The Transhumanist Tapestry
Unraveling Roles of Author and Audience

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"Nothing is so painful to the human mind as a great and sudden change."
(Shelley, 1818/1993, Chapter 23)

IN THE BIRTH OF THE SCIENCE FICTION GENRE, Shelley captures so beautifully the tension between the masterful and minacious use of a certain dimension of technologies—ones that carry with them the forbidden fruits of scientific/technological knowledge. *Frankenstein's* exploration of uniquely human properties may serve as a reminder once more as the proliferation of consumer-facing AI has given rise to understandable anxieties about the consequences of such technologies.

This comes on the heels of fears about the effects of the nearly ubiquitous use of social media among adolescents and the concerns for its long-term effects. However, these kinds of affective responses to new technologies are hardly new. There was once a time wherein the spread of a broader reading public, in the wake of the invention of the printing press, caused panic about what the masses would do with such unfettered access to information (Furedi, 2015). It is not that any of these responses in the face of new media are wrong, but rather that they are predictably *human.*

These human responses are often considered to be purely intellectual; in reality, human beings think and feel simultaneously, with mind and body. The emerging technology drives not only intellectual panic but embodied/felt panic as well. Anxiety, excitement, and curiosity in response to emergent media are embodied responses. To put it pedantically—we *feel* our feelings. They sit in lumps in our throats, keep time in accelerated heart rates, and reverberate and hum through our nervous system. As Gumbrecht (as cited in Engberg et al., 2022) reminds us, "The affective experience is about being touched from the inside" (p. 12). To embrace these feelings—to be able to be touched from the inside—is at the heart of the human experience.

We have, however, forgotten this. Humanist thinking has privileged the thinking-being over the feeling-being. We have, for so long, believed that we "think, therefore we are" (Descartes, 1637/1986, p.73). Locating our humanity dominantly in our consciousness rather than our bodies makes the boundaries we tread today particularly fraught. Machines are beginning to replicate the kinds of language and writing that once held a keystone role in our construction of humanity as a

distinctly sacrosanct species. Hayles (2000) argues that "the erasure of embodiment is performed so that 'intelligence' becomes the property of the formal manipulations of symbols rather than the enaction of the human life world" (p. xi). We had thought for a time that our ability to reason through language, communicate, document, and archive our experiences set us apart from other animals and situated us as hierarchically superior (Abram, 2012). Ignoring the implications this has for the ecosystems humans inhabit (which are vast and demand significant attention beyond the scope of this work), this hierarchy is beginning to come into question.

The boundaries of humanity are blurring, none more so than the boundaries between humans and machines. In this way, transhumanist thinking is changing the ways we interact with the world and demands that we reevaluate what this means for education. It is in our daily interactions with technology that the line between human/machine becomes unclear. Digital culture propels us to read at all times, and it also reads us as never before: "our movements in and across space, our shopping habits, our usage of data sets, our listening to music, our eye movements, and our attention spans" (Koepnick, 2022, p. 219). Emerson (2014) suggests that each occasion of engaging with digital interfaces becomes a *readingwriting*; "the practice of writing through the network, which as it tracks, indexes and algorithmics every click and every bit of text we enter into the network, is itself constantly reading our writing and writing our reading" (p. xiv). As humans, we read and at the same time are read by technology. We are increasingly being produced or at least distributed by technologies that surround us in a post-phenomenological position (Ihde, 2007). The students in our classrooms today have been born into this technology-rich culture and their "selves" are produced and distributed in ways that extend beyond our current imaginings.

This digital entanglement of machines and minds, of reading and being read, stands as an invitation to interrogate the historical relationship between reader and writer, audience and author, student and teacher. We must uncouple our understanding of this relationship away from a fixed binary to understand it as a symbiotic and dialogic relationship (Bakhtin, 1929/2013). Our ever-evolving dynamic with communicative technologies has made it such that author and audience, teacher and learner, occur simultaneously and are often one and the same; the *readerwriter* has become part human, part machine—parts that are often interwoven and deeply inseparable.

