

Critical Race Theory Interwoven with Mathematics Education Research

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Reflecting on the theme for the 2011 Benjamin Banneker Association Conference at Georgia State University *The Brilliance of Black Children in Mathematics*, I posit that it is important to emphasize the coupling of “Black” and brilliance. Those concerned with the mathematics education of all children, I believe, must bring issues of race to the fore and investigate the racialized experiences of Black (and all) students in mathematics in such a way that celebrates the brilliance that Black children possess rather than their perceived “at-risk” status. As it stands, critical race theory (CRT) is a theoretical framework that has been used to bring forward issues of race in education research in general and mathematics education research in particular. In this paper, I focus my discussion exclusively on CRT as a theoretical framework. In so doing, I describe the foundational tenets of CRT while simultaneously addressing the theoretical and methodological appropriateness of CRT. Next, I discuss how CRT has informed mathematics education research with examples from my work and that of another mathematics education researcher, and suggest that other researchers and practitioners employ CRT in their efforts. Finally, I conclude by challenging us all to (continue to) spread critical race messages of hope and brilliance to Black children concerning their mathematics achievements.

Critical Race Theory

Historically, race has been used as an unjust construct in the United States and throughout the world.¹ As West (2001) states, “It goes without saying that a profound hatred of African people (as seen in slavery, lynching, segregation, and second-class citizenship) sits at the center of American civilization” (p. 106). Since the enslavement of the peoples of Africa, Black Americans have experi-

¹ The Executive Board of the American Anthropological Association endorsed a statement on race that seeks to deconstruct race as a social construct that inequitably categorizes different racial groups (American Anthropological Association, 1998). The Executive Board argued that racial inequities exist not because of biological (scientific) reasoning but due to historical and modernized institutionalized “racial” practices.

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enced this hierarchical race system that places Europeans at the top and people of color at the bottom (DuBois, 1903/2003). African Americans are still grappling with issues of race and racism (Cleveland, 2004). Nonetheless, it has been suggested by some people that race has been minimized with the election of President Obama as the United States has entered a post-racial era. Racism, however, still exists in various forms. There are some who suffer from *dysconscious racism* where they accept White normative ideologies or possess a distorted ideological paradigm concerning race or racism (King, 1991). Hilliard (2001) argued that race is a political construct and that race in education is designed “to teach African inferiority and European superiority” (p. 25). Taken together, these arguments demonstrate that racism is an institutionalized force that has been used both historically and currently to dismiss and oppress people of African descent as well as other people of color. While race has been used overtly and covertly to marginalize people of color, CRT has emerged to critically analyze the ideological power structure embedded within racial hierarchies.

CRT has its genesis in Critical Legal Studies (CLS) (Delgado & Stefancic, 2001). CRT developed in the mid-1970s from the work of legal scholars such as Alan Freeman, Richard Delgado, and Derrick Bell (Delgado & Stefancic, 2001) as a response to the lack of diversity among the faculty at Harvard University and the marginalization of students of color from the law school’s curriculum (Carbado, 2002). Derrick Bell, an African American law professor, is considered the father of CRT (Delgado & Stefancic, 2001). This movement also consisted of other activists and scholars interested in investigating and transforming the injustices that were brought about because of issues of race, racism, and power in our society (Delgado & Stefancic, 2001).

Although CRT began in legal studies, it has expanded to other disciplines, including (mathematics) education. Solórzano and Yosso (2002) argue that CRT in education

advances a strategy to foreground and account for the role of race and racism in education and works toward the elimination of racism as part of a larger goal of opposing or eliminating other forms of subordination based on gender, class, sexual orientation, language, and natural origin. (p. 25)

Additionally, CRT includes African American epistemology, which Gordon (1990) defines as “the study or theory of the knowledge generated out of the African-American existential condition, that is, of the knowledge and cultural artifacts produced by African-Americans based on African-American cultural, social, economic, historical, and political experience” (p. 90).

