

# Empowering Black Mathematics Students Through a Framework of Communalism and Collective Black Identity

**Nickolaus A. Ortiz**  
*Georgia State University*

**Terrell R. Morton**  
*University of Missouri–Columbia*

*In this paper, we speak to the ways that Black people have consistently strategized and advocated for rights and the education of their children through communal efforts related to a collective Black identity. We use a framework of Black X Consciousness and ontological Blackness to nuance the ways that Blackness is internalized and taken up by members of this group and assert that although Blackness is a unifying factor, diversity in ideologies and goals exist. The ways that Black people have historically worked through these issues in hopes of achieving better education for their children is especially highlighted, along with the ways that these communal ideals may be utilized as forms of capital for Black children learning mathematics. Given this understanding, we also assert that what is generally culturally relevant for the collective may not be as prominent or relevant among various Black identities. In addressing the question of how to cultivate a mathematics education that is culturally relevant for Black children in particular, we discuss how our predecessors taught us that communal ontologies are instrumental in a) shaping the curriculum of a mathematics education worthy of Black children and b) shaping the facilitation of teaching and learning to which Black children are exposed.*

**KEYWORDS:** Black/African American, Black political thought in education, communalism, culture, mathematics education, race

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NICKOLAUS A. ORTIZ, Ph.D., is an Assistant Professor of Mathematics Education in the Department of Middle and Secondary Education at Georgia State University, 30 Pryor Street SW, 6th Floor, Atlanta, GA 30303; email: [nortiz1@gsu.edu](mailto:nortiz1@gsu.edu); Twitter: @ProfessuhNAO. Nickolaus A. Ortiz's research focuses on how an ontological Blackness is manifested and/or stifled during high-quality mathematics instruction that emphasizes teaching for conceptual understanding and mathematical discourse. He studies how mathematics discourse for Black children may be imbued with Black linguistic patterns and is actively theorizing about what it means to create a Black liberatory mathematics education that affirms these linguistic practices and Black people writ large.

TERRELL R. MORTON, Ph.D., is an Assistant Professor of Identity and Justice in STEM Education in the Learning, Teaching, and Curriculum Department of the University of Missouri–Columbia, 303 Townsend Hall, Columbia, MO 65211; email: [mortontr@missouri.edu](mailto:mortontr@missouri.edu); Twitter: @DrTRMorton. Terrell Morton's research focuses on identity as it informs students' persistence and engagement in postsecondary STEM education with a focus on race and an intersectional race-gender identity for Black students and Black women in STEM. He maintains a critical-phenomenological-ecological perspective with his work as he strives to transform the social positioning of race or race-gender regarding Black students' and Black women's STEM engagement to promote STEM learning spaces that are extensions of their identity rather than sites of hostility and alienation.

Justice, is juxtapositionin' us, justice for all just ain't specific enough.  
(Common & Legend, 2014, 0:52)

The words of Grammy Award-winning hip-hop artist Common resonate with us as we reflect on our various experiences within education and deeply and critically consider this assertion that “justice for all just ain't being specific enough” (Common & Legend, 2014, 0:55). In this paper, we call into question how Black people have still found ways to achieve educational endeavors despite the obstacles placed on them and without the full promise of U.S. rights and privileges, specifically within the context of mathematics education.

The current conversation is an important one within urban education, although it must be stated that “urban” is not synonymous with “Black.” Urban spaces, particularly those identified by Milner (2012) as urban intensive or urban emergent, on average possess large populations of Black people and students. For this reason, this conversation about Black students in mathematics is especially important, as the field contends with the way that communalism and collectivism for Black people, as explicated in this paper, seek to craft a more liberatory mathematics education for Black children. We offer ideas toward this direction. Thus, we speak directly to liberation-seeking Black teachers and those constituents who are critical players in the education of Black children (i.e., Black students, Black parents). This is not to understate (or overstate) the role of White teachers but to suggest that there is a unique role that these Black constituents play in educating Black children.

We start with, center, and solely focus on Black people and the Black experience in mathematics from a heterogeneous, intragroup perspective. Taking this approach helps us identify the various strategies enacted by Black people to gain their freedom, a perspective based on their individual or collective conceptualization of freedom and what it takes to be free. Situated within a concept of Black X Consciousness, racialized metacognition (Morton et al., 2019), we emphasize the political notion of Blackness embraced by those who galvanized resources and worked together collectively as a community to advocate for better living and learning conditions for their children.

In focusing on their political notions of Blackness, noticed through collective strategies and action, we offer up communalism and a collective Black identity as important principles for grounding and implementing culturally relevant processes in the policy development, teaching, and learning of mathematics for Black children. Communalism is operationalized here as collaboration and community rooted in reciprocal and interconnected relationships among African-descended peoples, and a collective Black identity as an ontological position seeking to understand the intricacies and (dis)similarities among those who identify as Black. As such, this paper uses these ideas to further conversations and research focused on Black liberation in and through the context of mathematics education.

