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My Brain Is All the Super-power I Need': Examining Black Girls in STEM and Schooling Spaces in Marvel Comics

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During my first year teaching I met an incoming freshman named Arianna Hamilton (pseudonym) at open house; she was joining the school's engineering program. "I want to create buildings and structures to make things better for my community," she told me as she picked up her schedule for the year. She was bold, brilliant, bright, and Black. For the four years I interacted with Arianna as her teacher, her passion for science and mathematics never wavered. Even when she faced teachers who doubted her intelligence and challenged her place in their advanced classes, she continued to persist and shatter the box that white teachers tried to put her in. She was one of a kind. She was also the only one, the one solitary Black girl in her program. What Arianna Hamilton experienced—racism, deficit views of her abilities, denying access to certain curricula—is a too common occurrence in schools across the country.

Negative perceptions and stereotypes as well as the adultification of Black girls rob Black girls of their childhood. These perceptions can manifest in various ways, which include intellectual, physical, and emotional violence towards Black girls (McArthur 1). These acts of violence can include not having curricula that are reflective of Black girls' diverse backgrounds (2), intense surveillance and physical assault from school resource officers (3), and the aforementioned adultification bias (5). Humanizing Black girls and addressing the inequities that accost them in the school system are a vital part of actively doing the work of social justice within education.

My scholarship, like scholars before me, aims to prioritize and center Black girls (Edwards et al.; McArthur; Muhammad and Haddix; Price-Dennis et al.; Sealy-Ruiz). As a Black woman who attended an inner-city public school, I understand what it is like to feel like you do not belong or that no one understands you. Within this article I interrogate the intersection of race, gender, and schooling within two Marvel comics, specifically the portrayal of two gifted

Black girls involved in science, technology, engineering, and mathematics (STEM). I examine the navigating of academic and communal learning spaces through the perspective of Lunella Lafayette in *Moon Girl and Devil Dinosaur* and Riri Williams in *Ironheart*.

Literature Review

Graphic Novels, Comics, and Race

The genre of comic books has been mainly dominated by white, hetero, cis-gendered males, in both authorship and character appearance. The standard model of superhero is often a representation of American values and power dynamics (Wanzo 314), and a satirical and commonly stereotypical view of Blackness is often illustrated on the pages (315). When persons of color are introduced into the world of comics they are generally stereotyped and lack nuance; they become "tokenized" caricatures who are usually relegated to the sidelines within the canon, the "official" story (Hosein and Clement 35). Canonical stories within comics don't often represent the multicultural society that exists (Kirkpatrick and Scott 122).

Comic book characters of color traditionally have been written by white authors. Iconic Black superheroes such as Black Panther, Falcon, Luke Cage, Black Lighting, and Storm were all created by white authors. These heroes are celebrated and have iconic canonical volumes in both the Marvel and DC universe. However, recent trends in comic book publications are challenging traditions. A new wave of Marvel and DC comics includes a younger and more diverse cast to appeal to a wide range of readers. Notably this was the inclusion of Miles Morales as *Spiderman*, Kamala Khan as *Ms. Marvel,* and Riri Williams as *Ironheart*. There were initially mixed reviews about Marvel's new approach to diversity due to the mantle of popular heroes such as Spiderman, Ironman, and Captain America becoming racebent— "reimagined as

different racial identities" (Owens). Comics communities and fandoms have been pre-dominantly white centered spaces consisting of hetero, cisgender males, often called "fanboys" (Pumphrey 208). When Marvel chose to racebend iconic heroes the "fanboys" of the community saw it as a challenge to the authenticity of the characters (Fu), but for readers of color it was a chance to see themselves represented within the panels as a reflection of society.