Unraveling Authorship

For the purposes of this paper, I frame concepts of writing and authoring broadly to include not only language-based texts but screen-based literacies as well. Kress (2003) argued that, as the screen begins to subsume the page, traditional writing may too increasingly become subordinated. He argued that we must consider "what reading is; what the functions of writing are; what the relations of language to thinking, to imagination, to creativity might be" (p. 22). This is not to say that writing or even language-based communication is obsolete, but rather that its dominance is no longer unquestioned. Reading and writing are no longer a purely alphabetic endeavor, as we continue to think and communicate in multimodal and embodied ways.

Our students have grown up with technology that has shaped us into an image-rich culture. The image-rich culture we find ourselves in means that "questions of communication and composition absolutely will include the visual, not as an attendant to the verbal but as complex communication intricately related to the world around them" (George, 2002/2011, p. 785). This has only grown in urgency since the early 2000s. The widespread accessibility of video

communication means that the metalinguistic elements of language, including our embodied communications, are reproduced and spread more frequently and more widely than ever before. In this changing landscape, it is insufficient for contemporary classrooms, particularly English classes, to grapple with only alphabetic texts. As our cultural conceptions and practices around communication shift so too must our teaching practices.

Within this broad framing of reading and writing acts, the role of the author is highly negotiable. There is a long theoretical tradition that questions the role and independence of authorship. Whether it be Barthes' (1967/1977) proclamation that "The Author is Dead" or Foucault's (1969) questioning of "What Is an Author," both post-structuralists work to destabilize the author's authority over a work. In so doing, they each, in many ways, echo Bakhtin's (1929/2013) dialogic framing away from a single voice toward plural voicing. Bakhtin argues,

> To be, means to be for another, and through the other for oneself. A person has no sovereign internal territory, he is wholly and always on the boundary; looking inside himself, he looks into the eyes of another or with the eyes of another. (p. 287)

We can see parallels to this in Barthes'(1967/1977) descriptions of texts as "multi-dimensional space[s] in which a variety of writings, none of them original, blend and clash. The text is a tissue of quotations drawn from the innumerable centers of culture" (p. 146). This is the same idea as the heteroglossia of Bakhtin's conception. There is no single author to a text, but rather an authorship of plurality. All of our writing is, in turn, the voices of others.

But we must ask, whose voices are echoed in Language-Based Artificial Intelligence? AI is able to replicate the same kinds of writing only humans had previously been able to produce. By analyzing vast amounts of text, these models have identified patterns in language and are able to reproduce human language. In essence, these models have become experts on speech genres (Bakhtin, 1929/2013) and conversation analysis (Sacks, 1992)—albeit perhaps an incomplete version. Generative AI will always be one step behind. Unlike humans, it will not on its own invent slang or alternative usage of words and phrases. At present, it has no impulse to modify or change language. These generative language models were never going to write *A Clockwork Orange*, coin new phrases the way Shakespeare did, or play in the realm of language the way comedians do.

That being said, there are a great number of things it can do and do well. It can analyze our text, recognize speech genres and the anticipated utterances possible within them, mix and match language, and perform tasks of conversation and writing. What it produces is much akin to the way we paraphrase one another—the things we have read and the conversations we have had. What is original in this type of writing is the *way* you bring these multiple sources together. Our compositions, like the compositions of generative AI language models, are interwoven ideas influenced by others. If we embrace the notion that we are all a bricolage of the knowledge we have experienced, then it follows that AI language models are part of that same intellectual community.

What, perhaps, drives some of the panic and fear around this technology is how it will in turn shape our discourse and by extension shape people and cultures. While we have historically shaped our own discourses and, in turn, those discourses have (re)shaped us, there is understandable concern for what role generative AI will play in the construction of new discourse. This is directly related to the disembodied nature of these digital multi-voiced authors. Bakhtin (1929/2013) argues that

> a person participates wholly and throughout his whole life: with his eyes, lips, hands, soul, spirit, with his whole body and deeds. He invests his entire self in discourse, and this discourse enters into the dialogic fabric of human life, into the world symposium. (p. 293)

With no eyes, lips, hands, soul, or spirit, Language-Based AI enters into our discourse. It is the reader of these texts who projects onto the language the embodied realities of these words. A chatbot has no obligation to "invest its entire self in the discourse," yet its words still enter into "the dialogic fabric of human life"—disembodied from the author, yet re-embodied in the audience.