## **A Continued Need to Focus on Blackness in Mathematics Education**

Our rationale for engaging this work, though informed by many different scholars and experiences, primarily stems from examining the outcomes of White pre-service teachers' (PSTs) attempts at implementing culturally relevant pedagogy coupled with liberalistic ideologies of "for all." In an earlier study examining PSTs' approaches to culturally relevant mathematics lessons, the first author of this manuscript thought about some of the explanations that the PSTs provided as to why their mathematics lessons were culturally relevant (Ortiz & Davis, 2019). In short, the PSTs claimed that their mathematics lesson plans were culturally relevant "for all" of the students they taught and would teach. We find this perspective, though universally adopted by many, to be problematic as we consider how these PSTs homogenized people and their lived experiences. This perspective, that there is one homogeneous understanding of people and life, is idealistic and often contested, as evident in a later excerpt from Common's (2014) verse when he claims that we "saw the face of Jim Crow, under a bald eagle" (2:27). In the same way that Toni Morrison (2017) has described Whiteness as being tacitly understood in literature and accepted as the norm, particularly in the absence of identifying the race of literary characters (i.e., identifying them as Black), U.S. culture, as Hoelscher (2003) stated, more generally enables the unspokenness of Whiteness to be the norm and all non-White identities to be "Others."

We use the metaphor of the bald eagle and Jim Crow to underscore the ways that Black people's lives and histories are overlooked in the United States in general and specifically within education through a "justice for all" perspective; we extend this metaphor to the examination of Black children in mathematics education. Like Common, we argue that justice for all just ain't specific enough and use this theme as a guiding frame for how we approach an education meant to be beneficial for Black children (e.g., Ortiz et al., 2018; Ortiz et al., 2019).

Broadly, curricula and educational policies assist the United States and its social institutions (like mathematics education) in overlooking the needs and ideologies, however diverse, of Black students (Asante, 1991), because they are not seen as ideal learners or even ideal citizens. Whiteness is so far engrained in U.S. systems (Bell, 1987; Davis & Jett, 2019; Tate, 1997) that it is assumed that something culturally relevant for all students will take White norms as the default. A focus that does not begin and end with Black children or center their needs and interests does not help them engage their greatest possible selves within (and outside of) mathematics education (Gholson et al., 2012; Martin, 2019; Ortiz et al., 2018; Warren, 2018).

In setting the stage for a need to center Black children in mathematics education, problematizing the notion of "for all," we now discuss historical depictions of the goals shared among many Black people manifesting through collective,

communal, and political notions of Blackness, goals that respond to the issues outlined in the above metaphor. We discuss how Black people have advocated for a better (mathematics) education, noting the specific resources requested. In highlighting collective, communal, and political notions of Blackness enacted to make change and what this means for mathematics education, we further this work by nuancing the conversation, looking within the Black racial identity group to discuss its heterogeneity. We end our conversation by detailing the pedagogical implications for how communalism among Black people might impact both policy and pedagogy.

### **Black Political Thought Among Educators and Parents**

To demonstrate variety in Black political thought with communal Blackness political strategy and action, we provide a brief overview of some well-known continuous debates taking place within the Black community surrounding Black education. We have reviewed literature that speaks directly to Black education, allowing us in this section to build a case for principles related to Black communalism and collectivity. In doing so, we attend not just to the differences discussed but the implications of said differences on the perspectives of Black educators and parents and their perceived role in educating Black children. Additionally, we situate the ways these diverse goals for education have historically led to communal action. We feature the following ideas and scholars' positions because of our shared histories and desires for improving Black education, as well as their scholarly traditions and evidence of both persuading and achieving educational, civil, and economical advances for Black people within their specific temporal and sociopolitical context.

#### *Historical Issues and Concerns in Black Progress*

The prominence of some key scholars, educators, and activists are important for understanding Black education and Black intellectual thought, and we share these anecdotes to posit that both implicitly and explicitly these figures were foregrounding a communal approach to life and education. King (1994) suggested that the scholarly tradition of Du Bois and Woodson reflect "the collective African American cultural ethos and social thought that evolved out of our common heritage and struggle" (p. 31). That is to say that this idea of a collective Black identity is framed first and foremost around a common heritage and Diasporic affiliation, but it does not end there. In his foundational text, Carter G. Woodson (1933/1990) articulated how Negroes had successfully been miseducated. One claim he made regarding the postslavery era is that the debate over whether Black people should have a classical or practical education was a very real one. Many Black families questioned whether a college education would be beneficial to what Black families needed to survive, particularly those in the South.

Tate (1995) gleans from Woodson's argument that an education that only catered to the needs, experiences, and desires of White individuals was a disservice to African American learners. For Woodson (1933/1990), even science and mathematics teaching had to consider the complexities and context that accompanied Black students' learning in that contemporary moment, such as less exposure to family budgets and calculations than their White counterparts, as well as less access to qualified teachers. Important here is that Woodson makes the point that Black people would be remiss to believe that individual success would be beneficial but that it was happening more often than it should have: "but the Negro forgets the delinquents of his race and goes his way to feather his own nest, as he had done in leaving the masses in the popular churches" (Woodson, 1933/1990), p. 37). This critique seems to advocate for an uplift in a communal and collective approach.