There is an expanding base of research within English studies and comics studies that interrogates race and positionality within Marvel comics and subsequent young adult novel adaptations of the heroes. This scholarly research covers the rare visualizations of intersections of gender, race, and queerness in Latinx characters such as America Chavez (Jiménez 7), the intersections of gender and religion in *Ms. Marvel* (Gill), and analyzes the titular characters of color in ways that reflect their cultural heritage and racialized identities while still grappling with everyday issues of adolescence. Heroes of color have to work against a duality of systemic oppression such as "racism and white supremacy" as they carry the weight of their superpowers while being racialized within their superhero mantles (Torres 166). The depiction of schooling issues in comics is a subject that is also covered by a variety of scholars, who examine charter schools and their impact in urban neighborhoods in *Marvel's Ultimate Comics Spiderman* (Low, "Waiting for Spider-Man"), and discipline policies and the school to prison pipeline and the teacher's role in fueling that system (Worlds and Miller). Comics allow readers to examine the real issues that exist in the world as portrayed by these fictional characters.

Black Girls in STEM

The National Assessment of Educational Progress (NAEP) in their 2014 report on the success of African American Students in STEM indicates that "African American students are more likely to struggle with environmental barriers that can reduce academic performance, and

not see themselves as having a place in the STEM community" (1). Their research also indicates that STEM learning is communal and begins at home with sixty-three percent of students surveyed stating that family members aided them in learning how to construct and repair things (1). These community practices can illustrate how learning is conducted within the home; family members explain how household items work and then extend the learning by allowing students a chance to deconstruct and then reconstruct household appliances or work on items such as computer repair. Students begin a tactile, hands-on learning experience that creates space for them to envision how they may construct something brand new in the classroom and beyond. Collins et al. address the underrepresentation of Black girls in STEM and the nuances of girls not being socialized to be raised as scientists. This can lead to a belief that as girls there is no place for them within this field of study. Young et al. ("Maximizing Opportunities") explain how Black girls gravitate to STEM and with proper supports and nurture can thrive in the field. Their existence in the field is a counternarrative to the hegemonic ways of being male—mostly white males—in STEM, and their presence highlights meaningful academic and community-based experiences.

Due to the lack of diversity in the STEM fields, continuous research is being done on how to increase the demographic of Black girls in STEM education and the workforce (Butler; Collins; Collins et al.; King; Young et al., "Maximizing Opportunities"). Part of that research focuses on finding ways to engage and support Black girls in science and mathematics classes with the hopes of them entering the workforce and maintaining retention there (Young et al., "Maximizing Opportunities" 174). It is imperative that attention be given to Black girls and how their literacies can be encouraged or stifled within STEM fields.

Historic and contemporary forces of oppression shape how students enter STEM spaces. For instance, Black girls have to endure disproportionate practices that make it harder for them to navigate school spaces from adultification bias (Morris, "Countering the Adultification"), excessive disciplinary actions, racism (Epstein et al.), and educational tracking systems that use Black girls' behaviors as justification for denying them placement in gifted programs (Collins et al. 57). Teachers can play a role in perpetuating or challenging these oppressive practices. King found that teacher engagement and the quality of support in the classroom can nurture STEM curiosity and success with Black girl students (9). The real-world research on Black girls in STEM echoes the fictionalized accounts of the comics analyzed in this article.

Theoretical Framework: Black Girl Literacies and Black Feminist Thought

Black Girl Literacies

Muhammad and Haddix, in their research on Black Girl Literacies, attend to the way Black girls make meaning and form their identities due to their intersectional approaches to literacies and learning by noting that Black Girl Literacies are "multiple, tied to identities, historical, collaborative intellectual and political/critical" (325). Their extensive study covers the multiple ways that Black girls make meaning in and out of the classroom and provides a framework and pedagogical practices for English educators to incorporate these practices within the classroom to create a more inclusive and communal learning space for their Black students. This framework relies on educators knowing their students and how they learn and understanding their sociopolitical standing in the world.

A component of the Black Girl Literacies framework is applying the use of multimodalities when engaging in text and text selection (Muhammad and Haddix 327).

