



Racial Equity in Mathematics

Reflections and Recommendations from a Black Mathematics Educator

Christopher C. Jett

Note: The opinions expressed here are not necessarily those of Notices.

Introduction

As a Black male mathematics educator, I should be more intimately familiar and involved with the American Mathematical Society (AMS), especially given its mission to support mathematics education at all levels. That's why when I was provided with an opportunity to "like" the Facebook page in early 2021, I jumped on it right away. To my dismay, there was a heated debate in progress, as some Black mathematicians voiced concerns in the comments section that the AMS had not done its due diligence in selecting a name for a new fellowship but instead publicly broadcasted the "AMS Fellowship for a Black Mathematician." I interpreted that to mean that previous AMS fellowships had been properly named before rolling out the red carpet and sharing the specifics with the AMS community. In this era of performative gestures in the name of racial equity, the optics associated with this entire debacle caused me to give AMS the side-eye. While there are debates concerning what constitutes racial equity in our field, this scenario is a clear example of what it is not. And as the adage goes, first impressions are lasting impressions. And if this was anyone's first impression of AMS via its Facebook page, then, as my students say, this was an epic fail!

Christopher C. Jett is an associate professor of mathematics education at Georgia State University.

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Without question, mathematics as a disciplinary enterprise has failed and excluded Black scholars. While there have been some successes and victories among Black mathematicians, more often than not, these successes have been coupled with a continuous fight for racial equality. As a Black scholar, I examine these interactions, such as the in-your-face racial politics about the naming of this fellowship, through a critical race lens. Although the aforementioned fellowship has been subsequently named the AMS Claytor-Gilmer Fellowship (named after Dr. William Schieffelin Claytor and Dr. Gloria Ford Gilmer, the first Black man and woman to publish a mathematics research paper in a peer-reviewed journal, respectively), such practices differentially impact Black mathematicians, which in turn, ultimately help sustain the disproportionality of Black scholars in mathematics. Therefore, the damage has been done even after different forms of backpedaling have ensued (i.e., statements, apologies, and the like).

In this article, I first discuss my professorial background to provide some context for the ideas shared here. Then, I share three recommendations derived from it for the readers of the *Notices of the AMS*. To be clear, mathematics education organizations have experienced some of the same racial challenges highlighted here, so they, too, are not without critique [1, 2]. Finally, I provide concluding thoughts and pose critical questions regarding racial equity in mathematics. Throughout the article, I draw on scholarship that centers Black people's experiences and tailor my discussion through my lens as a Black male mathematics educator.

Where I Enter: My Background and Professorial Work

I am a proud mathematics graduate of a historically Black college/university (HBCU). I earned a master's degree in the mathematical sciences and a doctoral degree in mathematics education. This past spring, I completed my tenth year as a faculty member in a mathematics program where I primarily taught content courses for future elementary and secondary teachers. I have also been involved with several diversity initiatives. To be sure, diversity efforts are a nice starting point. However, I have found that they overwhelmingly whitewash programmatic goals and systematically eliminate racial objectives in their design.

During meetings about the need for the racial make-up of our faculty to match the students' racial demographics, discussions about the need for Black faculty seemed to shift to discussions about diversity. The problem with this was that the definition of diversity includes so many constructs that race continued to get sidestepped. As a result, race became an afterthought even though that was the primary driver of the series of meetings. This was even more disturbing given that one of the largest racial disparities on campus was between the numbers of Black students and Black faculty. Dyson reminds us that Black people often get the short end of the stick vis-à-vis these designs, as we are the most negatively stereotyped racial group in the United States [3]. These stereotypes infiltrate mathematics efforts, even those designed to support said diversity initiatives and promote racial equity in the field [4].