The disembodiment of AI authorship also means that we must reckon with multi-vocality in a new way. When the multi-voiced author is embodied within a single being, we are able to reconcile ownership and authorship. Neo-liberalist thought frames authorship around ownership. Neoliberalists ask: who owns this content, concept, or particular arrangement of words? What body produced this content? Neoliberalists do not recognize the multi-voiced elements of all authorship. This is not to say that individuals do not deserve credit for the novel ideas and phrasings they produce, but rather that this tension between ownership and multi-voiced writing helps to explain some of the anxieties around this AI-produced writing. It is difficult to ascribe capitalistic notions of ownership to the texts produced by AI chatbots. AI chatbots produce writing by mixing and rearranging the language of many data sets. Though sometimes jarring, these are the ever-evolving epitome of dialogic multi-voiced writers, quite unlike their embodied counterparts.

Of course, this comes in tension with the anti-capitalist ideas that are often foundational to many creative communities, including authors and artists. For many creators, ownership of content is tied to creating in pursuit of originality and ingenuity yet in opposition to capitalism. Meanwhile, multi-voiced AI has the power to perpetuate capitalism and serves corporate masters by taking from individual creators and collapsing their multi-vocality to give their AI models something new to say. One danger is that we are not meaningfully recognizing this collapse of the individual. We must urgently frame for students that the content AI produces is not pulling from a singular, nor attributable source, but rather generating new content based on many voices, each uncompensated for their creative labor. AI does not account for whose voices or perspectives are being leveraged in this way.

In recognizing these chatbots as multi-voiced authors, the real concern is not just AI's ability to mix and match language in the same ways that humans can, but rather that they brutally reflect back to us our own corruptions. AI is imbued with all of the belief systems, biases, and assumptions of its creators. As Noble (2018) argues, "algorithms are, and will continue to be, loaded with power" (p. 171). In this way, old forms of oppression are given new affordances. These new affordances of oppression come in many forms. AI image generators reproduce images of individuals laden with ableist, ageist, sexist, and racist undertones—for example, when asking DALL-E to produce an image of an autistic individual, almost all compositions are of a young white boy. Language models too are laden with similar biases: as individuals type, auto-correct struggles to keep up with code-switching, underlining in red the natural language of individuals and reaffirming a standardization of grammatical constructs.

Through their texting, use of filters on social media, and their drafting of more traditionally academic compositions, our students are already producing and being produced by algorithmic compositions. Concepts of critical media literacy need to be supplemented with deeper conversations that promote algorithmic literacy, that move beyond critiquing and evaluating a singular text, and instead interrogate the substructures that underpin algorithms producing multiple

texts. Students can use their own feeds and experiences to critically evaluate the ways their identities, and the identities of others, are being produced and distributed in digital spaces and the ways that they are reading and being read by technology. Classroom explorations and discussions that encourage students to evaluate the power-laden nature of AI are essential to developing technological meta-awareness.

Weaving with AI

These "algorithms of oppression" move beyond those who develop algorithms themselves—but move so much deeper into the mythologies, or the subcode, that naturalizes the belief systems of our culture (Barthes, 1957/2013). New Media's increased participatory spaces further encode these myths embedded in our language. They are written into our everyday interactions in online spaces, picked up in the data sets provided to AI, and recreated and perpetuated by the technologies that leverage them. This has particular consequences for our embodied realities. As our bodies move through space, geographically dependent content curation risks a new sort of digital redlining, one that perpetuates existing mythologies about the people we encounter and places we inhabit. An adolescent who lives and engages with digital content in an urban area may encounter an entirely distinct digital space compared to an adolescent in a more rural setting. This curation is dependent on AI's operationalizing of geographic and social assumptions. As algorithms pull from participatory spaces like social media, they act as both audiences of our texts and authors of new mythologies.

