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Does race matter?

To the detriment of young African American learners, racial achievement gap rhetoric impacts social constructs in American classrooms. In my opinion, recent mathematics education reforms, despite equity-oriented rhetoric expressing concern for all children (NCTM 1989, 2000; RAND Mathematics Study Panel 2003), have instead helped foster an environment where African American children continue to be viewed as intellectually inferior and mathematically illiterate, usually in relation to children who are identified as white or Asian.

A long history

These social construction processes are not unique to current reforms but have long been found in the discourse that emanates from mathematics education research and policy. The quote below is just one of many examples in "Everybody Counts," an influential reform document dating back twenty years (National Research Council 1989). Although it makes a case for increased participation in mathematics, science, and engineering among underrepresented minorities, the statement simultaneously portrays African American learners as mathematically illiterate. Remarkably, the authors also make the unfounded suggestion that levels of mathematics literacy unfold along racial lines:

> The widening gap between *those who are mathematically literate* and *those who are not* coincides, to a frightening degree, with *racial* and economic categories. We are at risk of becoming a divided nation in which knowledge of mathematics supports a *productive, technological powerful elite* while a dependent, *semiliterate* majority, disproportionately *Hispanic* and *Black*, find economic and political power beyond reach. Unless corrected, *innumeracy* and *illiteracy* will drive America apart. (p. 14, italics added)

Does achievement gap rhetoric perpetuate racial myths?

A more contemporary version of this statement surfaces in the commonly repeated finding that African American twelfth graders demonstrate mathematics skills and abilities at the level of white eighth graders (Education Trust 2003; Lubienski 2002; Thernstrom and Thernstrom 2003).

Beyond research and policy contexts, negative social constructs increasingly set the tone for teachers' work with African American children, especially in an era of high-stakes testing and relentless pressure to raise test scores. To demonstrate the effects of negative social constructs on teachers' day-to-day understanding and practice, take the short quiz below and track your answers. Hundreds of preservice and in-service teachers, as well as school administrators, have taken the quiz with consistent results.

1. Have you heard of—and do you understand what is meant by—*the racial achievement gap*?

2. Have you devoted, or do you plan to devote, some aspect of your teaching and classroom practice to help close the racial achievement gap?
3. Do you truly believe in the brilliance of black children?

If you answered affirmatively to all three questions, you may be an unwitting contributor to the negative social construct of African American children. Teaching practices cannot simultaneously be motivated by both a belief in, or acceptance of, this gap (question 2) and a belief in the brilliance of African American children (question 3). The two questions are conceptually and practically incompatible.

An even stronger, more controversial claim is that there is no such thing as a racial achievement gap. Those who frame achievement issues in such a context lack an understanding of race, racism, and the realities of African American children's lives. Coupled with research on African American learners, critical analysis of research and policy literature leads to the conclusion that a racial achievement gap is a sociopolitical construct, an artifact of societal racism, albeit a new form of racism that is much more subtle than overt forms of earlier decades.

A counterclaim

A necessary step in countering these negative social constructs is to acknowledge that racism—including structural racism, institutional racism, everyday racism, and what has come to be termed *colorblind* racism—is a major factor contributing to these impoverished views of African American children. Taking this step requires exposing the underlying racist ideology that accompanies the discourse of a racial achievement gap in mathematics and what this ideology does to African American children and to teachers.

First, even with the good intention of raising test scores, accepting a racial achievement gap requires the initial assumption that African American children are inferior, because the gap locates them as such. Consequently, all subsequent efforts in educating African American children are framed on faulty suppositions and conclusions about their competence. Because test scores are often taken as factual evidence, a belief in racial achievement gaps also forces one to accept a natural ordering of mathematical ability across various social groups. This "racial hierarchy of mathematical ability" (Martin 2007; 2009b) typically locates students identified as African American, Latino, or Native American at the bottom and those identified as Asian or white at the top.

In addition to many research studies that use the concept of race to sort students (e.g., Kenny and Silver 1997; Lubienski 2002; Strutchens and Silver 2000), our daily conversations support belief in a racial hierarchy of mathematical ability. Stop a random stranger on the street and ask, "Who is good at mathematics? Who is not?" Answers will likely reveal a similar sorting.