Also among those who raised questions about the structure of education for Black Americans was Booker T. Washington. It is common knowledge that W.E.B. Du Bois and Booker T. Washington clashed regarding their opinions about Black social and economic progress. Although somewhat of a reductionistic approach to their ideologies, some would sum up the major differences in these prominent Black figures' positions by saying that Washington touted an industrial education for Black people that stressed vocational skills, while Du Bois envisioned academic, philosophical inquiry as a way to understand and incite social change (Bauerlein, 2004). Du Bois (1935) made the point that decisions about educating young Black children is not an individual endeavor and is intricately connected to the important role of Black parents:

But in the case of the education of the young, you must consider not simply yourself but the children and the relation of children to life. It is difficult to think of anything more important for the development of a people than proper training for their children; and yet I have repeatedly seen wise and loving colored parents take infinite pains to force their little children into schools where the white children, white teachers, and white parents despised and resented the dark child, made mock of it, neglected or bullied it, and literally rendered its life a living hell. Such parents want their child to "fight" this thing out, -but, dear God, at what a cost! Sometimes, to be sure, the child triumphs and teaches the school community a lesson; but even in such cases the cost may be high, and the child's whole life turned into an effort to win cheap applause at the expense of healthy individuality. (pp. 330–331)

As crucial players in the decisions related to Black children's education, it is not uncommon for individual parents to have various ideas about how and where to educate their children. However, this too often translates into underacknowledging the beauty in our own culture in favor of a traditional or White framing of school curricula (Asante, 1991; Boykin, 1994; King & Swartz, 2016; Matthews et al., 2021), as Black families alike rely on the curricula, its structures and norms, provided by K–12 schooling (and postsecondary education) to educate (and even raise in some

circumstances) Black youth. We see this in the work of Delpit (2006), where parents did not necessarily agree on the progressive models of education but emphasized the need for their children to gain standard skills that would help level the playing field. We understand this tension to result from the desire to love and embrace one's Blackness while simultaneously engaging in learning that ensures survival (physically, socially, emotionally) and learning that promotes self-confidence and love. "We teach our babies to pursue equal status with those whose (access to) life is defined by our (vulnerability to) death" (Woodson, 2020, p. 19). Communal efforts must value the insight and concerns of Black parents, believing and accepting that they have the best intentions for their own children but coming to a consensus that does not jeopardize one's Blackness or safety.

Notwithstanding, the importance of Black educators cannot be trivialized in discussions about Black education. A long-standing tradition of educating both oneself and the community is present among Black people (McCluskey, 1994), notable in the efforts of educators like Mary McLeod Bethune who was committed to the academic needs of her people. Johnson (2009) recounts the legacy of other Black women educators, like Nannie Helen Burroughs and Anna Julia Cooper, who understood that their own progress was intricately connected to their students' and the overall Black community.

As the leaders of classroom spaces, teachers play a crucial role in helping to create discourse around what is needed for the Black collective and how it will be implemented. It is notable that what often made the difference in the lives of Black children, pre and postsegregation, were dedicated Black teachers who understood and acknowledged their humanity (Ladson-Billings, 1995; Ware, 2006). Frank (2018) and Muhammad (2020) mentioned that these traditions of care and community are connected to a historical legacy of Black teachers and the power Black teachers wielded in classrooms (e.g., Noblit, 1993). Siddle Walker (2000) recounted these Black teachers as exemplars who were remembered for their high expectations and demanding teaching styles. These Black teachers were a part of the collective that knew what value and joy lay in teaching these brilliant Black children and helping to communicate a vision for their success.

We share these points because what becomes true is that these actors seemed to realize that individualistic approaches were not going to fare well for the Black masses who had recently become freed women and men, thus any theorizations and/or solutions had to account for large groups of Black people and mobilize them in a way that was strategic and liberating.

The ideologies surrounding integration-desegregation are worthy of a bit more attention, again with the undeniable presence of Black educators and parents operating simultaneously. Although many Black people were in support of the victory in *Brown v. Board of Education* and saw it as an iconic moment and win for civil rights, many believed that it was a disservice to Black children and would prove more

harmful than good (Ladson-Billings, 2004; Woodson, 2020). In asking the question of whether or not the Negro needs separate schools, Du Bois (1935) so bluntly stated, “Under such circumstances, there is no room for argument as to whether the Negro needs separate schools or not. The plain fact faces us that either he will have separate schools or he will not be educated” (p. 329). He, like other Black scholars, past and present, felt that although there might be access to more resources when attending schools with White children, the emotional, mental, and physical cost for Black children might be too great and, equally concerning, there would be a teaching force that would not be as affirming or convicted to teach Black children well. This is in stark contrast of former Supreme Court Justice Thurgood Marshall, who fought voraciously for the desegregation of these schools, arguing that segregated schools contributed greatly to the unwholesomeness and despair of Black children (Love, 2004; Woodson, 2020).

Still, Siddle Walker (2013) described a historical legacy of Black educators during this time period who “supplemented their local and national advocacy for educational equality with a parallel pedagogical and curricular agenda designed to spur change by intentionally teaching generations of Black children citizenship, democracy, and voting as a means to confront oppression” (p. 208). She painted the picture that these efforts were never accomplished alone and that even these educators’ membership within national protest efforts were aimed at doing what was best for the Black children. Further, she chronicled the actions of Black educators who rarely received credit for what would eventually lead up to the *Brown v. Board of Education* decision, all while acknowledging the collective efforts of Black educators across the South advocating for better school houses and increased wages for teachers. Contemporarily, Black teachers like these still have much impact and influence (Clark et al., 2013; McKinney de Royston et al., 2021).

