The Internet Doesn't Exist in the Sky: Literacy, AI, and the Digital Middle Passage

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ABSTRACT

This article utilizes speculative and visual storytelling alongside interdisciplinary research on artificial intelligence (AI) and algorithmic oppression to engage in a thought experiment on how literacy studies might refuse the oppressionist logics currently undermining the possibilities of AI in literacy education. As technological advancements in education will only continue to increase and as society is yet to ascertain the parameters of an ethical AI system, it is paramount to analyze the past and present *and* contemplate potential futures, especially those that do not result in violence against Black and Brown peoples. To engage in speculation, we employ Endarkened Storywork (Toliver, 2022) to present an empirically driven, futuristic, science fiction narrative from two perspectives: (1) a US, Black girl who is forced to participate in AI-structured secondary schooling and (2) a Black girl in Haiti who is forced to live in a country polluted by technological byproduct. This narrative, which is grounded in academic research and news editorials, is accompanied by comic art and followed by a companion analysis detailing the theoretical backdrop of the story. By utilizing multiple methods of scholarly distribution, we provide multiple entry points for readers to engage with this work. We offer a means for readers to see—via story, art, and scholarship—the potential impacts of AI on Black people globally. Additionally, by situating this article in the creative and scholarly realms, we strategically deconstruct traditional forms and methods of knowledge production that have constrained academic research and rendered invisible alternative forms of data representation.

Introduction

Since the introduction of Pressey's (1963) "teaching machines", the automation of public education has continued to circulate throughout the societal imagination. But while artificial intelligence (AI) has its benefits, the pace with which technology (e.g., ChatGPT, Querium, Ahura, and Gradescope) has consumed the field of education brings both utopian and dystopian possibilities. On one hand, AI makes space for individualized learning (Rouhiainen, 2019), automates time-consuming tasks like grading (Mintz, 2019), and provides assistance to struggling learners (Rudra, 2023). On the other hand, long-standing issues with edtech—like increased student surveillance; algorithms of oppression; ability and access issues; and labor exploitation (Noble, 2018; Tanksley, 2023; Weinstein, 2020)—often overshadow the technological benefits. Beyond human impact, the infrastructure necessary for maintaining the internet (i.e., the subsea cable network and data centers) has contributed to expansive environmental degradation (Crawford, 2021), raising questions

about the expansion of digital innovations at the expense of the natural world. In this way, AI brings advantages, but those advantages sometimes come at a mental and environmental cost.

Within literacy education, the reinscription of oppressive sociopolitical narratives is even more pronounced, as "what we read and how we read, and, more importantly, how we are conditioned to imagine ourselves as readers … is increasing[ly] determined by algorithms that operate underneath of the surface of texts" (Jones, 2019, p. 19). As examples, societal narratives about the literacy failures of public schools before and after COVID-19 have resulted in an increase of technosolutionism—the false belief that all societal problems can be solved with devices and algorithms (Morozov, 2013)—where education stakeholders embed AI-driven tools into literacy classrooms, particularly within courseware and assessment (Gaskins, 2023; Walker et al., 2022). The use of testing software like Proctorio and Gaggle has resulted in the disproportionate punishment of Black students as cheaters or violent offenders (Kim, 2022; Madaio et al., 2022). Researchers have also found that assistive writing AI tools such as EssayHelper rely on white norms of writing, resulting in an antiblack, white supremacist foundation for literacy assistance (Dixon-Román et al., 2020; Leander & Burriss, 2020). Thus, even as literacy stakeholders turn to AI as a solution to field-wide issues, AI's default setting is antiblackness, so it is imperative to critically consider the underlying surface of technological innovation.

But just because AI's predesigned values are steeped in oppression does not mean we cannot adjust its settings, as AI's default logics can be altered to better align with the needs of all users. To use AI in anti-oppressive ways, however, requires future thinking, a way for literacy researchers and English educators to proactively engage with AI, rather than reactively using digital platforms in response to societal ails, governmental demands, or public educational fears. Thus, in this article, we combine speculative storytelling with interdisciplinary research on AI, algorithmic oppression, and computer science to (1) interrogate and trouble the increasing use of AI in literacy classrooms and (2) engage in a thought experiment about what and how literacy researchers must consider to refuse the oppressionist logics that currently undermine the design and deployment of AI tools in literacy education.

To engage in speculation and future thinking around AI and literacy, we employ Endarkened Storywork (Toliver, 2022) and comic art (Eisner, 2008) to explore the codified systems of white supremacy that manifest in the everyday sociotechnical world and to showcase how Black people have, are, and will resist these systems. Our use of literary and visual speculation is deliberate. Technological advancements in education will only continue to increase, and society is yet to ascertain the parameters of an ethical AI system, so it is paramount to analyze the past and present while also contemplating potential AI futures. Further, we leverage the unique semiotic, communicative, narrative, and educative properties of comics—specifically how they can act as cultural artifacts and sites for literacy, discourse, and imagination (Jacobs, 2013)—to "more fully present the 'multimodal ensembles' that individuals orchestrate in real-life interactions (Bezemer & Jewitt, 2010), and the ways in which people make meaning of their lives through multiple modes of communication" (Kuttner et al., 2021, p. 201).

As Black women, researchers, and educators committed to subverting manifestations of antiblackness in education while also reimagining more just futures, our goal is to provide a means for readers to see the deleterious impacts of AI on Black people across the globe and to witness how Black people have hacked discriminatory computational systems to engage in abolitionist counter-coding. Additionally, by situating this article in the creative and scholarly realms, our aim was to strategically deconstruct the traditional forms and methods of knowledge production that have constrained academic research and rendered invisible other forms of data representation through epistemic violence. We begin this deliberate deconstruction with the endarkened story and comic visuals, following Toliver's (2022) recommendation that Endarkened Storywork requires readers to first engage in the task of story listening before reading the academic connections. After the story, we provide a companion analysis to clarify the academic foundations of the narrative and suggest that literacy scholars move toward a critical race algorithmic literacy (CRAL) approach to combat the antiblack underpinnings of AI.

Cracks in the Code: An Endarkened Story

When the upload began, she always looked down. Brown skin turned alabaster, unruly locs turned straw, prominent nose made narrow. Timiya's avatar was every bit of algorithmic perfection—controlled and systematic, white, suburban, and slim. And why would not it be? SymbIote was "the great equalizer," the best virtual education software on the market. It had done the necessary work humans failed to do for centuries: dismantle oppression in education. SymbIote's generative adversarial networks (GANs) constructed authentic images, believable cybernetic incarnations of people who did not exist, and yet did…to some extent, at least. It resolved that if race was wiped away, racial hatred would end and violence against people of color would be eliminated. It worked…to some extent, at least.