The media and popular press echo a racial hierarchy as well. In an article on girls and mathematics, Sarah Rimer quotes oncology professor Janet E. Mertz: "We're living in a culture … that is telling everybody that only Asians and nerds do math" (*New York Times*, October 10, 2008).

Second, racial achievement gap rhetoric rests on anthropologists' and sociologists' longstanding findings that race is not real. The meanings we imbue to race at any given moment in history are imposed on social groups to create power relations that allow some groups to dominate, some to be oppressed, some to be regarded as intelligent, and some to be regarded as deficient. Because race is not real, discrepancies in mathematics achievement outcomes cannot be due to race despite the proliferation of discourse and pseudoscience suggesting otherwise.

Interjecting the idea of race to explain test score differences is an example of what sociologists term *racialization*, which refers to any process or situation wherein the idea of race is introduced to define and give meaning to some particular population, its characteristics, and its actions (Miles 1988). Therefore, it could be argued that the racialization of test score discrepancies is simply a manifestation of the racism that exists in the larger society.

If the so-called racial achievement gap were reversed and those students identified as African American scored higher than those identified as white, the scores would not be construed as affected by race. International mathematics achievement comparisons often lament that U.S. students trail Asian students in Singapore, Japan, Hong Kong, China, and Taiwan. Essentially, these comparisons amount to comparing

white students—the vast majority of U.S. test takers on assessments such as the Trends in International Mathematics and Science Study and the Programme for International Student Assessment—to students in these Asian locales. However, rather than referring to score discrepancies as reflections of a racial achievement gap, with white students being intellectually inferior to Asian students, these gaps supposedly reflect teaching gaps (Stigler and Hiebert 1999) or curriculum and learning gaps (Stevenson and Stigler 1992). The topic of race never enters these discussions.

Third, the idea of "closing the racial achievement gap" as the goal of teacher practice is equally problematic. Yet this has become the driving force in many education corners. An Internet search on the phrase results in thousands of hits that highlight reports and organizations devoted to this purpose. A government document entitled "How No Child Left Behind Benefits African Americans" states that a "growing 'achievement gap' between white and African American students was left unaddressed for too long.... Because of No Child Left Behind [legislation], closing the achievement gap is now a national priority" (U.S. DOE 2005).

In colloquial terms, the idea of closing the gap is often translated as "raising African American children to the level of white children." Under this directive, African American children are viewed as change worthy and in need of remediation in the direction of white children with respect to behaviors and beliefs. This idea insidiously frames mathematics education for African American children in terms of the standing and well being of white children rather than considering the needs of African American children as African American children.

An equally insidious idea is that mandating—via No Child Left Behind and local and state school policies—that mathematics teachers adopt racial achievement gap discourse and act on all that accompanies this discourse ultimately positions teachers to serve as missionaries who must rescue black children from their blackness. Historical analysis shows that a missionary approach to teaching African American children contributes to their miseducation (Woodson 1993).

The notion of raising African American children to the level of white children is especially problematic because using white children as the standard for African American children sets an artificially low standard for African American children. Test score comparisons between social groups use group means. On assessments such as the National Assessment of Educational Progress, the mean for all comparison groups falls below the highest levels of proficiency. African American scholar Asa Hilliard (2003) argues that excellence, not white children's scores, is the standard against which African American children should be judged.

African American children are not passive recipients of the negative identities imposed on them; many successfully negotiate the impositions. Mathematical success is one way that this negotiation is manifested (Martin 2000). Yet this success is rarely discussed in the context of racial achievement gaps. Mathematics teachers should consider several questions before appropriating the ideologies embedded within racial achievement gap rhetoric (Perry 2003). The following questions do not excuse African American children from high academic performance, but they do acknowledge children's awareness of how this rhetoric directly assaults their identities.

- **Why take school seriously** when they cannot predict when and under what circumstances their intellect or intellectual work is likely to be taken seriously?
- **Why commit** to outstanding intellectual work if—because of their skin color—their work is likely to be undervalued, evaluated differently, or ignored?
- **Why work hard** at school, or at anything else for that matter, if these activities do not inextricably link to and address one's status as a member of a historically oppressed people?