Because of my own positive and negative experiences as a Black man in mathematics, I have been drawn to a line of scholarly inquiry that examines our experiences. My research agenda uses strengths-based approaches—approaches that focus on a group's positive attributes—to examine Black men's mathematics experiences. I draw from critical race theory (CRT) as a theoretical frame to counter the anti-Black racism endemic in mathematics contexts. My work is done in concert with other Black mathematics educators who are committed to the racial emancipation of Black students [5, 6, 7] as well as researchers who are dedicated to the liberation of Black women in mathematics contexts [8, 9, 10]. Using my research agenda and professional experiences as an anchor, I share three recommendations with the AMS community.

Recommendation #1: Make Racial Equity a True Priority

First, I admonish the mathematics community to make racial equity a true priority. This need is exacerbated during the current Black Lives Matter Movement where institutional and structural racism coupled with the ongoing challenges associated with the COVID-19 pandemic have forestalled many racial advancements. Without a doubt, America has a troubled racial history, and racism is institutionalized within our discipline, and by extension, the

AMS [11]. What I shared about the naming of the AMS Claytor-Gilmer Fellowship might cause one to question if the AMS truly prioritizes racial equity.

One way to advance this goal is to support and join those who have a track record of doing so. A premier example is the National Association of Mathematics (NAM), who recently celebrated 50 years of supporting mathematicians from racially minoritized groups [12]. NAM scholars have employed strengths-based approaches to make racial justice a priority for several decades. Other folks have jumped on the racial equity bandwagon to procure grant funding, elicit public exposure, and serve their own interests. If not careful, jumping on the racial equity bandwagon with rudimentary understandings of race could allow deep-seated racist beliefs to thrive and bolster the racial injustices in the profession. This is what Dyson refers to as performative empathy, "which is all for show and not to grow" [3, p. 205].

Recommendation #2: Learn and Collaborate With Race Scholars

Another important takeaway is for the mathematics community to work with race experts who extrapolate race-centric theories. As mentioned, I use CRT in my work, as it offers explanatory tenets that serve as an analytical frame to better understand Black men's mathematics and racialized experiences. One of its tenets is interest convergence, which maintains that the dominant culture advances race-based initiatives when it serves their interest, and critical race scholars examine the racial consequences behind these initiatives. Mathematics education researchers use CRT and its tenets to guide their scholarship [13]. Thus, the field could greatly benefit from bidirectional collaboration between mathematicians and mathematics educators who employ race-based theoretical constructs in their work.

In addition to mathematics educators who interrogate structural racism in mathematics contexts, there are race experts at our respective institutions [14]. There is also a growing body of scholarship produced by race scholars that can enrich our scholarship [3, 4, 15]. The mathematics community could also leverage this race-related expertise to advance goals related to racial equity. For example, the Task Force on Understanding and Documenting the Historical Role of the AMS in Racial Discrimination was comprised of a group of seven mathematicians [11]. Although the committee's work and report offered some fruitful recommendations for generating a more racially inclusive mathematics enterprise, having an erudite historian and authoritative race scholar on the task force could have strengthened the recommendations in these key areas.

Recommendation #3: Partner With HBCU Stakeholders

My last takeaway is for mathematics graduate directors and professors to partner with HBCU stakeholders. Of note, HBCUs graduate about half of the nation's undergraduate

Black students in mathematics even though they represent approximately 2.5% of higher education institutions [16]. In a previous qualitative study, I discovered that the four Black men who were pursuing graduate degrees in mathematics and mathematics education had completed their undergraduate degrees in mathematics at HBCUs [17, 18]. Furthermore, I found that HBCUs mathematically empowered and racially affirmed these four Black men, and these findings were echoed among a cohort of Black male mathematics majors I studied at Morehouse College, a traditionally single-gender HBCU catered to meeting the educational needs of Black men [16, 19].

