so have our fears. Today, most of us fear technology for another reason. Rather than new technologies being anti-human, and eliminating us as a species, we fear that they are too human and too good at mimicking us as a species.

This kind of fear is the source of the unsettling "uncanny valley" effect associated with realistic AIs and robots. It is tempting to write-off this kind of fear as the product of naivete or old-fashioned values, but that would be a mistake.

Even those at the forefront of the AI revolution worry that machines soon could be better at being human than humans themselves.

"I'm very close to the cutting-edge of AI, and it scares the hell out of me," remarked Elon Musk, CEO of Tesla and SpaceX, at SXSW 2018.

Musk is not alone in recognizing a problem. Nearly 70 million people could lose their jobs to automation by 2030, requiring a wholesale reconfiguration of the world economy, a McKinsey Global Institute study suggests.

Even more alarming is the fact that many of the AI tools we use today are the direct product of military research, and have been developed with weaponry in mind. Eventually AI could automate terrorism, mass-produce propaganda, and streamline hacking to devastating effects, some experts have postulated.

It's no wonder that citizens already are worried about hostile drones.

In short, our fear of technology today is slightly different than it was in the past. Rather than fearing that machines will eliminate us, many now fear that they will become us.

But What If They Stop?

This last point actually captures something that is often overlooked when talking about fear of technology. In many ways, the technologies we use have become us, and we rely on them to an unprecedented degree. In this context, "fear of technology" becomes something more like "fear of ourselves."

Take, for instance, the very modern fear that tech companies exploit us, and that the government is watching us. While a majority of people oppose this type of surveillance, in reality most of us

are totally dependent on smartphones created by tech companies and mobile networks overseen by governments.

In fact, most of us rush toward the convenience these devices offer, and increasingly seek to hand over our everyday tasks to technology at the workplace.

When it comes to modern customer service, chatbots do the talking for us. Want an online presence? You might not need a Web designer anymore, because today's top website builders are powered with various AI algorithms that work cheaply enough to price human designers out of the market. Eventually, perhaps, these same machines will make us immortal.

With this in mind, let's do a thought experiment. What if technology ceased to exist tomorrow? This is precisely what happens in one of the oldest pieces of science fiction -- and to my mind, one of the most prophetic -- *The Machine Stops*, by E. M. Forster. Forster imagines a world in which everybody is totally reliant on technology, living in small, isolated "cells" with their every desire provided by "The Machine." One day, it stops.

In the story, the citizens of Forster's world are freed from their daily routine, and eventually work out how to live without technology. I fear that if the equivalent were to happen today, we would not fare as well. That, perhaps, is the irony of technophobia today -- that while we fear the technologies that surround us, we fear their absence more. ECT

Appendix B: (Modified Text, Version 1)

Technophobia

The fear of technology has been around for as long as technology itself, and like technology itself, this fear is always changing.

There is evidence of "technophobia" -- the technical name for this affliction -- in every age and in every part of the world. However, it is perhaps reaching a peak in modern society. Americans are more afraid of technology than death, suggests research conducted in 2019. Specifically, they fear what technology will do in the future.

Many of Americans' greatest fears -- economic collapse, another world war, not having enough money for retirement -- concern the state of tomorrow, according to a 2017 survey.

In the past, people feared that technology would take them away from their "true" selves. Today, they fear that technology is too human.

In the Past

Perhaps the first sophisticated critique of technology's impact on the world was articulated by the Romantic poets in the late 1800s. That might seem like ancient history, but looking at what those poets feared can give us a valuable insight into how -- and why -- people fear technology today.

The Romantics thought, specifically, that the technologies the Industrial Revolution unleashed upon the world might destroy the "true essence" of man. Machines and factories drew people away from the fields and forced them to work long hours on production lines. The machines, in short, were forcing humans to become machines themselves.

There was also a fear that the machines were too efficient, and that they would make humans obsolete. This fear is the same one that informs SkyNet in the Terminator films, but it has a longer history than that. Take, for example, the thought experiment put forward by Oxford professor Nick Bostrom. He invites us to imagine a paperclip company that creates an artificial superintelligence and tasks it with the single goal of making as many paperclips as possible. The company's stock soars, and humanity enters the golden age of the paperclip.