She may have had problems during the initial upload because the techs still could not figure out how to make their computer systems notice Black skin, but it only took

a couple of weeks for her to fix the errors and force it to see her. No more repetitive "please stand in front of the camera" requests when she was sitting right in front of the device. No more waving her palm in front of the lens to alert the system that she was, in fact, sitting there. No more putting on the SeeMe™ Mask, the complimentary white veil that came with all new Cryptext accounts, to ensure easy transfer of body from the real to virtual world.

Other users in the Cryptext would also never see Timiya's true self. The self with natural hair, the self that was muscular, the self that was Black. And, by SymbIote's standards, that resulted in racism reduction. Can't be racist if everyone is white. Right? And everyone *was* white, the same chalky shade, the same melanin deficiency. SymbIote's engineers reviewed centuries of data and built upon the Golden Ratio to construct the most inoffensive human features, to create an unflawed facial and body aesthetic. The input was perceived as perfection; the output a mathematical justification for how and why whiteness was best; the result was Timothea, the girl whose face appeared in the top right corner of the screen.

"Upload complete. Approve?" A disembodied voice said (see).

"Nah," Timiya attempted, as she did every day.

"Sorry, I didn't get that. Approve?"

"I said," Timiya slightly adjusted her tone, "Nah."

"Sorry, I didn't quite get that. Approve? Please say yes or no."

"No."

"Sorry, I didn't get that. For approval, please wait."

"Nah. No. No, thank you. I don't approve."

"Alternate approval time reached. Thank you. Please enjoy your school day."

"Ugh," Timiya sighed aloud. It went the same way every morning. "No" was never an option even though the system pretended like it was, but Timiya wanted to be herself, the real self sitting in her family's two-bedroom apartment. She was tired of Timothea, tired of her body and name being so controversial. She'd continue to say "no" everyday if she had to, whether the system listened to her or not.

When the approval screen disappeared, Timiya was in front of MAGNAS Secondary School, a large building that, according to their daily ads, was meant to simulate the "look and feel of traditional high school." It looked like a high school, but the feel? This virtual world felt nothing

like the world she knew. It was blue skies, green grass, and luscious trees, a place where the warmth of a synthetic sun tricked her mind into experiencing heat. It was a vibrant landscape where birds and local insects harmonized to create a welcoming symphony for all who entered. But this was not the real world Timiya knew.

In her world, thick clouds of poison suffocated the sky, common animals were lingering on extinction, and decay colored the natural landscape. The vital signs of Earth were flatlining, caused by human addiction to the very tech that would kill the environment keeping them alive. But instead of tending to the place where real bodies lived, the solution was more tech. Why fix the real world when people could just hide in this one?

If the landscape did not signal the counterfeit experience, the people did. Every time she entered the system, there was a sea of white students who popped into view simultaneously. She did not know whether any of the avatars were real, of course. Yes, she could interact with them by sending messages or playing games, but there was no way of knowing whether they truly existed. There were times she thought she was connecting to an actual person, but she could never be sure. Were they sitting in their apartments like she was, or were they just computer systems simulating classmates? Were they in a city close to her, or were they somewhere else in the world? She could never be sure. Either way, she and the unpigmented horde walked into the building like they did every morning. Always together. Always at the same time.

She walked to her first class, English, and took her seat. Immediately, a paper appeared on the desk. Another D.

"Assistance." Timiya huffed.

"Hello! I am Mr. Nesbit. How may I assist you?"

"Can you tell me why I got a D on this paper?"

"Yes! According to platform documentation, I can confirm the grade was based on student prompt deviation. Grammar and usage are highly rated, thus moving you one step above a failing grade. Congratulations! Is there anything else I can help you with?"

"Yea… so like… what was the deviation? The prompt said to write about something we care about. I did."

"Please wait while I check this information." The avatar paused for a moment. "I can confirm the grade was based on student prompt deviation. The essay was unorthodox in its content and form. Is there anything else I can help you with?"

"Representative."

"I can assure you I am capable of –"
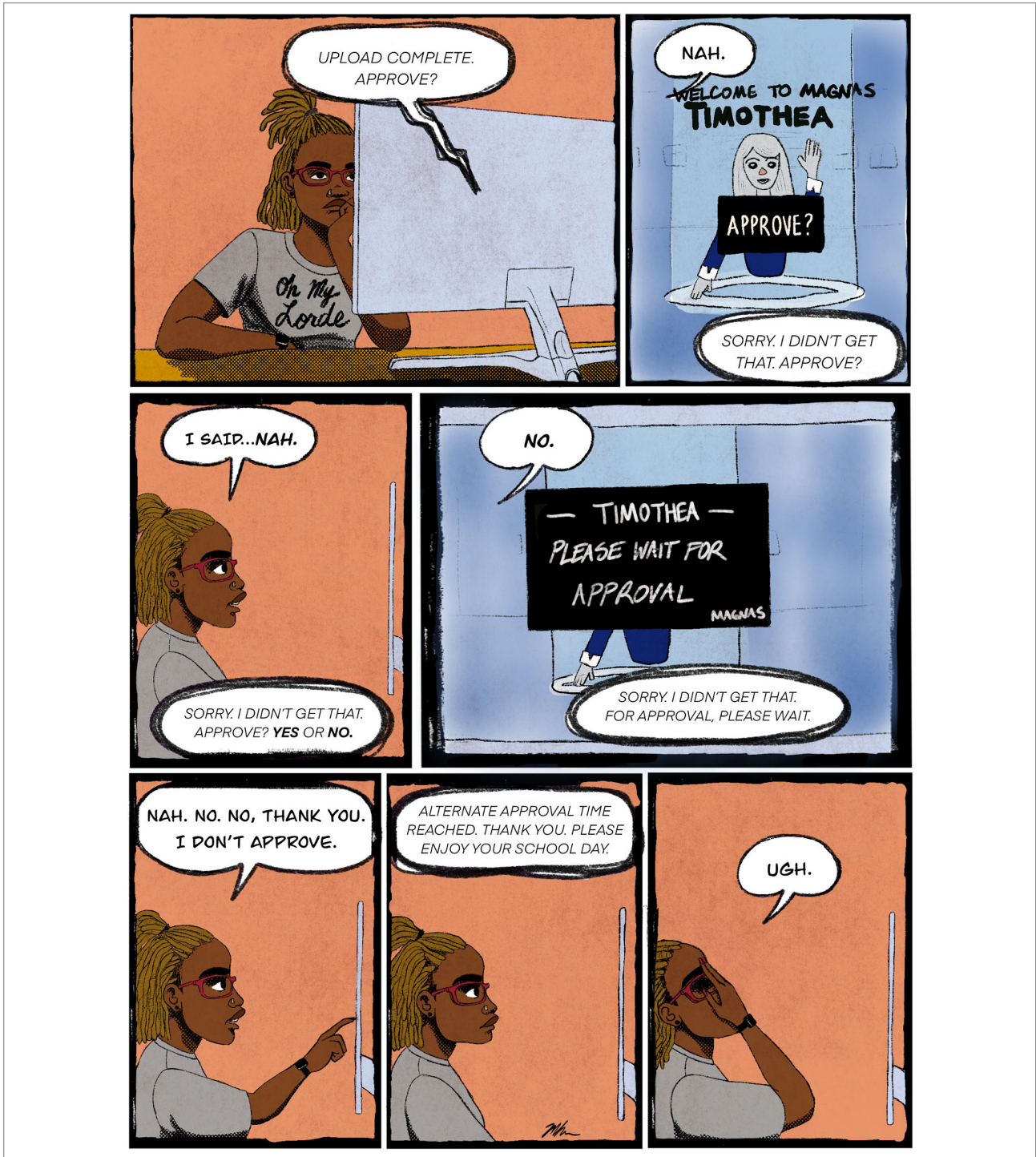
"Representative."