A different approach

How can we address these issues? Teachers can take a concrete step in countering negative social constructs of African American children by uncovering, studying, and understanding the simultaneous development of learners' racial identities and what I call *mathematics identities*. Mathematics identity refers to the dispositions and deeply held beliefs that individuals develop about their ability to participate and perform effectively in mathematical contexts and to use mathematics to change the conditions of their

lives. A mathematics identity encompasses a person's self-understanding and how others see him or her in the context of doing mathematics. Typically, a mathematics identity is expressed in narrative form as a negotiated self and results from the ongoing negotiation of our own assertions and the external ascriptions of others.

Explore identities

We can ask questions about what it means to be African American in the context of doing mathematics and what it means to be a doer of mathematics in African American contexts. A white teacher in a south side Chicago school with a 100 percent African American student body admits that she never thought about what it means to be African American from her students' viewpoint (Martin 2007).

Lack of attention to African American students' identities is often due to a narrow focus on achievement as the primary goal of teaching and learning. Yet focusing on how these students experience mathematics learning and teaching in relation to their life circumstances and schooling conditions would provide rich understanding of their mathematical success or underachievement. This argument extends to other student groups, including Asian American, Latino, Native American, and white students.

Growing evidence shows that African American children's mathematics identities are strong predictors of their mathematical success or failure and that teachers' classroom practices and beliefs can dramatically shape these identities—not just for the short term but also over life spans (e.g., Martin 2000; Spencer 2006; Stinson 2004). Recent advances in sociocultural learning theory supports these findings and suggest that learning and identity development are closely linked. As people become more (or less) central members of a mathematics community (in a math class, for example), changes in identity accompany changes in position and status. This identity shift signifies that learning (or disengagement)—a change in skills, dispositions, efficacy, and habits of mind—has occurred. Hence learning influences identity, and identity influences learning.

For example, consider someone being taught to play the violin. Many of us could learn the skills and demonstrate the proper mechanics. However, acquiring the skills does not make us violinists in the sense of taking on and owning that identity. On the other hand, a person could assume the identity of violinist, but maintaining that identity would be difficult in the absence of the skills needed to play the violin.

Teachers dramatically shape their students' mathematic identities.

Another example is to think of your own identity as a teacher. How have your identity and learning evolved as a result of your experiences (from preservice to student teacher to new teacher to veteran)? Just think of the narratives you could generate about your experiences.

Share narratives

Many teachers have shared such narratives with their students and subsequently explored their students' narratives about mathematical experiences and deeply held beliefs about mathematics. Such emotional, powerful narratives can make clear to teachers how African American learners assert their own identities relative to mathematics and how they must negotiate what is often said about them. Consider the comments of twenty-eight-year-old Larry, an African American father who was asked to reflect on whether he feels that "African American children are often identified as being [mathematically] the best and the brightest":

> No. I think a lot of times they are overlooked, or whatever, as being the best and the brightest. Yep. But a lot of times their teachers really don't recognize where they're from and don't see what this child has been through, or is like, "This kid can't even do basic math." Yet this kid is more gifted than some kid whose parents and everybody else have been showing him stuff.... And so they get overlooked that way. A lot; way too much. (Martin 2006b, p. 213)

Larry was asked to comment on how his own mathematical experiences reinforced beliefs about who can and cannot do mathematics (note his use of *we* and *they*):

> We had a guy named Mr. Smith, who came to my elementary [school], and we used to call him Mr. Einstein. Still, it was like he came in and was still basically a white guy coming into a black school doing magic. That's how it was to me. It wasn't like, you know, someone I could really relate to or whatever, you know. He's from over there, and that's what they do. It's not what we do. (p. 215)

Conclusion

We must reconceptualize the goal of teaching mathematics to African American children—to see beyond developing students' problem-solving skills, raising their test scores, and closing achievement gaps. Besides examining our own beliefs about African American children's mathematical competencies, we can do our daily work in ways that reveal and reaffirm positive developments in children's racial and mathematical identities. We must be aware that our beliefs in racial achievement gaps can motivate us to appropriate or develop negative beliefs about African American children and prevent us from seeing them as the intellectually capable, competent doers of mathematics that they are.

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