Algorithms are not just authoring alphabetic texts in response to the mythologies they find in participatory spaces, but they are also authoring particular reading experiences through the curation of feeds. While humans are often the creators of the content in New Media spaces, the arrangement of content occurs as a result of algorithmic intervention. As algorithms mix and match the content, they create unique reading experiences that impact how we interpret texts. Optimistically, we can envision this curation of feeds as a sort of found poetry—taking elements of our friend's experiences, our interests, and passions woven together into a new whole, a bricolage of our networked lives and an assemblage of our ethos, logos, and pathos.

It is important to remember though that the algorithm is our apprentice; we are the weavers.[1] It is not the algorithm alone that curates our lives; our algorithmic apprentice offers us threads of our lives; it is our interactions with this content that determines the pattern of our tapestry. Each time we linger on a post, like, or comment, we reaffirm an algorithm's presented conception of what we are interested in—it is an illustration of an algorithm's imagined audience. Conversely, each time we quickly scroll past, we challenge this imagined audience, reject this thread of thinking, and the algorithm amends what colored threads it offers us in the future. Over time, with too narrow a lens on the world, we are not given a wide variety of colors; we cannot weave broadly. With only the common threads of our experiences, the uncommon is left out; our tapestry becomes dull with too limited a color pattern—social silos are formed.

What would it look like if we gave students the time, space, and tools to critically evaluate the threads they are weaving with? If we showed them how to name the color of threads they choose, to pause and annotate their own practice of where they reaffirm or dismiss an algorithm's presented conception of their interests. Could we reframe the way we think about what it means to read online and the ways that students are authoring these algorithms to help them become more conscious writers and weavers? I think this demands that we cease placing value judgments about

adolescents' social media use and instead approach with earnestness and curiosity about the tapestry our students are weaving for themselves and the digital communities they are a part of. Can we apprentice our weaver students into broad and colorful tapestries?

Audiences: Authors of Their Own Interpretations

Engaging with participatory spaces in this way can be a helpful reminder of our own agency in interpretation. Audiences are authors of their own interpretations. Transactional theory, a concept that while descended from humanist thinking can be fruitful as we think about a transhumanist world, establishes that readers have an important role to play in constructing their understanding of a text (Rosenblatt, 1995). While Rosenblatt emphasizes individual transactions, socio-technical spaces are collapsing the difference between reader and audience by closing geographical gaps and empowering audience response. Individual readers do transact with texts, and educators should continue to encourage these transactions; however, such an individualistic focus potentially oversimplifies the "range and diversity of both oral and written communication situations" that are afforded to us in the modern age (Ede & Lunsford, 1984/2011, p. 83). While we continue to encourage individual transactions, media theory can help maintain the spirit of transactional theory while accounting for increasingly collective responses.

Hall's (1973/2000) reception theory argues that the audience is both the "source" and the "receiver" of the message—they are simultaneously author and audience (p. 54). However, in Hall's words, "'selective perception' is seldom as selective, random or privatized as the concepts suggest. The patterns exhibit, across individual variants, significant clusterings" (p. 58). While individuals author their own experiences, they are often formed in collective clusterings. Hall goes on to argue that readings will be "dominant," "negotiated," or "oppositional" (p. 60). In short, a given reader's particular reading of a text is likely to be shared with individuals who may completely agree, are utterly outraged by it, or fall somewhere in the middle. In online spaces, these clusterings are further bounded by the algorithms that share digital content. As algorithms read these reactions, they share it with others it anticipates will have a similar reading of the same text. For those users, this becomes the only reading of such a text they are exposed to. These "clusters" of readers' responses become increasingly rigid and bounded, clumping tighter and tighter.