"Calling a representative could result in further lowering of scores if unsuccessful. Do you wish to continue?"

"Yes."

"Please tell me more about your request so I can get you to the right person."

"Re – Pre – Sen – Ta – Tive." Timiya clapped each syllable.

"Please wait while I get you to someone who can assist you."

Timiya knew requesting a review could impact her overall grade, but she refused to let the graders give her low scores… again. Every paper was a D or an F because she "deviated" in some way. Usually, the "divergences" were just her use of creative rhetorical styles, but with prompts like, "write about something you care about" what else did the graders expect? The avatar might be white, but Timiya was not. She was Timiya, and Timiya had her own experiences that may or may not be common to what the graders knew.

Plus, she had other reasons for her request. The morning might have seemed normal because she stuck to her daily routine, but it was not a regular day. Today, SymbIote would be hacked…finally.

"Hi, Timiya."

"Rumeeta!" Timiya was relieved to hear a voice she knew. Well, as well as someone can know an incorporeal voice. "I was hoping it would be you."

"But what if you got someone else this time? You gotta be careful. Is this truly a representative call? Did you know a red alert popped up on my screen for you? That's a troublemaker alert."

"Yea… I mean… no, I didn't know I was a troublemaker, but yea, it's a representative call." Timiya wasn't shocked, of course. She'd known of a few others who were flagged as troubled youth. Prellyis, the vibrant, spirited friend she'd made her first year at MAGNAS was marked last year after he was flagged by the testing system. It was midterms, and he talked about how hard he had studied, but during the test, he glitched. The algorithm marked it as cheating, stating his Wi-Fi instability and computer temperature showcased "abnormal testing conditions," suggesting he cheated. The next day, he was gone, taken to the in-school detention center, an offsite campus where incorrigible young people were taken from their homes and detained in holding cells to complete their school work "beyond distraction." When they finally let him come back, he was not the same. Even the eyes of his avatar were dim. Then, one day, he just stopped logging in… or, they refused to let him log in. Timiya couldn't be sure.

"I'm guessing they don't like that I refuse to let them just give grades without telling me why. I'm not accepting a D just because."

"Mhmm. Let me check."

"Ok." Timiya knew Rumeeta could easily fix her grade. The system was looking for standards, for students who have the same background, the same experiences, the same style. It could not account for someone like her, someone whose background it would never see, whose experiences it would never know because… why would it? The developers were not checking for her.

"Girl. You put rap lyrics in your paper and wrote it like a story."

"Yes… and I also answered the prompt, right?"

"Yes, you did answer the prompt, but you know this system has no idea what to do with that! It only knows how to score a standard response."

"But what is standard? Who is standard? Whose standards?"

"I know… I know…But they want you to use the template. It can't score anything that doesn't use the template. Did you run your writing through WritingFix? It can put your work into the proper format."

"WritingFix helped me with some accidental tense shifts I had, and it did help me fix my narrative opening, but when I asked it to put my work in the template, it couldn't figure it out. It took out all the life of my writing, made it… bland. If there's one thing I'm not, it's bland."

"I gotcha. Well. I can adjust your grade because you did answer the prompt, but if I do, it's going to alter your feed again."

"Again?!" The last time she requested a grade audit, SymbIote lowered the tier of her learning content. It decided Timiya was requesting the grade adjustment because she was incapable of writing at the appropriate level. It decided that, instead of prompts asking her to detail the history of AI in education and how it affects global life, she needed easier assignments, like prompts asking her to simply write about her day. The individualized learning protocol tailored learning to each student, eliminating discrimination based on ability and removing the highly contested school tracking system that caused young people to feel inferior based on class grouping. And yet, the system still found ways to belittle the intelligence of its students.

"Yes. Again. This is the eighty-seventh time you've requested an audit. There's nothing I can do to change the tier in the system. On my end, it just asks for the new letter grade. Nothing else. But, once I submit, I know it's going to lower you again. I've seen it happen."

"It's the eighty-seventh writing assignment of the year, though. AND the eighty-seventh assignment where the grade was lower because the template doesn't work for my writing."

"I feel you. I really do, but I can't change it. What do you want me to do?"

"Change it."

"You're sure?"

"Yea. Ain't no way in hell I'm letting this system run me."

"Girl," Rumeeta sighed heavily, "you better than me."

"I know," Timiya said, causing both to laugh.

"Fixed. Now, as usual, after we end this conversation, you'll be prompted to complete a survey about your experiences. Zero is the best, and nine is the worst."

"They know that's confusing, right?"

"Yes. But, how else can they justify our low pay? It's easier to just rely on human error, even if they're the ones manufacturing it."

"Well, I'll remember the right one."