Returning to the opening interaction used to begin this article, one common denominator between Drs. Claytor and Gilmer is that they both worked at HBCUs. Because of their mathematical brilliance, they could have worked at research-intensive universities if not for the blatant racial discrimination in the hiring process and other racialized barriers [11]. Similarly, other mathematically astute Black professors at HBCUs teach and mentor Black students who have extraordinary mathematical talents and could be mathematical thought leaders and producers of disciplinary knowledge. Therefore, graduate program directors, mathematics professors, and administrators should partner with HBCU stakeholders, not just to increase their enrollment of Black graduate students to meet some arbitrary quota, but to also ascertain insights and promising practices that contribute to HBCUs' astonishing success in this domain.

Partnerships can be formed between HBCUs and non-HBCUs to produce more racially equitable mathematics graduate opportunities. An example is the Fisk-Vanderbilt Master's-to-PhD Bridge Program [20]. For almost 20 years, the Fisk-Vanderbilt program has facilitated a smoother transition for minoritized students to pursue doctorates in biology, chemistry, and physics. There are commendable bridge programs in mathematics, but a similar model explicitly geared towards HBCU students apropos doctoral study could be useful. Collaborations between mathematics (education) and race scholars could foster a positive racial climate for these programs at the outset. If designed with racial equity as a cornerstone coupled with people, practices, and policies that sustain it, non-HBCU partnerships with HBCUs can lead to programs that more systematically support, retain, affirm, and empower Black mathematics graduate students as well as prepare graduates for careers as mathematics professors at HBCUs, research-intensive universities, and other types of higher education institutions, if they so desire.

Concluding Thoughts

Here, I offer some final thoughts to stimulate discussion and subsequent action concerning racial equity in mathematics. In doing so, I circle back to the ideas expressed earlier and pose some critical questions: What first impressions do Black students and faculty have of our

mathematics departments, graduate programs, and programmatic spaces? How might these first impressions either bolster or undermine mathematical productivity? What is the role of mathematics, mathematicians, and the AMS in advancing racial equity? What interdisciplinary collaborations might help the field and the AMS leadership team truly move racial equity forward? And how do we ensure that any (proposed) strategic imperatives and structural changes do not reinforce our troubled history of racial injustice, buttress structural racialized challenges, and strengthen any racial power dynamics?

In closing, I must add that there has been some progress made with respect to Black scholars in mathematics, but much more work needs to be done. With that, my hope is that the AMS learns from its racialized past so that history does not repeat itself in a contemporary fashion, determines how best to proceed in this racial climate, and charts a path forward that remains loyal to racial equity for the long haul. As I submit this article in early 2022, the AMS Facebook page is celebrating the hiring of the Director of Equity, Diversity, and Inclusion, and my hope is that all-around support is provided to ensure the success of this important position. Moreover, as a professional mathematics community, we must collectively think and act regarding racial equity. My sincere hope is that our actions in the name of racial equity will not be labeled as an epic failure but as an epic success in our respective mathematics domains.

References

- [1] R. Q. Berry, III, M. W. Ellis, & S. Hughes, *Examining a history of failed reform and recent stories of success: Mathematics education and Black learners of mathematics in the United States*, *Race Ethnicity and Education*, 17 (2014), 540–568, <https://doi.org/10.1080/13613324.2013.818534>
- [2] E. C. Bullock, *Mathematics curriculum reform as racial remediation: A historical counter-story*, In J. Davis & C. C. Jett (Eds.), *Critical race theory in mathematics education*, (2019), 75–97, Routledge.
- [3] M. E. Dyson, *Long time coming: Reckoning with race in America*, (2020), St. Martin's Press.
- [4] D. B. Martin, *Equity, inclusion, and antiblackness in mathematics education*, *Race Ethnicity and Education*, 22 (2019), 459–478, <http://dx.doi.org/10.1080/13613324.2019.1592833>
- [5] D. A. Cooper, *Recommendations for increasing the participation and success of Blacks in graduate mathematics study*, *Notices Amer. Math. Soc.*, 51 (2004), 538–543.
- [6] E. N. Walker, *Beyond Banneker: Black mathematicians and the paths to excellence*, (2014), State Univ. of New York Press.
- [7] M. L. Ridgeway & E. O. McGee, *Black mathematics educators: Researching toward racial emancipation of Black students*, *The Urban Review*, 50 (2018), 301–322, <https://doi.org/10.1007/s11256-018-0452-2>
- [8] V. Borum & E. Walker, *What makes the difference? Black women's undergraduate and graduate experiences in mathematics*, *The Journal of Negro Education*, 81 (2012), 366–378, <https://doi.org/10.7709/jnegroeducation.81.4.0366>