Multimodal texts allow for reading and meaning making across modes and can lead Black girls into creating communal and collaborative spaces to build relationships, cultivate agency (309), and aid in Black girls using these literacies as a form of resistance and disrupting racial injustice in the English classroom (Young et al., “Even Cinderella” 105).

Having diverse texts that center Black girls offers students and educators ways of engaging in dialogue and interactions that situate Black girls as dynamic and multilayered, which can disrupt racist ideologies that lead to adultification bias and push educators towards nuanced ways of thinking, acting, and engaging with Black girls. These texts can be used as counternarratives to combat anti-Blackness (Tulino et al. 33). The literature should also be authentic and highlight the lived experiences of a Black girl rather than depicting a Black girl character as a token, sidekick, or a diversity add in (Greene 3). It is important to not just read about Black characters but to “see” those visual representations of them as well and to interrogate the portrayals of those images and the impacts they can have on readers (Brooks et al.; Francis; Hosein and Clement; Low, “Students Contesting”; Thomas “Critical Content”; Thomas, “Critical Engagement”).

Black Feminist Thought

Black Feminist Thought (BFT) seeks to challenge the way Black women are represented in literature, art, politics, and other public domains and discourses. In a society where women are marginalized, BFT seeks to illuminate and enhance the representation and agency of Black women. Using BFT in a literary aspect allows the reader to critically analyze portrayals of Black women and girls across various readings by deconstructing dominant ways of knowing (Collins; hooks, *ain’t i*). It is important that the portrayals of Black women and girls not be relegated to sideline sidekicks or fall into the lazy comfortability of stereotyping. Black Feminist Thought

reminds that Black women are more than caricatures and one-dimensional images. Rather, BFT places Black women in the central role of social change both historically and presently: "historically, U.S. Black women's activism demonstrates that becoming empowered requires more than changing consciousness of individual Black women via Black community development strategies. Empowerment also requires transforming unjust social institutions that African Americans encounter from one generation to the next" (Collins 291). That empowerment can come in the form of representation within literature.

Black Girls and STEM Fields in Comics: Analyzing *Moon Girl* and *Ironheart*

Drawing on Black Girl Literacies and Black Feminist Thought, I conducted a critical content analysis of visual images (Short) to analyze the ways in which two young Black female characters are represented in Brandon Montclare and Amy Reeder's *Moon Girl and Devil Dinosaur: The Beginning* and Eve Ewing's *Ironheart: Meant To Fly*. Specifically, I analyzed how the characters navigate schools and schooling processes in these titles. I chose these texts because of their portrayal of gifted Black girls within schooling systems at different educational levels: *Moon Girl* focuses on elementary classrooms while *Ironheart* is concerned with post-secondary school. I read through the texts, marking for instances of schooling which include characters in the school setting, mentioning of schools, learning, and meaning making for both in school and out of school contexts (Muhammad and Haddix). The questions that I used to guide my analysis consisted of:

- How are Black girls in STEM positioned in the texts?
- How do these young Black superheroes engage in depictions of schooling experiences?

- How do comics address the failures of public schools?
- What literacies do the Black girl characters enact in and out of school contexts?

Moon Girl was created in 2015 and centers a Black girl as the main protagonist, Lunella Lafayette, who is written by two white people, Amy Reeder and Brandon Montclare. Although written by white writers, Lunella is drawn by Afro-Latina illustrator Natacha Bustos who was drawn to the series because she grew up not seeing any representation of Black and Brown girls in comics and illustrates this character "in hopes of inspiring young girls of color" (qtd. in Alfonseca). Riri Williams of the *Ironheart* series was created in 2015 by acclaimed Marvel writer Brian Michael Bendis. Riri was introduced as a replacement for Iron Man. Bendis' depiction of Riri has since been criticized for her lack of authentic portrayal of a teenage Black girl and various stereotyping (Hosein and Clement). After Bendis departed from Marvel to take a position with DC comics, Marvel recruited a new writer to continue the *Ironheart* story in order to position Riri Williams as a character with her own canonical body of work. Marvel's search resulted in the selection of Eve L. Ewing, an African American woman and Chicago native (much like the fictional Riri), to take over the ongoing work of the *Ironheart* story (qtd. in Jung).