"Thanks! Well, you have another writing assignment in the cue today, so I guess we'll hear from you tomorrow. Take care until then!"

As soon as Rumeeta signed out, the survey box popped up. This was what Timiya was waiting for. Everything at MAGNAS was individualized, everything disconnected from a larger communal network. But the survey was the great equalizer, the only consistent part of SymbIote's system. There were four questions: How do you rate your overall experience? How do you rate your experience with the Nesbit protocol? Did the representative answer your question or otherwise meet your needs? How likely are you to recommend SymbIote to others? All Timiya needed to do was answer each one by choosing the right numbers in proper order.

She had installed her malware at the beginning of the year during one of her morning uploads. The back and forth with the disembodied voice gave her just enough time to attach it to the SymbIote mainframe. It started working within the week, granting her access to the larger system, but she could not pass the first encryption level. A challenge, for sure, but they were not the largest AI business for nothing.

Of course, it would've been easier if she had known how to code her software. She had tried multiple iterations of her virus over the years, but each time, she would gain limited entry and then be kicked out. No one on the B-web could help because no one had ever made it beyond the first security point. Many tried, but their viruses just never took hold. But how could anyone know? The key to its breakdown, Timiya finally learned, was something long hidden: Black language.

Making it through the SymbIote school system required operators to use *traditional* English, the English white people decided was…pure. If students wanted to graduate, they would have to use the language of the system. Otherwise, they could be kicked out of the system for a while. Or worse, placed in the SymbIote jail system,

unable to log out for whatever time the system deemed fit for violating community standards.

They banned Black languages because the system did not know what to do with it. It could not be codified in ways their engineers could exploit. So, every time it came across Black slang and colloquialisms, Black rhetorical style, or Black metaphors, it glitched. Rather than hire Black people to input language protocols that allowed for multiple languages, they just banned their use. But Timiya figured out that if she used them enough in speech or writing, the system would eventually break down. She should have figured it out sooner, but she never thought the language her mama passed down would be *that* powerful.

When she did figure it out, she knew how to hack the system. And it needed to happen fast because today was the day of action planned since the first day of school, since the day everyone on the B-web received the same message: Find the glitch in reality. Write yourself into existence. January 1. Code 1804. It was sent via B-web inbox and deleted 10 s after opening. The trail had been cold ever since. No one could figure out who sent the message, or how they managed to send it to every user on the heavily encrypted platform. But Timiya was ignited, ready to figure out what it all meant. Infiltrating SymbIote was every hacktivist's dream, and somehow, they were all going to hack the system on the same day… if they could figure out how.

It was time. Four questions. She entered her responses: 1, 8, 0, and 4. She would apologize to Rumeeta later.

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When the sun rose in the sky, she always looked down. Once flowing waterways turned dry, cracked land thirsting for the moisture that once nourished its body. Buola loved the sun, but humans had turned it into a violent master, providing light and death at the same time. And why would not it? As soon as the FAANGs (or MAANGs… or MAGNAs… the rebrand was always ongoing) decided they needed more water to cool their data centers, they looked to places no one would miss. The third worlds. The shit holes. The places no one cared about (or, when they did, sent thoughts and prayers instead of anything real).

When folks in the United West decided they wanted more virtual schooling options, FAANGs was eager to step in, ready to bring the next educational innovation to the masses (or, at least the masses they cared about). But, to bring that level of education to the Western world required space. Lots of space. And what better space to use than Haiti. They had water. They had land. They had bodies to labor.

As soon as the United West's congress signed the bill mandating the switch from face-to-face learning environments to virtual schools with AI supports, FAANGs moved in, bought up the land (whether it was for sale or not), and bought up the people. Of course, the people were

not for sale, but when the company is the only one with jobs (because it bought out small businesses and refused to let other large companies in), then the people have no choice but to work for them. When the company owns all the banks, it takes over all the mortgages, so it owns people's homes. When a company buys all the land, they own all the resources and can choose to share them (or not). Company towns? No. Haiti was a company country now, and Buola was sick of it.

She had been upset the day her mother told her the data firm (the one her mother started and built up to the powerhouse it was) was now owned by the FAANGs (see Figure 2). She had been angry when her father said he could no longer tend to the community garden because FAANGs needed a new data center and gardening was too low a priority. She had been irate when the FAANGs decided they could no longer fund healthcare for their workers or mitigate their destruction of the land because they were turning their attention to fixing other, more fiscally viable countries. She had been furious when her mother was admitted to a hospital for mental stress, and the FAANGs sent a message to the household saying that her family was responsible for finding a replacement for the loss of productivity. Their argument was that the algorithm had done a risk audit and used "evidence and reason" to decide which larger issues to fix. Mending the FAANGs harms would help Haiti, but it would take valuable resources from the rest of the world, creating an unacceptable risk.

If Haitians reviewed thousands of antiblack messages a day (and were forced to say antiblackness, racism, and violence against people of color did not go against community standards), then one group would be affected, not all. If Haitians reviewed millions of harmful and violent images so the "first world" would not have to, only one collective of people would need to see the violence. Mental crises could be isolated to one geographical space. Haitian mental health destruction, according to their altruistic tech systems, was worth it to ensure the safety of the larger world.

Of course, Buola's family could always say no to the request (FAANGs made sure to let everyone know that they never intended to enslave anyone), but FAANGs owned their mortgage, and eviction was not an option. Buola, as her mother's apprentice, decided to take on the responsibility. She would finish the plan her mother started months ago. The plan that would change everything.

Find the glitch in reality. Write yourself into existence. January 1. Code 1804.

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"WELCOME TO THE SUBALTERN. PLEASE WAIT." A news ticker scrolled across Timiya's vision. She was a knotted ball of emotion as tightly woven as the locs on her head. She had made it in time.

She looked down at her hands: dark brown, the color of wood after a heavy rain. She touched her hair: locs still in place; her retwist digitally maintained. She touched her face: thick nose and lips sat proudly on her face. Timothea was no more.

She was not sure what she was expecting, but it was not this. She had never seen herself in the digital, never seen a Black person in any augmented form at MAGNAS. And yet, here she was, existing within the SymbIote as herself. She was no longer forced into that parasitic digital relationship. But how?

"What is this place?" She asked aloud to no one in particular.

"Good question." A disembodied voice replied. But this one was not like SymbIote's. This one was warm. Friendly. Human?

Startled, Timiya spoke warily. "Hello?"

"Hello, Timiya. I am The Unnamed, the guide in the subaltern. Welcome."