What has changed, beyond the literary texts centered in Rosenblatt's works and the television programs Hall discusses, is the evolved dialogic relationship between author and audience. Literary texts, television programs, and even the blogs of the early internet were statically curated experiences. We had choices about what to engage with, but the arrangement was fixed. To return to my previous analogy, consumers of content were not weaving, they were quilting. Affixing together chunks of pre-curated content into a larger whole of their experience. The role of algorithms in curating our feeds means that we have much more choice, much more power, and much more creativity in how we construct the fabric of our lives. But, this is only true if we make active choices about the range of threads we choose to pull and the types of interpretations we are willing to entertain.

Social media is the dominant location where much of this thread work is broadcast. Bolter (2022) argues that "social media [has] broken down the boundary between consuming and producing texts, they have also facilitated collective reading on a scale that dwarfs any form of earlier literacy" (p. 41). Reader-authored interpretations are more broadly spread because of

participatory spaces and networked reading. The ability to highlight and comment on digital texts makes the act of annotation public—your '"reading' of the text becomes paratext that others can read and add to" (Bolter, 2022 p. 41). Modern readers become part of a textual network constructing shared experiences of reading and writing (Engberg, 2022).

In these participatory digital spaces, audiences are able to immediately share and curate their own readings of texts. This occurs broadly, across a variety of textual subjects, but of specific interest for English Educators is the expansion of fanfiction as a genre and BookTok as a reading community. The immediacy of sharing reading experiences constructs authors in their own right.

These fan-based interpretations and rewritings of literature run into a similar problem in the attribution of ownership as does AI, as noted in an earlier section of this paper. Neoliberalism demands to know who owns the intellectual property of a given story. Jenkins (2008) argues that fans in participatory spaces are working to reclaim their rights to their own interpretations of the content they have come to love. While their compositions may be original, they are multivocalities inspired by origins that have been claimed, and often commercialized (see Harry Potter and Star Wars), by private entities. Authors of source material inspire authors of interpretations that are shared digitally and algorithmically curated for users. These inspire other readers to become authors of spin-offs. Non-canonical readings become the widely preferred readings, and eventually, the original creator becomes entirely divorced from the disembodied, amorphous, and networked concept they initially germinated. All the while, corporations attempt to police the boundaries of interpretive agency and digital distribution. These participatory spaces put the author, audience, and corporate entities in a dialogic relationship, navigating a constant negotiation of roles.

AI as Meta-Audience

This interconnectivity afforded to us through the internet and social networking sites results in the need to rethink the role of not only of the author but of the audience as well. Ideas of conscious and unconscious audiences, real and imagined, are being reshaped in these new contexts. In online spaces, sometimes, a writer's audience is immediately present, like when engaging in live discourse through social media sites. Other times, the audience is utterly unexpected, like when a social media post "goes viral" beyond a user's immediate network. Regardless of their immediate or unexpected presence, professional and student creators alike imagine their audience, who they anticipate and imagine their audience to be (Ong, 1975/2011). Simultaneously, we must acknowledge that audiences play a creative role and "actively contribute to the meaning of what they read" (Ede & Lunsford, 1984/2011, p. 81). That being said, we must also recognize that this imagined audience only offers a partial view.

These imagined audiences do not account for an audience addressed (Ede & Lunsford, 1984/2011). The existence of an audience addressed shifts perspective from an imagined audience to an acknowledgment of the "concrete reality of the writer's audience"(Ede & Lunsford, 1984/2011, p. 78). This concrete reality has historically been understood as a tangible, embodied audience—an audience who can think, feel, and be touched by your composition. In this case, the writer cannot purely invent an audience; they must also "adapt their discourse to meet the needs and expectations of an addressed audience" (Ede & Lunsford, 1984/2011, p. 89). All the while, a fictionalized version of the audience lives in the author's mind. As writers in the modern age, we analyze and invent; we invoke and address the audience.

The complexity of the author/audience is further complicated in the digital age. Ede and Lunsford (1984/2011) argued that "audience refers not just to the intended, actual, or eventual readers of a discourse, but to all those whose image, ideas, or actions influence a writer during the process of composition" (p. 92). This broad framing of audience suggests that the audience is plural, and it is multimodal, defined by their ability to impact the writer. It is not just words that matter but the "image, ideas, [and] actions" too.