An important lesson stemming from these debates around Black education is that there is often overrepresentation among certain groups within the collective, such as the Black elite and upper/middle class (Smitherman, 2015; Woodson, 1933/1990). For example, we must be cautious of how much power that the Black elite and upper/middle class (Smitherman, 2015) has in cultivating a meaningful mathematics education for Black children. The particular moments in Black education that we have shared also help us to realize that while Black educators, parents, and students may aim to operate communally, sometimes the exact differences in the group’s desire to uptake any particular strategy might be made more salient when nuancing the ways that various Black identities see the strategy as potentially useful. In other words, does the mathematics education we proffer benefit most Black people or does it disproportionately marginalize some groups within the collective (e.g., low-income Black families).

*Summary*

Although solutions to these and other issues have never been clear cut for Black people, the reality has always remained that within the United States, “Black” was socially regulated to “Other,” hence prompting collective and communal goals among Black people as guiding principles in enacting change for Black racial progress and, ultimately, steps towards a more liberating mathematics education.

The debates described in this section helped clarify action and/or next steps for many Black people, with the driving force of both debate and action being related to what the collective needed. Woodson (2020) provided similar affirmation to this point by reminding us that achievement is “for the community but not on behalf of the community” (p. 20). Ultimately, though there will be many decisions that must be made in regard to the education of Black children, what we learn from each of these moments in history is that variance in perspectives and strategy are inevitable but must always respond to the needs of the collective and seek to foreground that which does not aim to commit harm.

In building on this foundation, we extrapolate collectivism and communalism as guiding principles for advancing Black liberation. To further nuance this conversation, specifically within the context of mathematics education, we leverage Black X Consciousness (Morton et al., 2019) and Ontological Blackness (Ortiz, 2020) to discuss anchoring Black liberatory mathematics education in Black communalism and collectivism in nonessentialist ways. This approach can build a mathematics education that empowers Black children, deriving a consensus with the Black collective that establishes a) a list of what we believe that Black children should have learned before they graduate high school and b) ample opportunities to engage in mathematics learning in ways that prioritize the collective (i.e., other Black students within their mathematics course).

### **Communalism and Collectivism Through Black X Consciousness and Ontological Blackness**

There is no monolithic Black experience because Blackness is not homogeneous; it is a social, cultural, historical, and political signifier for how individuals of a darker melanated hue who reside in or descend from continental Africa perceive and engage life (Johnson, 2003; Woodson, 2017). Blackness, as a construct, constitutes billions of people across the globe. How these various individuals coalesce, and in essence embody their Blackness, occurs through either self-determined or socially regulated means (e.g., Morton & Parsons, 2018). From a socially regulated perspective, Black is a racial identity ascribed to those who maintain shared ancestry and morphology with people of African descent (Atwater & Russell, 2015), where Blackness, superficially defined, is subjected to the ideologies and outcomes of mainstream



colonialism (e.g., hegemonic Whiteness; Cabrera, 2018). The self-determined manifestation of one's Blackness—how one demonstrates to the world what Black means to them, who one is, what one values, what one believes, who one associates with, and why—comes about after a series of psychological processing that involves perception, attention, information processing, and decision making all being regulated by a racialized metacognition, what was deemed Black X Consciousness (Morton et al., 2019).

Black X Consciousness thus details the ways in which Black people operate as theorists of life, conceptualizing what it means to be Black within and across various contexts given the sensory data they receive from interacting with their environment (Morton et al., 2019). As a self-determined understanding of Blackness, though situated within the mainstream socially regulated idea of Black, how one understands and enacts their Blackness (socially, culturally, and politically) falls on a spectrum that ranges from individualism to thin or thick conceptions of collectivism (Shelby, 2002). Individualism represents perspectives and actions that favor and privilege personal autonomy, meritocracy, and individual well-being (Shelby, 2002). Collectivism involves coordinated movement towards a Black communal recognition. Collectivist approaches to Blackness vary from thin conceptions—basing one's group identity off superficial notions of Black limited to the hue of one's skin and morphological structure—to thick conceptions that constitute cultural and political notions of Black (i.e., building community around shared ideas, beliefs, values, norms, and strategies).

In noting the expansive nature of Black X Consciousness to conceptualize how Black people engage mathematics education, comprising metacognitive praxes such as stereotype management (McGee, 2016), we draw on this concept to examine and emphasize the strategizing and action had by Black people to revolutionize life and education. We specifically attend to the collective, communal strategies enacted by various politically Black groups, noting how they theorized change given their interactions with their environment. In focusing on how and why they coalesced, detailing the justice they fought for, we provide a deeper conception of collective, communal Black activism and the possibilities of embedding this perspective within the present and future teaching and cultivating of Black children in and through mathematics.

Connectedly, ontological Blackness can be understood through at least three forms of capital: communalism and a collective Black identity, resistance, and linguistics (Ortiz, 2020; Ortiz & Ruwe, 2021). These three forms of capital as described do not exhaust our understanding of Blackness as an ontological reality but instead promote aspects that make Blackness real to those who inhabit it. In delineating these various forms of capital, we attest to that fact that not all Black people utilize these forms of capital in identical ways, as has been conceptualized in the thick and thin notions of Blackness. Despite this noted understanding, the experiences that Black people have in education and in mathematics specifically are too often similar in disheartening ways (Gholson & Wilkes, 2017). These shared experiences have triggered

the many ways in which Black people internalize ideological positions and strategize for solutions (Morton et al, 2019, Ortiz et al., 2019).