Then something unexpected happens. The artificial intelligence surveys the natural resources needed to survive and decides they could go a long way toward paperclip manufacturing. It consumes those resources in an effort to fulfill its prime directive, "to make as many paperclips as possible," wiping out humanity in the process.

This is a kind of technophobia that we could call the "classic" form. The fear is that technology is an inherently antihuman force, and eventually will wipe us out.

Technophobia Today

As technology has developed, so have people's fears. Today, many fear technology for another reason. Rather than new technologies being anti-human, and eliminating the species, modern humans fear that technologies are too human, too good at mimicking human beings.

It is tempting to write-off this kind of fear as the product of naivete or old-fashioned values, but that would be a mistake.

Even some at the forefront of the Artificial Intelligence (AI) revolution worry that machines soon could be better at being human than humans themselves. A McKinsey Global Institute study indicates that nearly 70 million people could lose their jobs to automation by 2030, requiring a wholesale reconfiguration of the world economy.

In short, fear of technology today is slightly different than it was in the past. Rather than fearing that machines will eliminate us, many now fear that they will become us.

But What If They Stop?

This last point actually captures something that is often overlooked when talking about fear of technology. In many ways, the technologies we use have become us, and we rely on them to an unprecedented degree. In this context, "fear of technology" becomes something more like "fear of ourselves."

Take, for instance, the very modern fear that tech companies exploit us, and that the government is watching us. While a majority of Americans oppose this type of surveillance, in reality most are totally dependent on smartphones created by tech companies and mobile networks overseen by governments.

In fact, most of us rush toward the convenience these devices offer, and increasingly seek to hand over our everyday tasks to technology at the workplace.
When it comes to modern customer service, chatbots do the talking for us. Want an online presence? You might not need a Web designer anymore, because today's top website builders are powered with various AI algorithms that work cheaply enough to price human designers out of the market. Eventually, perhaps, these same machines will make us immortal.

With this in mind, here is a thought experiment. What if technology ceased to exist tomorrow? This is precisely what happens in one of the oldest pieces of science fiction -- and to my mind, one of the most prophetic -- The Machine Stops, by E. M. Forster. Forster imagines a world in which everybody is totally reliant on technology, living in small, isolated "cells" with their every desire provided by "The Machine." One day, it stops.

In the story, the citizens of Forster's world are freed from their daily routine, and eventually work out how to live without technology. If the equivalent were to happen today, humanity might not fare as well. That, perhaps, is the irony of technophobia today -- that while people fear the technologies that surround them, they fear the absence of those technologies even more.

Appendix C (Modified Text, Version 2)

Technophobia

The fear of technology has been around for as long as technology itself, and like technology itself, this fear is always changing.

There is evidence of "technophobia" -- the technical name for this affliction -- in every age and in every part of the world. However, it is perhaps reaching a peak in modern society. Strangely, Americans are more afraid of technology than death, suggests research conducted in 2019. Specifically, they fear what technology will do in the future.

Many of Americans' greatest fears -- economic collapse, another world war, not having enough money for retirement -- concern the state of tomorrow, according to a 2017 survey.

In the past, people feared that technology would take them away from their "true" selves. Today, they fear that technology is too human.

In the Past

Perhaps the first major criticism of technology's impact on the world was launched by the Romantic poets in the late 1800s. That’s practically ancient history, but looking at what those poets feared might give us clues about how -- and why -- people fear technology today.

The Romantics thought, specifically, that the productivity-enhancing technologies the Industrial Revolution introduced to the world might somehow destroy the "true essence" of man. Machines and factories drew people away from the fields and lured them to work on production lines. The machines, they thought, were forcing humans to become more machine-like themselves.

There was also a fear that the machines were too efficient, and that they would make humans obsolete. This fear is the same one that informs SkyNet in the Terminator films, but it has a longer history than that. Take, for example, the far-fetched story put forward by Oxford professor Nick Bostrom. He invites us to imagine a paperclip company that creates an artificial superintelligence and tasks it with the single goal of making as many paperclips as possible. The company's stock soars, and humanity enters the golden age of the paperclip.