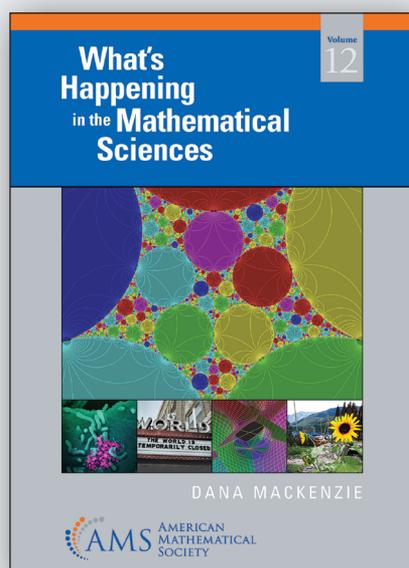
- [9] N. M. Joseph, M. Hailu, & D. L. Boston, *Black girls' and women's persistence in the P–20 mathematics pipeline: Two decades of children, youth, and adult education research*, *Review of Research in Education*, 41 (2017), 203–227.
- [10] L. Leyva, *Black women's counter-stories of resilience and within-group tensions in the White, patriarchal space of mathematics education*, *Journal for Research in Math. Education*, 52 (2021), 117–151, <http://dx.doi.org/10.5951/jrese-matheduc-2020-0027>
- [11] T. R. Inniss, W. J. J. Lewis, I. Mitrea, K. A. Okoudjou, A. Salerno, F. Su, & D. Thurston, *Towards a fully inclusive mathematics profession: Report of the task force on understanding and documenting the historical role of the AMS in racial discrimination*, (2021), Amer. Math. Soc.
- [12] O. Ortega, E. D. Lawrence, & E. H. Goins (Eds.), *The golden anniversary celebration of the National Association of Mathematicians*, (2020), Amer. Math. Soc.
- [13] J. Davis & C. C. Jett (Eds.), *Critical race theory in mathematics education*, (2019), Routledge.
- [14] E. O. McGee, *Interrogating structural racism in STEM higher education*, *Educational Researcher*, 49 (2021), 633–644, <https://doi.org/10.3102/0013189X20972718>
- [15] M. Abu-Jamal, *Have Black lives ever mattered?*, (2017), City Lights Books.
- [16] C. C. Jett, *"Third floor respect": A Black masculinist examination of Morehouse College's mathematics learning community*, *The Journal of Higher Education*, 93 (2022), 248–272, <https://doi.org/10.1080/00221546.2021.1971486>
- [17] C. C. Jett, *HBCUs propel African American male mathematics majors*, *Journal of African Amer. Studies*, 17 (2013), 189–205, <https://doi.org/10.1007/s12111-011-9194-x>
- [18] C. C. Jett, *Mathematical persistence among four African American male graduate students: A critical race analysis of their experiences*, *Journal for Research in Math. Education*, 50 (2019), 311–340, <https://doi.org/10.5951/jrese-matheduc.50.3.0311>
- [19] C. C. Jett, *Black male success in higher education: How the mathematical brotherhood empowers a collegiate community to thrive*, (2022), Teachers College Press.
- [20] Fisk-Vanderbilt Master's-to-Ph.D. Bridge Program, <https://www.fisk-vanderbilt-bridge.org/>



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