Introducing Lunella Lafayette AKA Moon Girl

Lunella Lafayette is the main character in Marvel's titular comic series *Moon Girl and Devil Dinosaur*. Lunella is a nine-year-old fourth grader at PS 20 school in New York City. She is a scientist who is trying to get into gifted programs and applying to STEM schools with no success. The representative schooling spaces for Lunella happen in two locations throughout the comics, the first being her science class and interactions with her classmates and her science teacher, Ms. Dominguez. Lunella's point of contention in the classroom is that the school she is attending is not meeting the needs she has as a scholar and an adolescent. She is constantly

challenged and ridiculed and expected to adapt to the situation of what a docile model student would be (Epstein et al. 5).

The first introduction the reader has to Lunella within schooling spaces comes within the opening pages of issue #1. Lunella is running late for school because she is working on an invention that she created. When she finally reaches school, she makes it to the door of her science class just as the bell is ringing. She tries to tell Ms. Dominguez that she made it in time, and instead she is greeted with the threat of a tardy slip if she does not find a seat (Epstein et al. 9). As the panel progresses, we are given a glimpse into the instructional practices of the science class. Ms. Dominguez is having her students repeat the theory of evolution. Lunella is seen sketching out her invention and is called upon to explain the theory of evolution. She initially says she can't, and the teacher interprets this as she doesn't know and ridicules her in front of the class and calls her "little miss know it all". Lunella corrects her and responds with an evolved answer of why evolution is not a theory with substantiated evidence. She is then cut off and ridiculed more by peers as they know this is acceptable endorsed behavior (Reeder and Montclare 8).

Lunella's superhero moniker "Moon Girl" is a nickname given to her by her peers because they see her as constantly "spacing out" and not being present. The truth is that school is not serving Lunella's needs. She is highly gifted and has multimodal tactile ways of learning (Muhammad and Haddix 307) as illustrated in the opening panels. Because the teacher is not cued into her needs, Lunella is feeling pushed out (M. Morris, *Pushout*), and she goes on to say that she sometimes hates school, inherently because she is not understood, nor is she made to feel as if she belongs. Being gifted, Lunella is very aware of what she should be receiving, but no one is listening to her. She remarks, "My brain is all the super-power I need" (Reeder and Montclare

11), when she thinks about herself within the context of her school, her community, and world ripe with superheroes.

Schooling continues to be a racialized place for terror during physical education (P.E.) class. Lunella is often assaulted by dodgeballs by her peers and bullied by her P.E. coach, Coach Hrbek (16). Both school and home have failed Lunella, she is self-sufficient and assertive in her quest to seek out answers to her inhuman process. In order to ensure her own success, Lunella created a science lab beneath the school. She enters through the school's ventilation system as well as the sewer system. It is here where Lunella's true learning and meaning making happens. The juxtaposition is that Lunella cannot learn in the science class but instead has created her own science lab within the school without anyone knowing. The lab is fully equipped with technology that Lunella has either refurbished or built on her own. She has created her own safe and equitable space for learning, reaffirming the notion that Black girls need spaces for literacy learning and meaning making (Price-Dennis et al. 4).

Introducing Riri Williams AKA Ironheart

Riri, like Lunella, is another young Black girl genius. She is a fifteen-year-old who due to her intellect excelled and graduated school early. Riri is enrolled in Massachusetts Institute of Technology (M.I.T.). Her experience within the university system affords her more access and privileges than Lunella. Riri has her own lab where she can manufacture and tweak her inventions. However, her access comes at a cost. Within her learning space she feels bombarded and taken advantage of by the dean of the college (Ewing 8), yet she understands she and her lab are beholden to him due to it being on school property and the school itself is a funding source (10). The actions of the dean within Riri's lab are a form of colonization because the school

believes it should have free access to Riri/Ironheart and all of her inventions because the school brought her in; Riri's genius and skills are viewed as property. Collins explains this paradigm as a subjugation of knowledge where white men come in and suppress the ideas and works of Black women in social institutions (269). The dean exercises his authority and ownership of Riri and her lab by disregarding her privacy and entering at his own leisure with guests to put Riri's intellect on display.