Then something unexpected happens. The artificial intelligence surveys the natural resources needed to survive and decides they could go a long way toward paperclip manufacturing. It consumes those resources in an effort to fulfill its prime directive, "to make as many paperclips as possible," wiping out humanity in the process.

This is a kind of technophobia that we could call the "classic" form. The fear is that technology is an inherently antihuman force, and eventually will wipe us out.

Technophobia Today

As technology has developed, so have people's fears. Today, many people fear technology for another reason. Rather than viewing new technologies as anti-human and threatening the species, modern humans fear that technology is too human-like, too good at mimicking human beings.

This kind of fear may be just the product of naivete or old-fashioned values.

Those at the forefront of the AI revolution question whether machines could ever get better at being human than humans themselves. But a McKinsey Global Institute study suggests that nearly 70 million people could lose their jobs to automation by 2030, requiring some restructuring of the world economy.

In short, fear of technology today is slightly different than it was in the past. Rather than fearing that machines will eliminate us, many now fear that they will become us.

But What If They Stop?

This last point actually captures something that is often overlooked when talking about fear of technology. In many ways, the technologies we use have taken on more human-like roles, and we rely on them to an unprecedented degree. In this context, "fear of technology" becomes something more like "fear of ourselves."

Take, for instance, the very modern fear that tech companies could exploit us, or that the government might be watching us. Of course a majority of Americans oppose this type of surveillance, and most enjoy using smartphones created by tech companies and mobile networks overseen by governments.

In fact, most of us rush toward the convenience these devices offer, and increasingly benefit from handing over our everyday tasks to technology at the workplace. When it comes to modern customer service, chatbots can talk for us. Want an online presence? You might not need a Web designer, because today's top website builders are powered with various AI algorithms that work with an efficiency surpassing that of human designers. Eventually, perhaps, these same machines will make us immortal.

With this in mind, here is a thought experiment. What if technology ceased to exist tomorrow? This is precisely what happens in one of the oldest pieces of science fiction -- and to my mind, one of the most prophetic -- The Machine Stops, by E. M. Forster. Forster imagines a world in which everybody is totally reliant on technology, living in small, isolated "cells" with their every desire provided by "The Machine." One day, it stops.

In the story, the citizens of Forster's world are freed from their daily routine, and eventually work out how to live without technology. The reader is left to wonder whether humanity would fare as well if the equivalent were to happen today. That, perhaps, is the irony of technophobia today -- that while people may fear the technologies that surround them, they fear the absence of those technologies even more.

Appendix D: (Part 1 of the study, as it appeared on Qualtrics)

(Section 1: Introduction)

Welcome to the Readers' Response Study!

Please do this activity on a laptop, not a phone. You will not have enough screen space on a phone.

You will be reading a non-fiction text and responding to a series of questions.
This will give you practice in close critical reading. We hope that the results of this research will help teachers understand how they can guide students to become better readers.

Confidentiality

As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk. Your responses to the text may include information that identifies you. This identifiable information will be handled as confidentially as possible. However, individuals from UC Davis who oversee research may access your data during audits or other monitoring activities. To minimize the risks of breach of confidentiality, we will ensure that only the researcher has access to the responses you provide.

Compensation

You will not be paid to complete this study. If you choose to participate in the follow-up interview, you will receive a $50 gift card for Amazon as a thank-you gift, which will be sent to you within one month of your participation.

Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and you can stop taking part in the project at any time. Whether or not you choose to participate, or answer any question, or stop participating in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

Amy Lombardi, PhD Candidate, Linguistics
If you have questions about this study, you may contact the researcher at
(415) 515-5931 or ajlombardi@ucdavis.edu

(Section 2: Demographic Data)

Which writing class are you currently taking?

UWP 21
UWP 22
UWP 7M
UWP 1

What is your major (or intended major) at UC Davis?

What was your first language? (If you grew up speaking multiple languages equally, you can give more than one answer here)

How many years have you attended an English-medium school? (Where all classes are taught in English). This could be either in the U.S. or another country.