Given this understanding, situating ontological Blackness within Black X Consciousness by attending to components that make Blackness real as individuals engage their learning environment and how said Blackness shapes their cognitive processing and behavioral applications, we operationalize communalism and a collective Black identity as both political strategy and action to protect and advocate for Black people in mathematics education. It is important to note that our focus here is on mathematics education, particularly because it is often regarded as the queen of the sciences, neutral in its implementation (Kokka, 2020), and a gatekeeper responsible for rejecting or ascribing privilege and/or inequity (Martin, 2009). Notwithstanding, these conversations are relevant to other contexts and disciplines beyond the scope of this paper; we strategically make sense of nuancing the case in mathematics education.

This framing of communalism and a collective Black identity suggests that these key aspects of Blackness, however understood and however enacted by Black people, is a beautiful thing worth being celebrated, period! As part of that celebration, these concepts should be integral to educational curricula. As Dumas and ross (2016) asserted, there is no one way to be Black; the only recommendation they provided is just to love being Black. We argue that with that love comes a desire to see all Black people flourish and recognize that this desire, often connected to the communal efforts of Black people, can be a unifying-communal experience in itself. In this way, we specifically tackle the vastness of communalism within Blackness, suggesting that advancing Black progress (even based on a thin description of Black) is a uniting feature for Black people and that historically it has been the foundation upon which their ontological realities are created and a priority in seeking group rights and privileges together.

### **Black Collectivism and Communalism— Considerations for Mathematics Education**

In this section, we discuss our operationalization of Black collectivism and communalism within the context of mathematics education. Given the prior discussion on diversity in the strategies and needs for Black people, we caution the reader to interpret our work as but one perspective that may serve to empower Black students' pursuit of mathematics and help educators see how to address their needs and self-proposed desires. We align our thinking with these scholars within Black intellectual thought and more explicitly outline a commitment to education that permits Black children to “*choose* collective liberation and survival as a goal and to see this as a part of a larger struggle for social change” (King, 1994, p. 30).

As we ideate the many possibilities in which we can transform mathematics education to ensure the thriving and success of Black students, we attend to the notion of enhancing culturally relevant/responsive instruction for Black children (Ladson-Billings, 1997; Leonard et al., 2009), advocating for conversations around the capital, ideologies, and needs of Black children as central to political strategies and actions that advocate for Black children as a collective. In other words, instead of a lesson being perceived as culturally relevant for all, we argue that one of the ways mathematics teaching and learning is made relevant for Black children is by tapping into a capital that prioritizes communalism and Afrocentric ontologies. By proposing that communalism and a collective Black identity serve as guiding principles for the education, political advocacy, and action of Black people (King & Swartz, 2016), we again broach this concept with a perspective that Blackness is heterogeneous in its embodiment, with the social regulation of Blackness by U.S. society creating an ontological Blackness that maintains a “barebones minimum” collective reality that is thinly situated.

Similar to Hilliard (2001) and Shujaa (1992), we acknowledge the temporal and geographical implications that accompany Blackness and highlight how some iterations or understandings may be static (Anderson, 1999; hooks, 1990). Ross (2009) argued that these forms of conceptualizing Blackness cannot erase Black subjectivity because it allows for other forms of oppression to surface among Black people. We call for a communal and collective approach that is sensitive to these needs and advocates for all Black people. In iterating this idea, we extrapolate how the embodiment of Blackness is situated within existing research.

### *Considerations of Black Heterogeneity*

In discussing a collective Black identity, it is very important to acknowledge the “type” of Black people featured, delineating differences in the embodiment of Blackness in relationship to what Martin (2009) has described as micro or macro levels of societal problems. In the context of this paper, we understand macro issues to be those that inherently impact the Black X Consciousness of Black people, as macro issues dictate the ways in which Black people navigate their various environments that are culturally, historically, socially, economically, and politically regulated. Micro-level concerns, though also informing Black X Consciousness, thus reflect connections that might be specific to various groups within the collective Black. For example, micro issues could include concerns, topics, or trends that appeal to specific subgroups of Black people (e.g., Black girls and women, low socioeconomic status, or individuals from Atlanta). Micro issues do not only reflect subgroups based on social identities; these can also reflect subgroups based on ideology. Although the macro-level issues deal a lot with critiquing systems of inequity and privilege, we see more micro-level issues related to pedagogy and learning styles, home life, and interests. Overall, the point we strive to make is that there are going to be issues that

pertain to Black people just by virtue of them being Black within the United States, and there will be more nuanced aspects of these phenomenological Black realities (Martin, 2012) as we survey the needs of subgroups of Black people. Communal approaches must take different meanings of Blackness, that which we are suggesting under a collective Black identity, very seriously.