"Guide? Like a bot?"

"Not quite. I am human, and I am not."

"I don't get it." Timiya was getting frustrated. She was tired of bots. "Ok, so what, exactly, are you? Or, who are you?"

"I am a what and a who. I am living, and I am not. I am person, place, and thing. I am me and them."

"Well, Mx. Noun, who, what, when, where, and why are you?"

"Excellent questions. As for who, I am unnamed because I have many names bound into one body. What I am is a cyber consciousness uploaded from ancestors past. I am Bayard, Ida, Marsha, Medgar, and Shirley. I am Frances, Malcolm, Anna, Fred, and Audre. I am song lyrics, poems, novels, speeches, film, diaries, and memories. I am moments in time, but I also exist beyond time… in the next time. So, I do not have a when nor a where. I just am. And why am I? Well, those before knew you would need me, I suppose. They knew something like SymbIote… or the other FAANGs… would attempt to take over, to force the shedding of the Black."

The consciousness paused, giving Timiya a little time to digest, then they continued. "Upon their end, some uploaded their minds to the subaltern because they believed their collective consciousness could help guide the next generation. Some did not want their awareness to continue beyond their bodies, but they dedicated their lives to writing and uploading their thoughts. And some spent years as archivists, finding texts deemed too Black to be read and ensured their

FIGURE 2
Comic Illustration of How FAANGs Devastated Buola's Haitian Community

preservation through me. The FAANGs burned our texts and destroyed our bodies, but some of our minds and stories exist in me."

"But then… why don't *we* know you exist? Why do you hide here?"

"I do not hide. I am here for those willing to listen, willing to remember. You have to embrace our shared knowledge to enter. Those who refuse will never find this place."

"Shared knowledge? How are we supposed to know what that is?" Timiya was processing, but it was slow going.

"You found it, did you not?"

"Yea, but it was hard to figure it out. No one knew what the secret was."

"Ahhh… but someone knew."

Timiya sat for a moment. The B-web did not have the answers, but her Grandpa Brock did. That is how she learned the trick. They had ventured out of the apartment without the virtual devices because, as grandpa preached, "Timiya needed to see the world without goggles and mouthpieces."

They drove around all day, stopping to walk through local parks and neighborhoods. As they walked, Grandpa told stories. Not the usual "back in my day" narratives, but new ones. Illegal ones.

"You know we been hackers, right?" He'd began.

Timiya wasn't sure how to answer. How had he known she was trying her hand at hacking?

"You don't think I know what's going on? I may be older, but I keep my ear to the ground… and to the B-web."

With her mouth almost reaching the ground, Timiya responded. "How… how do you know about that?"

"Y'all ain't start it. We been in it. How you think you knew where to go, huh?"

"I… I found it."

"You found it? Or, it found you?"

"I guess, when you put it that way, it found me. I was just searching around and a box popped up."

"And who you think sent that box?"

"I just thought it was the B-web. You know, like it finds people with skills?"

"Baby girl, we all got skills. Us old heads tell it who to contact."

"You? But…"

"But I don't talk like a hacker? That it?"

Timiya looked ashamed. "Well… yea."

"That right there is why you'd never find it. My talk is the sound of hacktivism. You think it gotta be *proper* or sound like people at that school of yours. That ain't it. This is."

"I don't get it."

"Not now, but you will. My advice? Start listenin more. You'll figure it out."

"You can't just tell me?"

"Nah… you got it. It's inside you. Just gotta find it."

And find it, she did.

Timiya shook her head, bringing herself from her reverie and back to the present. "So, when does it start?" She asked The Unnamed.

"It already has. Can you not feel it?"

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Buola sat nervously. She had hoped the message was clear enough for B-web hacktivists to understand, but vague enough to thwart the FAANGs if they came across the dispatch. Her mother had started the idea years ago and worked with strategic B-web users (she called them the old heads) to figure out how to put the plan in motion. The B-web contingent decided the best way to exploit the glitch was through Black languages. The plan was simple: data laborers in Haiti would make sure the small glitches Black languages caused would result in bigger backend errors, ones that could not be fixed easily. Those in the United West and beyond (even those in countries ignorant people believed to be without internet access) would use Black languages consistently while using SymbIote programming to cause an overload of glitches. Together, they would hack the system from both sides.

But, the message Buola sent could not have anything about Black languages in it because she did not want to alert the SymbIote engineers. She hoped that, somehow, users would figure it out. She hoped at least a few users would show up and that they might be willing to work together (that is what the diaspora was supposed to do, right?). She had never imagined this many people would come.

She had been ready for one hundred, maybe even two, but millions? Buola never fathomed that people would be interested. But, then again, why would not they be? Her entire life, she was forced to watched FAANGs suck the life out of her country, pushing her and her people into the shadows of their own lands. From what she heard about Black people living elsewhere (SymbIote's jail system with indeterminable freedom dates, police murdering people while they are uploaded and unaware, forcing every user in the system to shed culture, race, and language), it was not much better. They were in this together, desperate to end an algorithmic prison created to force them toward digital (and physical) death.

But this gathering was filled with possibility, a chance at new life untouched by the parasitic corporations who feasted on their digital and physical bodies. This collective

was hope. But, it took years to come together, so Buola had one shot to get this right, to make people see that working together was how they would dismantle SymbIote, challenge the FAANGs, and, possibly, create a digital counterspace where they could live free.

She had her speech, words her father and grandmother helped her put together. It was a speech of independence, a speech of hope. She just hoped it would work.

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Timiya felt ripples. One by one, people popped into view. She was not sure if they had already been there, waiting with the unnamed until it was time, or whether they were just logging in. All she knew was that there were thousands of avatars standing around her. Many, she had never seen before. But some, she knew. Tahir, Mya, Treana… Prellyis. This was larger than she could have ever imagined.

"Um… excuse me." A Black girl stood on a raised platform. Her skin was a rainbow of black, and her cropped afro was perfectly shaped, creating a sort of halo around her head. In some ways, she seemed nervous, but Timiya could sense an inner strength, something maybe the girl did not see. The crowd hushed.