The university does not offer her mentorship and guidance, only a place to perform for what they see is beneficial to their institution. hooks speaks about teaching as a "counter-hegemonic act, a fundamental way to resist every strategy of white racist colonization" (*Teaching to Transgress* 2). For Riri to engage in a "counter-hegemonic act," the university system as a whole would need to provide institutional support beyond mere funding. Riri, like all Black girls in a new environment, could possibly benefit from mentorship, guidance, and a protected space to cultivate and nourish her skills (King 11). Riri is very conscious of this fact. The opening pages of the graphic novel have Ironheart soaring above the sky, her first thoughts: "I was never meant to fly" (Ewing 6). Riri reflects on a line from the Maya Angelou poem "Still I Rise" as she continually flies high among the clouds. Riri knows her circumstances are very privileged given her background from the south side of Chicago, yet she still faces systemic barriers. She promises that she will continue to rise above the assumptions and expectations that the world places on her and Black girls like her. Riri is also subjected to stereotypical assumptions about girls in STEM and about Black culture in general. When questioned about her love for engineering it is usually in reference to whether her father taught her to build and construct things, and a comment is made on if her armor can be weaponized to harm in the way that her best friend and stepfather were killed by weapons (6). There are older university students

in the lab that try and build community with Riri. When her colleagues reach out to her, she is withdrawn and introverted and very much into her work. Her colleagues leave with the remark, “it’s not so good to be alone,” but Riri is functioning in the way that she has been conditioned by her schooling processes, to work, build, and create alone, at least when she is in a classroom setting.

Through a series of flashbacks, the story of ten-year-old Riri and teenage Daija unfolds. Daija is an old friend of Riri who has gone missing. Daija took Riri under her wing and was the only person to look out for her when she was the youngest kid in high school. In the present time Riri wants to look out for Daija; she realizes that no official search is being conducted so she decides to look for her on her own. Within this context this is known as “missing Black woman syndrome”—where you have to fit a certain mold to be important and that schooling spaces can contribute to the erasure of Black girls (M. Morris, “Countering Adultification” 47).

The Daija Hamilton mystery is the vehicle which shows the negligence of the school systems when teens go missing and the trauma of child labor. Daija was a young Black woman who did not finish high school. On the surface level this could seem stereotypical, but Ewing presents the narrative that shows that Daija dropped out so that she could help her family. Within low-income families’ children often have to share the responsibility of providing for the household. That need supersedes the need for institutional education. From that perspective, Daija is no longer just a dropout but a young woman who had to put the needs of her family before her own.

The story of missing Daija is one that is a narrative of the Black woman experience. Oftentimes Black women and girls go missing, and they remain missing (M. Morris, “Countering Adultification” 47). There is no national manhunt, no hashtags, no call for justice. Combined

with her main storyline are metanarratives of not only experiences of people of color but also people who live on the poverty line. Daija is kidnapped and held hostage by her white boss, the Councilman Birch. Birch was also using illegal child labor to steal data and sell it to the highest bidder (Ewing 9). The children that are visually represented all resemble persons of color. Both Riri and Daija set about freeing the children.

The exploitation of people of color by the white majority is not a new issue. People who are in dire need and feel as if they have no way out are often the perfect targets to be exploited (Butler 29). Riri and Daija offering the kids a way out via fighting for them and providing a place for them to come back to afterwards shows the resilience of the community. Riri and Daija both know what it's like to lack in resources mentally, physically, and emotionally. Once the children are free Riri provides a "safe space" as a laboratory where the kids can come and hang out and learn new skills (Ewing 19). Not only is she protecting them, but she provides a learning space where they can develop the skills they need to eventually get out of their situation. It is within this space Riri realizes her power to effect change within community (Collins 293) without the help of an institution; the resources that the community needed came from one of their own. Ironheart becomes a story not just about Riri Williams, but about coming together as a community and working towards healing what was broken by an imbalanced society.