*Black perspectives—gendered, diasporic, and regional.* Scholars articulate the need for disaggregating Black people in general and when analyzing different subgroups within the collective, such as Black girls or young people (Gholson & Wilkes, 2017). We highlight this example as a way for us to consider how we frame capital for Black students, acknowledging the need and possibility of providing a perspective that attends to the different subgroups among Black people regarding age or gender and realizing that essentializing these identities is counterproductive (Graven & Heyd-Metzuyanim, 2019; Jurdak et al. 2016). When educators consider making instruction culturally relevant for Black learners in particular (as opposed to a “for all” method as described in the introduction of this paper), they would do well to think about the nuanced understandings of Blackness among subgroups, as well as the overarching theme of communalism.

In proposing nine dimensions to a collective Black cultural ethos, Boykin and Toms (1985) focused on “Afro-Americans” and linked the African American cultural experiences to a traditional African ethos. They suggested that Black people express alignment with these dimensions—spirituality, harmony, movement, verve, affect, communalism, expressive individualism, orality, and time—at varying degrees. In leveraging Black cultural ethos, we emphasize that how people approach and enact Black cultural capital can differ. For example, Black cis-gender women may utilize Black capital in ways that differ from Black men or non-binary folk given the multiplicative nature of identity and its influence on determining reality, a perspective that should be reflected in pedagogy and praxis (e.g., Berry, 2010). A communal approach must account for how within-group differences could include leveraging frameworks that note collective cultural identities among Black people but differences in the understandings of reality specifically for Black girls and women given gendered experiences (e.g., Hudson-Weems, 2020).

Seemingly, there is little disaggregation had of Black people within the Diaspora within mathematics education as it relates to Black cultural capital or culturally relevant interventions. Some noteworthy exceptions do occur in Bermuda (Matthews, 2008), among Black English Language Learners (Leonard et al., 2009), and in research that examines domestic and international Black students in engineering—a mathematically heavy discipline (Burrell et al., 2015). Aside from gender and Diasporic (e.g., ethnicity and nationality) exemplars, Blackness can be nuanced by geographical regions. Caniglia (2003) discussed the role of Detroit’s Black history in the overall Black history and how highlighting the specific contributions of Detroit can make educational content relevant for Black children within that locale because

of their connection to the city. Regional pride and identification are important because what may be familiar to Black children in one part of the country may not have the same meanings or intuitiveness in other areas; Blackness may be performed much differently in Detroit, Michigan, versus Atlanta, Georgia, or even Asheville, North Carolina.

This reflection regarding the approach to multiplicative identities and specificity within Blackness among communalist approaches is also true when we think about religion or spirituality (e.g., Black Christians, Black Muslims, Black agnostics, etc.) and Black people across the spectrum of sexuality (e.g., heterosexual, homosexual, bisexual, pansexual, asexual). Our positioning strives to think more about Blackness as this multifaceted ontology and to prompt deeper conceptions about what unites Black people and what makes us special. Connecting this deeper, collective-based introspection to aspects of culturally relevant pedagogy, we extend and deepen conversations about reflecting on the context of the classroom and how instruction can be culturally relevant to the heterogeneity of Blackness present within the learning space. For example, though we see a lot of these discussions surrounding lower income Black students (e.g., Coleman et al., 2017; Jackson & Remillard, 2005; Powell-Mikle & Patton, 2004), we raise questions around whether Blackness differs in light of class or socioeconomic affiliation?

More research that focuses on diversity within Blackness alongside these notions of a collective Black within the context of mathematics education is needed. Additionally, mathematics education should focus on the implication of said research on both policy and practice within mathematics teaching and learning. In the same way that Carter (2003) was explicit about how these poor African American youth living in Yonkers, New York, used certain forms of capital, it may be worthwhile to see who is being left out of the conversation when we talk about Black cultural capital. Davis (2018) contended that a “liberatory paradigm is responsive to the distinct historical and contemporary needs of the collective Black community in mathematics education and society at large” (p. 70). The major point worth taking from this part of the conversation is that the research community must include more explorations of the ways Black children make sense of Blackness and how this can be understood alongside cultural relevance, as situated within their experiences across multiplicative Black ontologies. More succinctly, is our instruction culturally relevant for all Black learners, or perhaps for a subgroup of these learners (e.g., Black boys)? We suggest that this answer may vary according to context.

### *Principles Towards Mathematics Instruction and Assessment*

Notwithstanding, it makes sense that communalism is prevalent in much of the research on Black children’s mathematics learning and culture (e.g., Coleman et al., 2021; Leonard, 2018; Thompson & Davis, 2013). As defined by Boykin (1994), communalism denotes “a commitment to the fundamental interdependence of people

and to social bonds and relationships” (p. 249). In short, the ontological position we foreground here celebrates collectivity, interdependence, and the well-being of the group over self-exaltation (Boykin & Toms, 1985; King & Swartz, 2016). With this stated, the role of competition embedded in our mathematics classrooms (e.g., tracking efforts, standardized tests measures) is antithetical to how Black children may be socialized outside of these classrooms (Davis & Martin, 2018; Lim, 2008; Moody, 1998; Tate, 2005; Yanisko, 2016).

If, as we have argued throughout this paper, communalism and a collective Black identity are noteworthy to many Black people, then perhaps at least one way that communalism might be targeted in mathematics classrooms is through the use of group work. To be clear, we are not suggesting that all Black students want to work in collaboration at all times, or that some do not prefer to work alone. What we are saying is that we have to be cognizant of the ways that we assume the existence of neutrality in the teaching of mathematics and the ways we assess our students (Gutiérrez, 2013; Jett, 2019; Ortiz et al., 2018). Weissglass (2002) described how evaluation and assessment have been used, particularly in mathematics, as barriers to social access and how these assessments may cater to cultural values and practices not shared by non-White student groups. We must be open to the fact that those who do not perform well on current assessments are still brilliant, and perhaps we are still utilizing far too many antiquated ways of evaluating students’ knowledge when alternative mathematics tasks can and do exist.