This also means that, while digital technologies author texts and digital experiences, algorithms are also an audience. Algorithms read our data both in content and context. They can not only "read" the message of multimodal writing we do online, but also recognize the spatial and temporal consistencies of our compositions. That is to say, our location, screen time, posting time, posting frequency, and much more are tracked and taken into account. Moreover, algorithms read the same data from responses to the root content in the form of comments, likes, shares, etc. It may be easy to dismiss this paratext to the writing we develop, but as Leander and Lovvorn (2006) argue, understanding these relations and movements helps us to avoid an overly narrow focus on "isolated texts or even textual practices" or a similarly narrow focus on "what texts mean rather than what they do" (p. 292) In doing so these activities become embedded in other activity structures and help to shape spatial and temporal relationships "of streams of activity" (p. 292). All of this information collectively forms a sort of meta-audience reading, not only the initial content but all of the paratext associated with it.

Recognizing this new algorithmic role, what happens when the audience invoked and addressed is non-human? What happens when creators construct compositions with an algorithmic audience in mind? Social media and social networks are not just spaces of human connection, but these digital networks are leveraged in favor of corporate interests. Modern content makers are not just thinking of potential product customers when they write for digital spaces. Each time a marketing executive aims to make a post "go viral," they are imagining an algorithmic audience—a reader of the text and paratext that will provide and reproduce the content on an accelerated scale. The writer imagines an audience without its own ethos, without its own pathos, without its own ability to reason. It thinks only in terms of trending sounds, constant clicks, and interest and engagement. It cares not for the truthfulness or ethics of the content—only for its likelihood to generate more writing. It is an audience designed to create more authors.

It would be foolhardy not to recognize these negative potentialities of an algorithmic audience. But that does not mean that an audience designed to create more authors is necessarily always negative. There is the potential for the stimulation of positive authorship. Much the same way that a beautiful painting might inspire future artists, beautiful content too may inspire more beautiful content. It can uplift voices and invite more participants into the conversation. Algorithms bring people together to cope with grief and tragedy (Eriksson Krutrök, 2021). They can spread information on under-reported issues, particularly in areas with state-controlled media (Enikolopov et al., 2020). Algorithms facilitate "learning in the wild" (Haythornthwaite et al. 2018) expanding viewpoints and perspectives.

The hybridity of humans and machines means that we carry traces of this algorithmic writing into in-person spaces. For our students in particular, much of the composing they do is in these algorithmic spaces, and they have learned, unknowingly, to write for the proliferation of content. We have seen time and time again how this can manifest itself in negative ways that have insidious effects on our embodied realities. Dangerous performativity is too often the currency of the day with little consideration for embodied impacts. These trends invent and reinvent themselves, but what is more important is the change in the ways the internet has made

performativity a more complex interaction between author and audience. Public spectacles of embodied risks are not new, but now, rather than a limited and local audience, the digitization and algorithmic proliferation of such content make a performer of such embodied acts—a character. Any individual witnessing and recording these acts becomes an author. The digital viewer, remote from the situation of such a spectacle, is read by algorithms each time they view or share such videos. Algorithms write curated experiences of the spectacle for more embodied audiences. Upon seeing the reach of such videos these embodied viewers recreate and reauthor more embodied performative experiences.

These lingering traces of algorithmic audience indeed impact the way we move through in-person interactions and lead to the proliferation of content that trades in indignation and outrage, but this does not need to be the case. It would be naive to ignore the dangerous elements of the ways that algorithms are impacting our embodied realities, but similarly, it would be overly cynical to ignore the ways that an audience that creates more authors can also be utopic.

We have seen firsthand how the sharing and writing of digital content has translated into embodied effects and has started to create a population rife with civic participation. The spread of digital content and the creation of more authors has facilitated the organization of embodied social justice movements. In these moments, we see digital networks commune in lived spaces of solidarity and resistance. We have seen the ways that documenting and sharing embodied abuses online draw attention to systemic oppression and act as direct challenges to power and privilege. Though often hard to watch, it is the proliferation of content online that has led to better documentation of embodied abuses of power by state force. Folks know the importance of leveraging disembodied audiences to make change in our embodied spaces.