Historically, CRT builds off of four foundational principles. Some scholars have added different tenets to these four principles while others have modified them to reflect their own cultural inclinations (see Brayboy, 2005; DeCuir &

Dixson, 2004; Solórzano & Yosso, 2002). Nonetheless, the four principles are consistently noted within most versions of CRT in education research and provide the philosophical underpinnings.

First, critical race theorists argue, “racism is normal, not aberrant, in American society” (Delgado & Stefancic, 2000, p. xvi). Because the United States has historical structures, institutional structures, and schooling practices that perpetuate racism, critical race theorists assert that racism seems “normal” to people in the United States.

Second, CRT does not follow traditions of positivist scholarship because it allows researchers to employ storytelling as an epistemological resource to “analyze the myths, presuppositions, and received wisdoms that make up the common culture about race and that invariably render blacks and other minorities one-down” (Delgado & Stefancic, 2000, p. xvii). Through writing and storytelling, critical race theorists seek to speak against rules and processes that continue to give power to European Americans and allow racism to thrive in American society with the hope of contributing to social justice by breaking down (some of) these racist barriers.

Third, CRT asserts a critique on liberalism (Ladson-Billings, 1999). I embrace Delgado and Stefancic’s (2001) definition of liberalism: a “political philosophy that holds that the purpose of government is to maximize liberty...the view that law should enforce formal equality in treatment” (p. 150). Critical race theorists critique this philosophy by arguing that the dominant culture does not fully understand how liberty and equality function. Under the notion of liberalism, critical race theorists have also critiqued “colorblindness, the neutrality of the law, and incremental change” (DeCuir & Dixson, 2004, p. 29) as phenomena that simultaneously minimize and/or disregard race and do not espouse liberalism in its truest sense.

Fourth, CRT argues that Whites, particularly White women, have been the major beneficiaries of affirmative action and civil rights legislation (Ladson-Billings, 1999). This alignment reifies that Whites will accept and/or encourage policies that advance people of color only when these policies can also help Whites advance themselves (Delgado & Stefancic, 2001; Ladson-Billings, 1999). Critical race theorists critique the motives behind White support of legislation and question whether the policies were designed to benefit people of color in the first place (Delgado & Stefancic, 2001). Collectively, these four tenets provide the groundwork for how CRT can be applied theoretically or methodologically to education research in general and mathematics education research in particular.

Theoretical and Methodological Appropriateness of CRT

CRT has been underutilized as a theoretical and methodological framework to investigate the mathematical experiences of African American students. Further, issues of race and racism have been underexplored in education research. Ladson-

Billings and Tate (1995) argue that while race issues seem to be prevalent in society, race has been untheorized, especially in education research. Solórzano and Yosso (2002) further argue, “substantive discussions of racism are missing from critical discourse in education” (p. 37). As Hilliard (2001) questions, what can be done about the way that we deal with race in education, particularly in education research? These scholars do not suggest that scholars have not explored race or even considered race when examining social inequality; instead, they argue that this theorizing has not been systematically employed when analyzing educational inequality. In an attempt to address the shortage of research in mathematics education approached from a critical race perspective, they propose that researchers employ CRT to investigate race and racism in education. All of these issues emphasize the importance of including the construct of race in educational research and integrating CRT as a framework to examine educational settings.

Theoretically and methodologically, CRT can be viewed “as a way to link theory and understanding about race from critical perspectives to actual practice and actions going on in education for activist social justice and change” (Parker & Lynn, 2002, p. 18). CRT allows researchers to critically analyze historical and current racial concerns through a critical race lens (Parker, 1998). Solórzano (1998) claims, CRT “in education challenges the dominant discourse on race and racism as they relate to education by examining how educational theory, policy, and practice are used to subordinate certain racial and ethnic groups” (p. 122). By not fully taking into account race and culture when investigating the issues students of color face in schools, educational research has not adequately examined the educational complexities students of color confront theoretically (Parker & Lynn, 2002; Solórzano, 1998; Valenzuela, 1999). Ladson-Billings (2000) posed the following question: “Where is ‘race’ in the discourse of critical qualitative researchers?” (p. 272). Parker (1998) answers with his own methodological question for critical thought and reflection:

Rather than ask what can this theory do for qualitative studies in education, an alternative inquiry I would propose is what can qualitative research in education do to illuminate and address the salient features of CRT with respect to race and racism in educational institutions and the larger society? (p. 46)

Drawing upon Parker’s argument, we need to employ CRT in qualitative educational research to ascertain these racialized discourses. One of the main ways to accomplish this goal, along with one of the methodological tenets of CRT, is the use of “voice” (Dixson & Rousseau, 2005). With voice, there is “the assertion and acknowledgement of the importance of the personal and community experiences of people of colour as sources of knowledge” (p. 10). Borrowing from this tradition, critical race theorists believe in and use personal narratives and personal sto-

ries as forms of knowledge to document inequity, injustice, and/or discrimination (Dixson & Rousseau, 2005).

When using the term *voice*, it is important not to essentialize² or assume that one person's voice speaks for the entire group or culture (Dixson & Rousseau, 2005). Delgado (1989) asserts that many who tell stories are those "whose voice and perspective—whose consciousness—has been suppressed, devalued, and abnormalized" (p. 2412). Allowing their voices to be heard through the usage of devices such as personal stories, narratives, counterstories, and autoethnographies, critical race theorists seek to offer a counter-perspective to the disparaging narratives about marginalized groups that circulate throughout the discourse. Additionally, Delgado (1989) contends, "Members of the majority race should also listen to stories, of all sorts, in order to enrich their own reality" (p. 2439). My argument is that listening to the success stories of African American male students in mathematics can continue the legacy of mathematical brilliance among African American students.

Implications of CRT in Mathematics Education Research

Bell (1992) charged scholars to employ a critical race theoretical perspective in their scholarship. He wrote: "With what some of us are calling critical race theory, we are attempting to sing a new scholarly song—even if to some listeners our style is strange, our lyrics unseemly" (p. 144). Employing CRT as a theoretical framework also allows education researchers to explore the culture of K–16 institutions, explore the nature of racist acts, behaviors, and/or utterances to students of color, and examine the disciplinary acts (if any) of students who engage in these racial undertakings (DeCuir & Dixson, 2004). I, along with other scholars (see, e.g., Berry, 2008; Carter, 2008; Duncan 2002; Harper, 2012; Martin, 2009a; Stinson, 2008; Terry, 2011), am seeking to sing a new scholarly song in mathematics education research regarding African American male students.

Martin (2009b) brought race to the forefront of his analysis. Seeking to change the way that race is used as a means to categorize students in mathematics education research, he proposed that race be understood as a "sociopolitical, historically contingent construct" (p. 298). Further, his analysis included (re)conceptualizing the mathematics education goals of marginalized groups such as African Americans, Latinas/os, and Native Americans to adequately reflect race. By doing so, Martin called for a deconstruction of the racial hierarchy of mathematical ability that places Asian and White students at the top and African

² Leistyna, Woodrum, & Sherblom (1996) defined essentialism as a fundamental nature or biological determinism to human rights through attitudes about identity, experience, knowledge, and cognitive development. Within this view, categories such as race and gender become gross generalizations, and single-course explanations about individual character.

American, Latina/o, and Native American students at the bottom. Martin's analysis is an example of employing a critical race theoretical lens in mathematics education research, and his work is seminal because it provides the backdrop from which recent CRT mathematics education scholarship is grounded.

I utilized CRT to investigate the mathematical experiences of four successful African American male graduate students in mathematics or mathematics education who obtained undergraduate degrees in mathematics (Jett, 2009). I conducted three semi-structured interviews and honed in on their racial experiences in mathematics as African American male students. I shared their stories in narrative form. Participants were given a copy of the article *Beyond Love: A Critical Race Ethnography of the Schooling of Adolescent Black Males* (Duncan, 2002) to read and reflect on before the final interview. It is interesting to note that the article was not used to steer the participants down critical race lane, but rather to highlight the "voices" of Black male students themselves embedded within the manuscript. In other words, I shared the article because I wanted the participants to feel comfortable sharing their stories with me as a researcher and to simultaneously expose them to CRT. I sought to examine their experiences with the discipline of mathematics as African American male students. More specifically, I explored the culture of the participants' undergraduate institutions as well as how they negotiated race and racism as African American men in a society entrenched with racism.