Moon Girl and Ironheart Owning Their Literacies

Muhammad and Haddix, in their conceptual framework of Black Girl Literacies, posit that Black girl literacies are "multiple, tied to identities, collaborative and intellectual" (325). Both Lunella and Riri have moved beyond schooling spaces because their intellectual literacies were not being nurtured. Lunella creates a lab for herself to nurture her own learning, while Riri creates a lab as well but extends it as a safe working space for other marginalized and

underserved youth like herself. Both characters' literacies are tied to their identities because they are consistently told by older, non-Black people how they should show up in the world. There is even a moment between the two in *Moon Girl and Devil Dinosaur Issue 15* where Riri tells Lunella that she was always told by older people what she couldn't do, and she doesn't want that for Lunella, because she has the right to make her own choices (Reeder and Montclare 60). Within that scene they also lean into their collaborative literacies, and Riri becomes a pseudo mentor for Lunella (King 5), and they find common kinship—as two Black girls, scientists—with each other in that supportive space.

Another pivotal moment in Lunella's story is when she decides to assimilate and become what everyone has been telling her to become. She goes to school and attempts to be "normal"; she does not lean into her intellect and instead regurgitates information. She attempts to make friends and play in P.E. Her teachers and parents are thrilled about her behavior, but the illustrations show the truth. Lunella is miserable (Reeder and Montclare 114). By not allowing her the freedom to be herself, Lunella is being "pushed out" of her own body; the schooling system positions her to receive "less nurturing, less protection, less comfort, and less support" (M. Morris, "Countering Adultification" 44). Her depression does not last long, she takes a resistance stance and decides she will do things her way on her time and let the adults think they have the upper hand. Lunella finds her identity and agency in who she is and becomes comfortable in her own skin. She takes ownership of the name "Moon Girl" and decides that she is self-made and takes pride in being her own greatest invention.

Black girls within schools are being underserved in their educational needs (Collins et al. 52). Riri Williams, due to the nature of her parents, excels in her intellect and ultimately gets to attend M.I.T. even though she is fifteen years old. Lunella however is trapped within her school

system, learning how to navigate and create space in an institution that is not designed for her to be academically or intellectually successful. Denying Black girls the freedom to imagine outside the sanctioned school curriculum enslaves them to hegemonic norms (Young et al., "Black Girls"). Both Lunella and Riri create their own spaces due to lack of nurturing and schooling support. Both characters exemplify a giftedness that transcends their peers, yet within academic structures they are still limited.

Black girls experience racialized violence via pedagogical standards, disciplinary actions, and exclusionary curriculum. Lunella and Riri represent two examples of a real truth for Black girls. In both iterations these characters represent Black girls in STEM but through varied experience. In the case of Lunella, her story opens up with a collage of rejections to gifted programs. She is discovered to be the smartest person existing, and she is still confined to public schooling because there is no space for her in the programs that would best serve her. A large portion of her story lies within her questioning why no one understands her or sees her genius. She is constantly questioned even after proving via testing that she has a high level of intellect. The scientists that surround her suggest the testing is potentially flawed rather than concede that a Black girl can hold space in her body for so much genius.

Moon Girl and Ironheart Creating Collaborative Learning Spaces

Both characters' identities as scientists show that their literacies are varied. By design as engineers, they work to construct new ideas and creations and find ways to fix them or create something new. These literacies translate to their learning and meaning making in the community. Lunella, when she embraces the mantle of superhero, begins to police her neighborhood by fighting crime to make it safer. After an encounter with other superheroes whose fighting left pieces of the neighborhood destroyed, Lunella begins to reconsider when

saving the day whose responsibility it is to clean up the physical mess that is made outside of the criminalized mess. It is in that moment that her community literacies are enacted, and she begins to see being a hero in her community is more than fighting crime; it's about preserving the everyday structures and livelihood of the people she engages with on a daily basis. These same literacies apply to Riri, after her stepfather and best friend are gunned down, she decides to use her superhero techniques as anti-weapons. She uses the technology in her lab to try and create inventions to de-escalate situations without them becoming volatile. Her lab becomes the safe haven she wishes her neighborhood would have been.