Educating Beyond The Algorithm

The question is: How can educators work toward this future of advocacy and action? It is helpful to remember that these positive effects are already happening and that embracing our students' funds of knowledge (Moll et al., 2006) around these issues may mean letting go of old ways of being in the classroom. While of course anecdotal, I have seen in my own students a willingness to push back, speak up, and make plain things they are uncomfortable with. Though my experience is anecdotal, it has been shared by educators across the country (Zirini, 2021) and by Gen Z themselves (Stahl & Literat, 2022). Our students have grown up sharing their thoughts and experiences with unknown audiences and have simultaneously been the audiences to people unlike themselves. They have learned the power of virality and have brought that boldness in addressing problems to their embodied realities.

However, this learned ability to speak up and challenge authority disrupts the power balance between educators and students. While many teachers advocate for socially just classrooms, too often it is undercut by their classroom management. Educators too often celebrate the narratives of speaking back to positions of power but don't often make space for this in their actual classrooms (Shalaby, 2021). In this way, educators do not often embody the principles they espouse. They rationally endorse social justice movements without embodying them. This means they only selectively acknowledge the bodies in front of them. To be fair to educators, embodying these practices can feel genuinely uncomfortable. Those embodied feelings of discomfort are valid and a real part of teacher identity. That does not, however, mean that they are correct. hooks (1994/2014) reminds us that "new ways of knowing may create estrangement where there was

none" and that difficult experiences are common in the integration of theory and practice (p. 43). It can be helpful to remember that this questioning, reflection, and critical and affective thinking is exactly the kind of work we want our students to do and are the kinds of skillsets students need to navigate this hybrid world of online and embodied entanglement.

What students need is not a dismissal of their advocacy but the tools to navigate the entanglement of embodied, live audiences, disembodied, digital, human audiences, and algorithmic audiences. Students need to develop a sense of paratextual and algorithmic meta-awareness. When teachers are crafting lesson plans and curricula that may include discussions of digital spaces, they need to keep in mind these evolving conceptions of audience/authors. Just because students are authoring does not mean they are not an audience. Just because you are an audience does not mean you are not authoring. Rather than a binary, these elements are in constant negotiation. Moreover, students need to grapple with the ethical complexities of writing for algorithms, for disembodied human audiences, and for embodied spaces.

I know that for many teachers a school year with already over-scheduled curricula rarely affords time and space for such endeavors. It can be tempting to only think of technology in limited ways. For many, they see technology as an obstacle to work around: How do I prevent my students from cheating using ChatGPT? How can I prevent them from watching YouTube during class time? For others, technology becomes supplemental to existing modes of teaching. Leander (2007) argues technology is too often integrated to "work with teaching and learning, adjusting here, supporting there" (p. 46). However, neither of these stances accounts for the increasingly complex interactions we have and will continue to have with technology. Technology is already intertwined with our bodies, our composition, and our communication. Students will continue to navigate this hybridity for the rest of their lives.

Embodied and Disembodied Parts Stitched Together

Perhaps one way to work through this is to tap into the very human compulsion toward empathy. Humans are both thinking and feeling beings, but empathy, dominated by feeling, is an embodied response. We lose this embodiment in virtual spaces because we are disembodied to others. In other words, the primary source of empathy is physical feeling (how would I feel physically if placed in another context); therefore, empathy is harder to stimulate in virtual settings. While we can expand our understanding of what it means to read and write, to compose and be an audience, we can reflect on what it *feels* like to do those from an embodied perspective as a way to work toward more compassionate communication.

It is an age-old problem to get student writers to conceptualize an audience beyond their teacher and yet they are *readingwriting* daily for embodied/disembodied audiences. As teachers move forward in thinking about composition instruction, we can help students understand the ways that they are *always* author/audience. By questioning their own compositions, we may facilitate a more empathetic and expansive understanding of their writing practice.