"Hello everyone. My name is Buola, and I am the one who gathered you here." Soft murmurs reverberated through the crowd. "I am what is known as a data laborer, a person who is responsible for the virtual life many of you have enjoyed. But the internet does not exist in the sky. It exists in the lands of Haiti, siphoning off our natural resources. It exists in the waters of Haiti, cooling the data servers that have not infiltrated the lands of the first world. It exists in the minds of the Haitian peoples, as we are forced to view violent and degrading images so some of you may remain innocent. I am an example of the human they don't want you to see, the face they don't want you to know exists, and I have called you here because it is time for us to break from the SymbIote." Cheers erupted, but they were tempered by shame. Timiya knew there was more to the virtual world, but this was not what she expected.

Buola waited a moment. Then, she continued. This time, confidence boomed from her voice. "It is not enough to hack the parasites who have destroyed our lands, murdered our waters, and violated our bodies and minds. It is not enough to break into their systems and engage in small acts that allow us to experience semblances of our humanity while we participate in the digital world. We must act in international authority to forever ensure the liberty of Black people. We must eliminate SymbIote's hope to shed the Black and end the inhumanity embedded in their algorithmic empires. Let these words unite us and be the signal of our battle and reunion."

Timiya held on to Buola's every word. The thousands… no, millions of users were hushed. The silence was ominous, yet powerful (see Figure 3).

"On this day, I and a collective of others have brought together hacktivists across nations, but even as we are here, SymbIote's name still haunts our lands, still hides our ancestry. Every day, the monstrosities of this corporation plague us. Even getting to this space in the subaltern required us to go through their systems, to see ourselves white before we could resume the Black. But we do not have to let it be so. Let us collectively choose another path. Let us choose freedom. Let us vow ourselves to our collective digital life, rather than resign ourselves to a virtual death. Let us fight together to create our freedom. Let us reimagine and redesign technologies that do not serve us. Let us use our collective knowledge to center Black hope, healing, futurity, and life. On this day, we come together to dream of technology anew. On this day, we force the SymbIote corporate organism out of our lands, out of our bodies. On this day, we break the chains of algorithmic oppression. Together."

There was a pregnant silence as the listeners weighed Buola's call. "An interesting speech, I'd say." The Unnamed startled Timiya.

"Yea."

"And… what shall you do?"

Timiya thought for a second, but the answer was clear. "I think… this time… I'll look up. This time… I'll fight."

Companion Analysis

To create the story, we first followed the method of Endarkened Storywork (Toliver, 2022) by becoming story listeners. Specifically, we met on Zoom four times over the course of several months to cultivate a space where we could (1) tell stories about our personal experiences in schools and with edtech; (2) discuss our attempts at grappling with questions surrounding technology, the speculative, and education; and (3) share research literature that informed our thinking around AI, literacy, education, blackness, and liberation. In these meetings, we analyzed our conversations in real time, noting the threads connecting our ideas across disparate fields of expertise. These threads included concepts like the prevalence of algorithmic antiblackness; education's technosolutionism; Black historical and contemporary activism across digital and analog spaces; and technology-related issues within and beyond the United States. In addition to the threads, we noticed the larger patches of our individual stories, suggesting that even though we are Black women who were born in the United States and whose lives are deeply entrenched in the field of education, our experiences with AI, with literacy, and with education are vastly different.
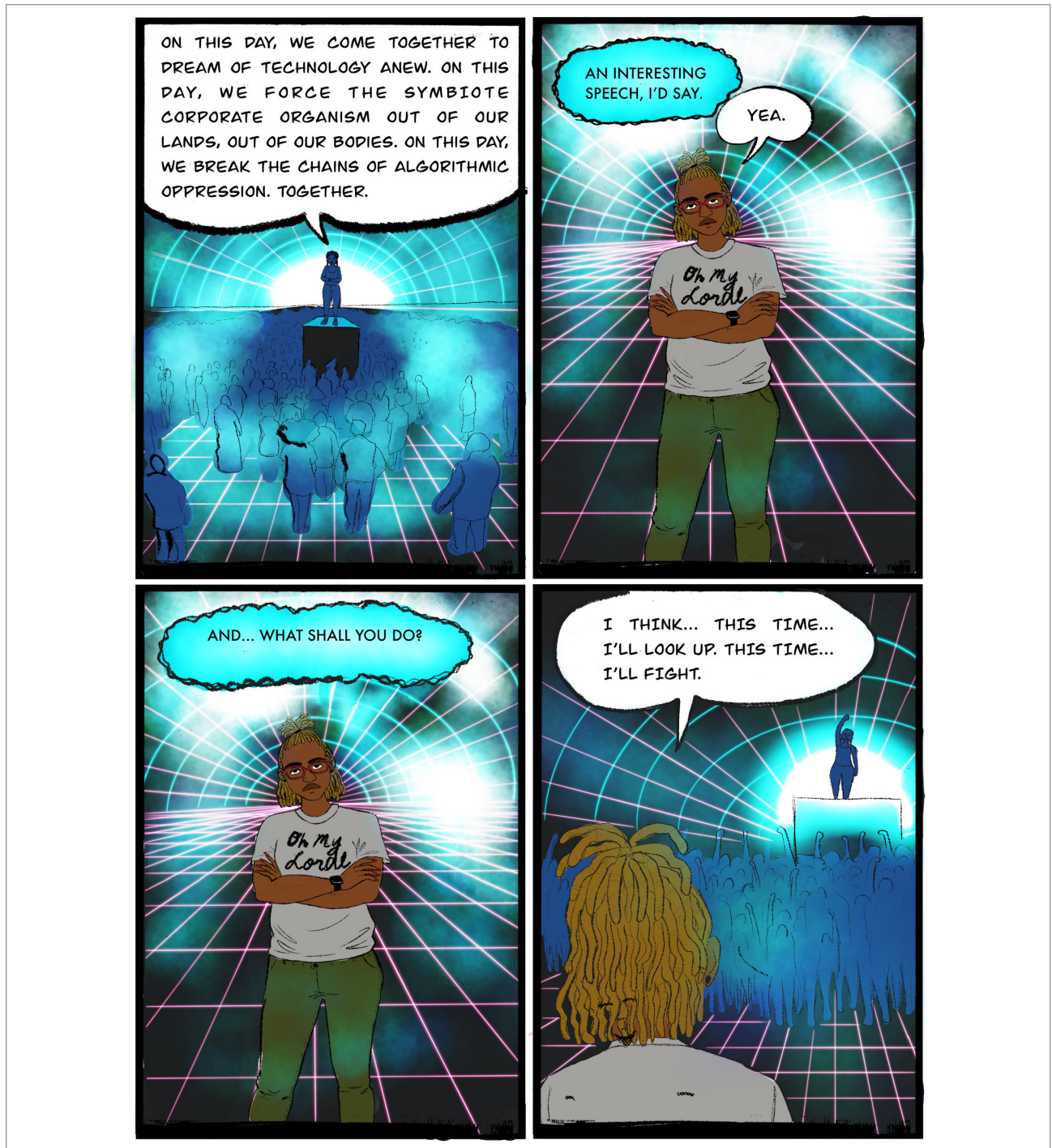
We considered both the threads and the patches as foundations to the narrative story.