Conclusion

CRT is a theoretically and methodologically sound framework that allows us, as researchers, to bring race to the forefront of our differing analyses in various interdisciplinary, educational research studies. If the goal of educational institutions is to recruit and retain students of color in multiple disciplines, then these students must be recognized as "holders and creators of knowledge" (Bernal, 2002, p. 106) even though their knowledge might not reflect the beliefs held by the dominant population. CRT maintains that the histories, experiences, cultures, and languages of students of color are acknowledged and respected (Bernal). In the context of mathematics, this charge would constitute capitalizing and building on the rich history of Africana mathematics.

While CRT should be employed to investigate the educational experiences of African American students, new and different theoretical frameworks should be used in tandem with CRT to better address the needs of students of color. (For information concerning other theoretical constructs, see, e.g., Stinson & Bullock, 2012.) These frameworks must allow researchers to investigate educational phenomena through a critical race lens, examine and act upon racial change in order to eradicate (as much as possible) racial inequalities and injustices, and provide

access to equitable schooling practices, especially in (undergraduate) mathematics (Parker & Stovall, 2004). Such scholarship that draws upon frameworks such as CRT in education is long overdue (Gordon, 1990). In addition, such work can be done by scholars from all racial and ethnic backgrounds (see, e.g., Brayboy, 2004, 2005; Fernández, 2002; Villalpando, 2003). Scholars are invited to the “critical race table” to problematize, challenge, deconstruct, and work to eradicate issues of race and racism.

Furthermore, theoretical frameworks like CRT are also needed to contribute to knowledge production. Ladson-Billings (2000) asks, “But how can the full range of scholarship be explored if whole groups of people are systematically excluded from participating in the process of knowledge production?” (p. 271). Similarly, how can the full spectrum of mathematics be studied if African and African American contributions are excluded from mathematics curricula, standards, and the like? How can we sustain mathematical communities if African American male students are still viewed as mathematically incompetent from the onset (i.e., Pre-K/K) of their schooling experiences to the outset (16-graduate/professional school)? Additionally, how can we remain silent and not act while racist mathematical practices continue to hinder African American (male) students from entering the mathematics pipeline? Something has to be done to critically analyze such spaces and work to foster positive racial mathematical environments for African American male students; CRT is a viable mechanism to critically analyze environments where Black male students are not promoted as the mathematically talented beings that they are.

As forestated, I make use of CRT in my work because it does not contribute to the marginalization of African American male students but rather provides a space for them to contribute to knowledge production, even in mathematics enclaves (Parker & Stovall, 2004). Educational researchers should be more willing to listen to scholars and students of color and seek to better understand the meaning(s) behind their racialized stories. This ideological paradigm reinforces what I did with the four participants in my study. I listened to their stories of how being African American and male played out in their educational experiences, especially with regards to college mathematics.

In sum, brilliance goes hand and hand with the longstanding mathematical Africana/African American tradition. Brilliance! Brilliance! Brilliance! These words should be the main chorus of the scholarly song that we sing to and about Black children concerning their academic success in general and their mathematical success in particular (Bell, 1992). This message is one that I “shout out” to my two nephews, cousins, church members, students in school settings, community children, and all with whom I connect. My hope is that Black children both near and far will hear these messages, internalize them, and turn them into self-fulfilling prophecies. Such positive affirmations with critical race messages are

needed for the sustainment of our mathematical communities as well as the production of more critical race educational research in the African tradition. What critical race messages are you sending to Black children concerning their mathematics experiences?

At the Symposium

During the symposium, I shared with conference attendees this overview of CRT and how I have used it in my own work. In the breakout session, conference participants narratives and stories were shared that aligned with the ideas expressed during my presentation. The testimonies were rich and powerful, and they could have been used as research data to substantiate why race should be brought to the forefront in mathematics education scholarship. Additionally, critical race theoretical ideas were further extrapolated and expounded upon to challenge, critique, and continue the work in this domain.

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