Sometimes returning to the old can help us see the new. Moffett's (1968) framing of shifting levels of discourse offers some useful questions students can ask themselves: "For what reason am I telling him? Would I tell it differently to someone else? Would I tell it differently to the same person another time and in a different circumstance?" (p. 37). The aim here is of course to shift our perspective, to consider who is the audience, who is the author, and in what ways might we be both—ultimately in pursuit of empathy and understanding.

However, this pursuit of empathy and understanding must go beyond a purely humanist perspective that only wonders how another person might feel at a given moment. Rather, students need to practice empathy for what another *being* might experience. What empathy can I share with this animal or plant or system? Can we begin to practice empathy for a technological being? Are we not all bound to one another through this same technological other—through an ecosystem from which the technological is inextricable from the organic?

I return here to Mary Shelley's (1818/1993) *Frankenstein*. The comparison of Artificial Intelligence to the novel has been made by many, but I do so to highlight the value of asking students to shift their perspectives. Victor's creation, as he moves through the world, is feared and spurned by society—a grotesque representation of the pursuit of forbidden knowledge. However, it is important to remember that as Victor initially toils away, he sees his creation as beautiful, an improvement upon man, and a triumph over death. It is only upon the creation's waking that the sublime becomes grotesque:

> How can I describe my emotions at this catastrophe, or how delineate the wretch whom with such infinite pains and care I had endeavoured to form? His limbs were in proportion, and I had selected his features as beautiful. Beautiful! Great God! His yellow skin scarcely covered the work of muscles and arteries beneath; his hair was of a lustrous black, and flowing; his teeth of a pearly whiteness; but these luxuriances only formed a more horrid contrast with his watery eyes, that seemed almost of the same color as the dun-white sockets in which they were set, his shrivelled complexion and straight black lips. (Shelley, 1818/1993, Chapter 5)

At this moment, when theoretical knowledge becomes embodied knowledge, Victor's emotional response becomes paramount. He cannot articulate his emotional response, but he can feel it. He becomes an audience to the creation he has authored and is struck for the first time by its alienness. The engineers and scientists who have been working to develop Artificial Intelligence since the 1950s toil away under a similar pursuit of beauty and grandeur unable to recognize their own writing. It is when society at large encounters the product of their toils that the beautiful and the grotesque clash. We are unable to process our feelings: simultaneously awed and horrified, excited and bewildered by the possibilities.

But our humanly embodied responses to technology are only one element at play here, and anyone who knows the tale of *Frankenstein* knows that the narrative is not about Victor's perspective alone. Through a non-human perspective, through the lens of such a technological creation, the lens of the creation, a much richer perspective is gained.

The creation is neither perfection nor a monster, but rather, like much of life, somewhere in between. For many who read the novel, myself included, the ultimate message of the work is empathy for the creation—even as we recognize the atrocities he is ultimately responsible for. The creation in *Frankenstein* is neither inherently malicious nor benevolent; rather, the creation's interaction with humans is at the root of his misdeeds. Much like the creation, it is through the ways that humans interact with these evolving technologies that their ethics are constructed.

In the novel, the creation implores, "Oh, Frankenstein, be not equitable to every other and trample upon me alone, to whom thy justice, and even thy clemency and affection, is most due" (Shelley, 1818/1993, Chapter 10). In what ways are we today, professing equity for fellow humans while trampling on the creations to which we owe justice, clemency, and affection? We learn much, as an audience to the creation's narrative. How can we account for the ways that we are

already audiences to the narratives AI constructs for us? How can we teach our students to do the same? Rather than reacting with fear or rejection of this newborn technology, as Victor does, can we replace it with curiosity and empathy? Rather than abandon our creation to the whims of society, how might we work to raise it, shape it, and recognize it as part of all of us?

Notes

1. I want to note here that the analogy of weaving has been used with some frequency to describe various aspects of the human experience, but particularly often in reference to education. I hope that here I use the analogy in a novel way.

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