Creating the Characters

We created the characters by generating composite beings that highlighted scholarship within our respective fields: STEAM learning and creative, interdisciplinary technologies (Shaw); secondary literacy, Black girlhood, and the speculative (Toliver), and critical race technology theory and AI (Tanksley). For example, as Black women whose work is centered in racial justice, we knew that "acts of naming [are] both ceremonial and critical to liberatory praxis" (Kirkland, 2021, p. 61), so we sought to produce

character names that highlighted Black technology scholars who have spoken out about algorithmic oppression: Timnit Gebru and Safiya Noble (Timiya), Seeta Peña Gangadharan and Rumman Chowdhury (Rumeeta), Joy Buolamwini (Buola), and André Brock Jr. (Grandpa Brock). We also created Prellyis to honor scholars whose research highlights the nuanced digital literacy practices of Black youth (Greene, 2016; Kelly, 2018; Lewis Ellison, 2017; Price-Dennis, 2016). We chose not to name the subaltern guide to represent the idea that a collective Black consciousness that moves from Black Other to Black subject (a named being) is elusive and difficult to grasp and, therefore, difficult to name (Knox, 2022; Wright, 2004). By beginning with naming, we honored the Black feminist roots that guide our individual work, while also situating the story in the scholarship of prominent Black activists and digital scholars.

Although naming was essential, the setting within which the characters' stories are told was also essential to the characterization. As Black women who were former Black girls in US schools, we wanted the primary character, Timiya, to be located within our contemporary and historical learning contexts, but because we all attended schools in different cities, we did not name Timiya's specific living context. Instead, we focused on larger experiences that represented the whole of our stories. While Timiya's location was broad, we deliberately chose Haiti as Buola's geographical location, as the country is emblematic of the possibility of abolitionist dreams and the reality of Black revolution. To highlight this context, we made several narrative choices. As examples, the secret B-web message Timiya receives says "January 1. Code 1804," and this was selected because January 1, 1804 is the date that Haiti became a free republic after a revolution. Buola's speech was constructed using the Haitian Declaration of Independence as a mentor text. Creole and French are Haiti's official languages, so the comic illustration of Buola's story includes a French newspaper. Ultimately, we chose Buola's geographical context to critique labels of Haiti as "third world" and challenge descriptions that ignore the rich history of knowledge and activism in the republic.

Defining the Conflicts

After creating the characters, we turned to the story's conflict, beginning this process by situating the story in research that highlighted how Black youth's educational experiences are steeped in conflict. Multiple scholars have noted how Black girls experience difficulty while navigating the traditional school system due to pushout (Morris, 2016) and erasure (Carter Andrews et al., 2019; Evans-Winters & Esposito, 2010), and this expulsion and deletion manifests in multiple spaces within and outside of literacy classrooms. As examples, Baker-Bell (2020) and Smitherman (1997) have discussed education's reliance on

White Mainstream English, a language practice that demonizes Black linguistic and rhetorical methods and results in punishment for Black girls when they choose to resist by using their cultural languages (Koonce, 2012). Additionally, Kohli and Solórzano (2012) discussed the racialized renaming that occurs in schools, often signaling to students that their cultures are unwelcome in the classroom. Black girls are often victims of this microaggression, as teachers "rush over their names, mispronounce them, or abbreviate them without regard for how it may impact their self-esteem" (Alexander et al., 2021, par. 2). Moreover, scholars have argued that hip hop and storytelling are foundational to Black literacy practices, but these cultural ways are typically shunned in literacy classrooms in favor of more traditional methods of language and literacy (Gibbs Grey & Harrison, 2020; Richardson, 2007; Toliver, 2022). We used this literature surrounding Black youth's educational experiences to guide Timiya's experiences at MAGNAS.

Moving from Timiya's specific characterization to the larger conflict in the story required further investigation and analysis of research on AI, literacy, and antiblackness. Looking to the work of digital literacy and platform studies scholars, we considered how AI has infiltrated literacy classrooms via automated assistive writing technologies (Robinson, 2023), surveillance technologies and GANs (Leander & Burriss, 2020; Maluleke et al., 2022; Nichols & Monea, 2022), and e-learning and social media platforms (LeBlanc et al., 2023). To interrogate and trouble the increasing use of AI in literacy classrooms, we looked to public and academic scholarship detailing how Black students might experience the digital in their various learning environments. As examples, scholars recounted how algorithms have trouble "seeing" dark skin (Harding, 2023); how digital applications "beautify" people of color by changing their features to resemble those of white people (Bhaimiya, 2023; Monteiro, 2023); how assistive writing technologies uplift dominant modes of writing without consideration for cultural variation (Dixon-Román et al., 2020); and how Black users face disproportionate harm and surveillance by online proctoring platforms (Logan, 2021). So, while we included storied components that showcased how AI is and might become a symbiotic force in education, we also critiqued that inclusion by showcasing how it might negatively impact Black students who inhabit AI-infused learning spaces.

Rather than focus our interrogation on schools and schooling, however, we also turned outward because, as Crawford (2021) argued, AI "is both embodied and material, made from natural resources, fuel, human labor, infrastructures, logistics, histories, and classifications," so "computational reason and embodied work are deeply interlinked" (p. 8). To showcase this connection, we read literature on the human and environmental impacts of AI. We started with readings on the existence of data centers,

storage buildings that house computer systems and their associated components. These centers occupy large spaces of land and use billions of gallons of water for cooling purposes, taking valuable land and water resources from resource-deprived communities (Osaks, 2023; Satti-raju, 2020). We then analyzed readings about the human labor required for AI operations. For instance, to remove derogatory text and images related to violence, hate speech, and sexual abuse, companies like OpenAI outsourced to data labelers in in Kenya and other developing nations, and these human laborers were paid minimally and often refused necessary mental health services (Perrigo, 2023). The human cost of AI is often overlooked, thus contributing to the idea that AI exists in the sky, that it just *is*. But the stories of those whose resources are taken and bodies are undervalued are important to the larger understanding of how AI operates. Ultimately, our goal was to further define the conflict by highlighting how AI does and might affect the classroom, but also how it impacts the larger world. In doing so, we showed the specifics of antiblackness and oppression that are directly related to AI in the United States (via Timiya's perspective) and the global context (via Buola's point of view).