Black girl literacies are also tied to identity. The identity of Lunella and Riri lies in wanting to help others. Riri’s collaborative literacy is evident when she teams up with a childhood friend to solve the mystery of a missing former classmate. In this moment Riri gives up schooling at MIT and decides to return home to where she is needed most. She recognizes that the formal schooling space is not providing support to her or others, so she takes up collaborative and communal spaces and returns to where her learning first originated: her mother’s garage, her very first lab. She reconfigures her technology to triangulate Daija’s cellphone location in order to find her. Throughout the series Riri makes the choice to leave traditional schooling to take up learning on her own terms and with her own hands. Lunella, as stated earlier, is not allowed that same affordance. As the series progresses her interactions with her science teacher become less antagonistic, yet Lunella is still seen by her teacher and peers as a weird, overzealous girl with occasional behavioral issues. Lunella does find ways to persist, but she always hangs in the balance of surviving instead of thriving.

Another example of the collaborative aspect of Black girl literacies is how Riri and Lunella both understand that they alone cannot fix the issues in their community. In both series

the two characters reach out to other superheroes to assist them in difficult tasks or to work out a solution. In Riri's case her childhood friend Xavier is often a co-collaborator for helping her to figure out what's going on in the neighborhood. Riri calls upon some of the more notable names in the Marvel world such as Shuri, Ironman, and Dr. Strange. However, it is Xavier, another Black teen, who affirms her and offers her support in her superhero endeavors. Lunella is helped by the young Hulk, Amadeus Chao. Most of the superheroes who assist her often question her. However, Kamala Khan (Ms. Marvel) and Riri Williams offer assistance to Lunella while affirming her and allowing her to make her own choices. The two women of color, Kamala Khan and Riri, become mentors to Lunella (King 5), and the co-constructed space between these young women of color becomes a place where they enact literacy socially and intellectually (Muhammad and Haddix 314) within the realization there is a shared amount of reciprocity of understanding what it means to be young women and superheroes. Seeing these depictions of Lunella and Riri using their minds and creating inventions that help their community and save the world can aid in pushing forward the narrative of Black girl representation in STEM fields.

Closing Thoughts, Looking Forward

Comics can be used as a tool to interrogate schooling structures and the way that marginalized characters engage in depictions of schooling practices. Black girls encounter the same types of teachers and educators that are depicted within the panels of these comics, and these negative biases and perceptions of them cause pushout not only in the classroom but in STEM education. Classrooms should be communal spaces for creative and sustainable learning (hooks, "Narratives of Struggle" 8). These communal learning experiences can be "contextualized within the framework of generational family experience" (hooks 3). By encouraging ways of knowing and meaning making for Black girls via their multiple literacies,

educators can disrupt schools as negative racialized spaces. Young et al. posit that teachers should use "Black girl literacies as a form of resistance" ("Even Cinderella" 105), and that "Black girl literacies are needed to develop Black girl literacy pedagogies" (104). We see the potential of Black girl literacies in STEM spaces through *Moon Girl and Devil Dinosaur* and *Ironheart*. When educators respect and acknowledge the intersectional identities of Black girls and include them as co-collaborators in the classroom, school becomes as best stated by bell hooks a "radical space of possibility" (*Teaching to Transgress* 12). Educators can create that space by nurturing STEM activities, using multimodal texts, offering mentorship and leadership opportunities, and acknowledging the cultural knowledge that Black girls bring into the classroom to enact humanizing heritage and community practices that work towards centering the cultural livelihood of black girls within the classroom.

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