There is much evidence in the mathematics education literature concerning the idea that advancement for Black people groups has to be a collective effort (e.g., Coleman et al., 2017; Collins, 2018; Davis, 2018; Lewis et al., 2002). Similar to the historical recap presented above, Davis (2018) suggested that within historical movements of civil rights, the goal has been, and should remain, to evaluate ways in which to improve social conditions for Black people and how to move the community forward collectively. He juxtaposed this with the ways in which a Eurocentric ideal has established individualistic goals and a tendency towards competition within mathematics classrooms and in their mathematics trajectories, and in our analysis above, we showed how collaborative efforts were prioritized in these propositions on Black education. Eurocentric conceptions run counter to ideas of communalism, again creating a climate in which Black students may face some dissonance. Thus, even mathematical assessments should acknowledge the role that collective work and progress can serve Black mathematics students, both in their learning or materials but also the application of these materials to real, relevant problems.

Davis (2018) is not alone in highlighting the role of collective effort, both in policy and in pedagogy (see Battey & Neal, 2018; Bonner & Adams, 2012; Ladson-Billings, 1997). Connectedly, Clarkson and Johnstone (2011) described the Afrocentric connections that Black students felt in one school. In the featured school, the leaders promoted *ujima*, a sense of collective work, because it aligned more with

Afrocentric collaboration. These students explored mathematics learning in terms of group work, similar to ways described by Jett (2013) and Hubert (2014). When this happens, students are introduced to new ways of engaging in mathematics that bring new perspectives and arguments to the forefront. Black educators are inherently connected to a legacy of Black teachers who utilized these communal approaches and may thus be well positioned to utilize them and to advocate for their use by their non-Black counterparts.

King and Swartz (2016) provided some helpful principles (i.e., inclusion, representation, accurate scholarship, Indigenous voice, critical thinking, and collective humanity) related to how we imagine some of these ideas being implemented in group work. Although all equally important, these last two principles provide some tangible ways to think through mathematics pedagogy. They suggest that critical thinking should promote culturally authentic assessment such that it guides students to produce knowledge and proffer solutions through demonstration rather than selecting a predetermined right answer. This is powerful in that communalism would ensure that students are all able to think through scenarios together, an example being the best way to describe conceptually why  $\sin^2\theta + \cos^2\theta = 1$  can be thought of as a Pythagorean Identity. Multiple ways of approaching this explanation exist, but the communal responsibility that undergirds collective humanity would ensure that all students in a group make sense of this explanation before the class is over. We imagine that higher cognitive demand-type questions (McCormick, 2016; Stein & Smith, 1998) like this could help teachers to build an atmosphere where Black (and other) students are responsible for helping one another to understand a geometric approach versus an algebraic one in explaining their rationales. In other words, a better approach to a conceptual question like this may result from helping students to recognize the power of not just providing a correct answer but collaborating in a group to make sure they can explain it to their peers and that everyone has mastered the concept. This is what we mean by fostering a communal approach in our classrooms.

Further, Eglash (1997) described the brilliance of Benjamin Banneker as it related to a wider, African history of counting number systems, and Tate (1995) described a scenario where Black students' reasoning behind purchasing a more expensive bus pass was because of the benefits it would bring to their family. Their decisions were not based simply on them calculating the cost for themselves, but new perspectives were considered when the students explained that their family members could also use a bus pass to make it to the places they needed to go in a given month. In noting these exemplars, we assert that capital is invaluable in thinking about how mathematics can influence the lives and dispositions of Black people (Ortiz et al., 2019), or even the uptake of certain self-concepts that stem from collectivist views (Woodland, 2008).

Some of the current assessments might be better completed together, and we borrow this approach from those Black educators and parents who recognized that

solutions to the real-world problems they were working with (e.g., desegregation) were communal efforts. Mathematics educators and policy makers might consider seriously the pros and cons to these types of assessments. Would standardized tests completed within small student groups negatively impact the learning that is taking place among our students? Boykin and Toms (1985) and Coleman and colleagues (2017) would seem to disagree, stating that communalism, which may be seen as dependency to the mainstream, exudes a range of social values. These values seem to align with the idea proposed by the scholars foregrounding Afrocentric curricula that promote *ujima* and family (Clarkson & Johnstone, 2011; Nyamekye, 2013). These scholars help to support the idea that mathematics teaching and learning can still be rigorous in these contexts and that mathematics can be taught alongside cultural values (Grant et al., 2015). Further, the benefits that might occur from allowing students different ways to demonstrate their knowledge, particularly in ways that may align more with the forms of capital that are well represented among Black learners, speak to the different learning modalities that exist among diverse students. We proffer these ideas as necessary principles towards a more liberatory mathematics education for Black learners that operates communally while still acknowledging the various needs within the collective.