- 0 (I am a first year student at UCD and my previous schooling has not been primarily in English)
- 1- 2 years
- 3-5 years
- 6-8 years
- More than 8 years

How would you rate your reading ability in English?

- Excellent---I can usually understand what I read quite clearly.
- Good—I can usually understand what I read, though some topics or writing styles may be difficult for me.
- Fair—I often struggle to understand the author's ideas

(Section 3: Presentation of Text and Personal Response Paragraph.)

Instructions: Download the attached file "Technophobia," read it, and answer the questions that follow. You will need to refer back to the reading as you answer the questions. It will be helpful to save the file and then keep it open in a separate tab for easy access. PLEASE NOTE THAT YOU WILL NOT BE ABLE TO RETURN TO THIS SECTION LATER.

(Qualtrics randomly assigned either Version 1 or Version 2 to each participant)

Freewrite Response:
In the text that you have just read, the author describes "technophobia"-- a fear of technology.

Do you personally have technophobia? Please write a short paragraph (about 4-5 sentences) explaining how you do and/or don't fear technology. In this informal response, you may include whatever thoughts and examples come to mind. PLEASE NOTE THAT YOU WILL NOT BE ABLE TO RETURN TO THIS QUESTION ONCE YOU HAVE SUBMITTED YOUR RESPONSE.

(Section 4: Follow-up Focus Questions and Invitation to Participate in Part 2)

1. Does the author believe that people SHOULD be afraid of technology?

Yes, very much so. Yes, a little bit. No, not very much. No, not at all. I can't tell.

Please explain HOW you determined your answer—referring directly back to the text.

2. Does the author think the Romantics had good reason to fear technology?

Yes, very much so. Yes, a little bit. No, not very much. No, not at all. I can't tell.

Please explain HOW you determined your answer—referring directly back to the text.

3. Why do you think the author tells the story about a paperclip company?

Please explain HOW you determined your answer—referring directly back to the text.

4. How does the author feel about the conveniences provided by today's technology?

Please explain HOW you determined your answer—referring directly back to the text.

5. Overall, how would you describe the author's attitude toward technology and technophobia?

Please explain HOW you determined your answer—referring directly back to the text.

The researcher will be conducting follow-up video interviews. Each interview participant will receive a $50 gift certificate to Amazon as a thank-you gift. Are you interested in participating in a follow-up interview?

Yes
No

Please provide your contact information below so that the researcher may schedule a follow-up interview with you. (Displayed only if participant responded "Yes" to the previous question)

Thank You for Your Participation!

If you have any questions about this research, please feel free to contact the investigator, Amy Lombardi, at (415) 515-5931 or ajlombardi@ucdavis.edu.

If you have any questions about your rights or treatment as a research participant in this study, please contact the University of California Davis, Institutional Review Board at 916 703 9158 or HS-IRBEducation@ucdavis.edu.

Appendix E (Interview script as submitted to IRB)

Text-Based Interview Script (Semi-Structured)

The interviews in this study will be text-based, meaning that all of the interviewer's questions will be tied directly to the subject's written responses to the reading entitled "Technophobia" (also attached).

During the interview process, the reading, "Technophobia," and the participant's own responses to the reading, will be visible on the screen. The PI will ask the participant to refer back to the text during the interview.

Interviews will be semi-structured; follow-up questions may be posed when a participant has provided an interesting or unanticipated response.

The basic script will be as follows:

Part 1: (In reference to students' paragraph in response to the text)

> *PI: "Here you have mentioned that _____. Can you tell me more about that?"*

Part 2: (Repeated 5 times for each of the 5 previously written responses)

> *PI: "Here you have responded that _____Can you explain more about why you responded this way? Can you show me in the text what gave you this impression?"*

Follow-up Questions: Follow-up questions may be posed when a participant gives an unexpected or otherwise interesting answer. The purpose of any such question will be to better understand the participant's cognitive process of reading, and to guide the him/her toward a closer reading.

For example, the PI may ask question such as:

"Is there a particular word in that sentence that lets you know how the author feels?"

"Why did you focus on this particular section of the text to answer that question?

"What if the author hadn't mentioned this detail? Would that change your perception of

_____