Reaching the Resolution

The pitfalls of AI were important for the conflict, but AI literacies have also been used to engage in social justice, so we wanted our resolution to suggest a more hopeful future for Black students who will exist in an ever-increasing AI educational landscape. To guide our thinking, we first turned to scholarship on critical race media literacy, research that aims to assist people in acknowledging, critiquing, and reading societal power relationships related to race and racism that are embedded in the media (Alemán & Alemán Jr, 2016; Yosso, 2002). We also turned to critical race digital literacy which centers "the knowledge, skill, and awareness required to access, identify, organize, integrate, evaluate, synthesize, critique, create, counter, and cope with race-related media and technologies" (Tynes et al., 2021, p. 112). From this research, we saw how Black youth leveraged technology to center their own ways of knowing and existing; used their technological knowledge to author themselves into digital existences beyond white supremacist technological structures (Adomako, 2018; Garcia et al., 2020); and engaged in creative multimodal and digital practices to imagine Black worlds that make space for the construction of alternative methods of living, working, and being (Brock, 2020; Green-Hayes & James, 2017; Griffin & Turner, 2021). We also learned how the youth of color are knowledgeable agents of the digital, people "who acquire powerful, agentive, and candid realities around their experiences with digital and nondigital texts, [which are] reaffirming and salient" (Lewis Ellison, 2018, p. 88). Collectively, this literature recognized

that Black youth are not passive users of digital technology, as they regularly push against codified systems of white supremacy inherent within and across technological systems. Black youth bring a host of techno-literacies to the classroom, and these technosocial funds of knowledge are indispensable to the learning environment and to social justice praxis.

While we wanted to centralize young people's technosocial prowess, however, we also believed that AI, as a vast entity with many interrelated and moving parts, needed more specific examination, especially as it relates to racialized Others. Thus, we turned toward Tanksley's (2024) conceptualization of CRAL, a precursor to abolitionist coding (Benjamin, 2019) wherein students leverage their critical sociotechnical consciousness to design and deploy emancipatory technologies that can not only dismantle codified systems of antiblackness but also offer new, justice-oriented systems in their place. CRAL attends to current scholarship, but provides a tapered focus on AI in ways the other frames do not. Specifically, CRAL enables students to critically "read" technologies as codified systems of white supremacy designed in ways that reinforce, speed up, and automate antiblackness on and offline. By understanding how racial logics become encoded in various infrastructures (e.g., algorithms, machine learning logics, and content moderation protocols), CRAL demystifies technology and cultivates feelings of algorithmic agency. Additionally, by fostering students' ability to read the algorithmic "word," CRAL prepares students to critically interrogate, read, and resist the algorithmic "world." It equips students with the critical sociotechnical and techno-structural knowledge needed to identify, make sense of and 'fight back against' technological racism as it manifests across technological hardware, software and infrastructure. Finally, CRAL enables students to move past identifying, interrogating, and critically navigating racist technologies to actively imagine and design technologies in algorithmically and racially just ways. It bridges social, computational, and applied sciences to understand algorithms as "stories" that can—and should—be (re)written to produce transformative, justice-oriented change.

To bring CRAL to life and to highlight the ideas of critical race media and digital literacies, we ensured that Timiya and Buola's hacking abilities were prominent. As examples, we first ensured that the characters were not just humans being acted on by AI and larger social forces. Instead, they were also actors who could read analog and digital words and worlds in an effort to create more socially just digital futures. Timiya, for instance, read the world in her acknowledgement of how the algorithm defaulted to antiblackness in its erasure of her personal identity upon her upload into MAGNAS as well as how the assistive technologies lowered her grades because she chose to centralize Black linguistic and cultural practices. Buola identified how the algorithm perpetuated antiblackness in its

selection of Haiti as too insignificant to save and the FAANGs disregard for Haitian land and people, and she used her knowledge of the algorithmic word to invite Black organizers and activists across nations to collectively hack the system to prepare for revolution. Although we did not showcase what Buola and Timiya might have designed to create a more algorithmically and technologically just digital world, we did highlight Buola's call to rewrite the algorithmic trajectory and Timiya's response that producing transformative change requires young people to "look up," to consider personal, collective, and transnational means of critiquing algorithmic injustices and developing worlds anew.

On Slowing Down and Looking Up

Technology developers have long lived by the mantra "move fast and break things," a statement presented by Mark Zuckerberg that promoted the idea that it is better to make things happen and apologize later (Jacoby et al., 2018). In a fast-paced landscape where care and essential critique are initially disregarded, however, the things that get broken are people, communities, and nations. And, in a world that prioritizes speed over criticality, algorithmic violence is able to entrench itself into the foundation of the coding system, making it difficult to untangle from the larger technological network. Still, even as AI leaves a collection of broken things in its wake, we are already on the ship, moving quickly toward literacy futures in which AI and education exist in a symbiotic relationship. We are already a part of the digital middle passage in which Black people (as users and laborers) are disproportionately broken and discarded to ensure that technological things *happen*. But, we are not obligated to go along and accept apologies. Our options are not relegated to a reliance on challenge and critique in hopes that our words will one day result in lasting change. Moving from reactive to proactive stances, however, especially when AI development is moving at rapid speed, requires the speculative, a consideration of "what might be" rather than "what is."

In this article, we employed this speculative and proactive stance, deliberately situating our ideas in a science fictional story in order to think ahead, to cast our gaze toward the future so we could consider Black youths' existing technosocial literacies while also contemplating how we might make space for young people to engage their CRALs so that they can continue to critique and build, dismantle and design, hack and code. As our article title suggests, the internet does not exist in the sky; instead, it is built on the backs and lands of people. Thus literacy educators must consider how to hack the system, to design new algorithms, and to develop new technological futures. We must recalibrate our ideas around AI literacy practices, to create room for young people to not only end antiblack tech systems but also envision these systems anew (Benjamin, 2019) and create more sustainable AI practices. We must ensure that even if the default algorithm is antiblackness, we assist young people in reading analog and digital words and worlds, so they learn to look up, fight, and, eventually, construct algorithms coded for Black liberation.

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