## Discussion

With this said, culturally relevant and responsive pedagogies (Brown et al., 2019; Corp, 2017; Ladson-Billings, 1997; Nolan & Keazer, 2021) help us understand that communal approaches are at least one way that mathematics teaching and learning can be made relevant for Black children. Notwithstanding, group work is not something that is magically going to allow Black children to exert their capital. Teachers still have a responsibility to help facilitate what mathematical practices are occurring in these groups (Sengupta-Irving, 2014; Webb et al., 2019). What may be different in the way that group work and collaborative assignments are implemented in classrooms with high populations of Black children is that group work must still promote what is considered to be high-quality mathematics instruction (Munter, 2014). These children can be pushed to higher levels and should not be exposed to group work only for trivial tasks; we see that this kind of low-level instruction occurs far too frequently in classrooms with Black children when low expectations are abundant (Stinson, 2008). Communalism and this collective Black identity have the power to inform our instructional activities without compromising or reducing the rigor of mathematics instruction.

This conversation about communalism is an important one for thinking about the ways that Whiteness holds power and how we might resist that power. If Whiteness has dictated the Eurocentric standards to which we still comply by promoting individual achievement of goals (Davis & Martin, 2018; Tate, 1995), then how might



more Afrocentric ideals of communalism challenge these dominant ways of mathematics instruction? We suggest that empowering the students in the way we have framed here is manifested through the uptake of a curriculum and pedagogy that values what many Black students may regard as more consistent with the forms of capital they wish to utilize. It would stand to reason that if communalism is regarded highly by many of our Black students, then it might offer some insight into how our assessments might better include opportunities for them to showcase their knowledge alongside other groups' members. More pragmatically, as stated by Ortiz (2020), one option might be to reconsider how we administer standardized testing. One thought might be to allow, for example, 1/3 of the assessment to be in communal activity. This might help to reduce the anxiety that is associated with the competitiveness of being compared to one's peers and further validate the sense of collective goals for the group. This may also give a better indication of student knowledge and comprehension of the material. The reality is that standardized tests in the current form rarely tell us anything substantive about Black children's ability to do mathematics or whether they are actually "proficient" (Larnell, 2019); they more explicitly reveal the exact disparities that exist in Black children's experiences and inherently provide part of the evidence for why Black people must continue to advocate for a better mathematics education. We believe that the collective efforts of Black people will help to see this type of change.

Next, we move to the voice that Black parents and students can offer up in conversations about securing new teachers in their schools. Being a citizen means also having a voice in important decisions, such as who will get the privilege of teaching any particular Black child. Again, the point we made earlier is that these goals and needs may differ as we think about who we want to teach Black girls, Black LGBTQ+ children, and others, but the point is that these students should have some voice that advocates on behalf of the collective; protesting and opting out of a harmful system requires work in behalf of the collective. We see these communal efforts as a way to accomplish some of Martin's (2019) recommendations, such as refusing to engage in tracking policies that perpetuate competition and hierarchical systems, yet these efforts are contingent upon each of the constituents we have mentioned.

Lastly, Black children deserve to learn mathematics from teachers who they also trust and feel comfortable with hiring, ones that help them fight against anti-Blackness and White supremacy in the U.S. Empire (Martin, 2019). They should feel that these teachers will present curricula in a way that does not marginalize their Blackness but that seeks to celebrate their Black identity(ies) and continue to move the collective forward. We see Black students' voices as left out of this conversation too often and recognize that empowerment can occur when these diverse Black voices are included. Thus, a communal approach in this context would allow Black children to be a part of the hiring efforts for teachers in their schools.

## Conclusion

Toni Morrison (2019) cautioned, “Let us be reminded that before there is a final solution, there must be a first solution, a second one, even a third. The move toward a final solution is not a jump” (p. 14). In a similar way, Martin (2009) cautioned us against a solution on demand for problems that have metastasized over centuries. This is important in understanding the goal of this paper. We have offered a critique of how Black children are overlooked in mathematics education and how in looking for solutions, particularly by starting with the roots of Black education, Black people have strategized collectively and in ways that reveal their Black X Consciousness. We have argued that, in addressing the question of how to cultivate a mathematics education that is culturally relevant for Black children in particular, our predecessors taught us that communal ontologies are instrumental in a) shaping the curriculum of a mathematics education worthy of Black children and b) shaping the facilitation of teaching and learning to which Black children are exposed.

Marginalization happens too often in education, especially when there are so many “Others” underrepresented in conceptions of “all students.” If the curriculum was truly for all students, Black children would not experience disparities and stereotypes within mathematics achievement at such alarming rates (Ladson-Billings, 1997; McGee & Martin, 2011; Stinson, 2013). Further, tension in this assumption of “for all” arises when one considers that the current state of mathematics education cannot be working and or relevant for all children (Delpit, 2012; Goffney, 2018; Jett, 2013) if Black children are not benefiting; furthermore, their neglect inherently means all children have yet to be considered. A huge point that we have made in this paper is that Black people have historically advocated for the collective. We honor this tradition by suggesting that we must strategize with attention to the collective, constantly reevaluating whether some Black identities are being overshadowed in what is to become a liberatory mathematics education, even within the propositions we have foregrounded in this discussion. Empowerment for Black people has always been connected to the communal efforts. Thus, where justice (and mathematics) for all was not specific enough, we advocate for a more communal framing that is responsive to Black children specifically.

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