

Interest and Identity Convergence for Equitable Mathematics' Teaching: Reflections on the Interplay of the Institutional and Individual on Teacher Development and Action

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Propelled by Maxine Greene's (1988) continuum of freedom from normative structures to critical consciousness and action, I illuminate the institutional and individual influences on teacher development and action in mathematics teaching. I focus on the question: What barriers and openings, both individually and institutionally, spur teachers to consider equitable mathematical teaching practices as important to pursue with commitment? Reflecting on the broad cultural features that uphold mathematical inequities, factors that inform mathematical contexts, and constructions of individual identity, I contemplate avenues to enter meaningful, asset-oriented growth for white teachers in particular toward equity practices in mathematics. I argue that linear frameworks, such as white privilege and racial identity development, do not provide the required reflection and action steps for transformation. Rather, the nuance of societal conditions and dynamics of individual identity must be examined in depth by teachers and mathematics classrooms to progress toward equity. Teachers' identity convergence, the moral imperative to understand the self and others, will prompt institutional change before interest convergence (Bell, 2005a) necessitates it, as the economic benefits of mathematical equity are not immediately apparent.

Year after year, measures depict the growing achievement gap between African-American and Latinx students and white students, demonstrating more than half a standard deviation of difference in mathematics by Kindergarten (Espinosa, 2005). The discourse around mathematical achievement and inequities centers on gap-gazing (Gutiérrez, 2012), or blame-shifting, to

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move responsibility from policy makers, teachers, and administrators. Rather than acknowledging the myriad influences on achievement in the construction of tests and the learning environment itself (Au, 2013), achievement discourse uses deficit thinking that focuses on missing skills or traits to discuss students of color and their families (Aguirre, Mayfield-Ingram, & Martin, 2013; Martin, 2007; Davis & Martin, 2008). Positioning Black students as mathematically illiterate and lower achieving reifies them “as particular kinds of students and learners” (Martin, 2007, p. 17), namely, “inferior and lacking in intelligence” (p. 16) without considering other explanations for their mathematical disengagement, challenges, or resistance. Moses and Cobb (2001) considered mathematical literacy the civil rights’ issue of the current age because of its contributions to technological advances, necessity for college admittance, and opening of economic options. Because of demographic shifts, teachers must understand social and racial realities required for equitable mathematical instruction (Wang, Castro, & Cunningham, 2014).

Ignoring the causes of achievement inequities poses major obstacles to equitable teaching and learning. While reductionistic mentalities behind inequity apply to Latinx communities and some Asian communities (Paik, Kula, Saito, Rahman, & Witenstein, 2014), I focus predominately on Black students. Achievement data distorts Black and Latinx students in particular, considering them insufficient compared to a white norm (Davis & Martin, 2008; Martin, 2012) rather than with strength-based conceptions of their cultural capital, such as their ability to navigate multiple communities, speak various languages or styles, and resist oppression (Yosso, 2005). Distortion develops a “massified” consciousness (Freire, 2011) wherein individuals do not realize the complexity positioning certain racial groups as less capable (Frankenstein, 1983, p. 19). Thus, Martin (2007) claimed if teachers do not understand the social realities of students, the way students can use mathematics as power, and the role of racial identities in mathematics learning to move past deficit-based perspectives of students, they are not qualified to teach Black students. Disruption of race-based hierarchies of capability must go

beyond teachers' good intents. It entails deep examination of their identities in relation to their students and the practices, systems, and thinking behind inequity.

Despite critical interrogation, I use an asset-oriented view of teachers by situating their realities within structures to position them as agents capable of the reflection and practices required for equitable teaching. Teachers exist within institutional structures such as schools, university programs, teacher communities, and school districts that permeate individual consciousness and impact how they see and construct normative practices. Because of the interplay between individual and institution, teachers must probe the features of the institutions. Therefore, I first focus on the question: What barriers and openings, both individually and institutionally, influence teachers to consider equitable mathematical teaching practices as important to pursue? To consider teacher development and action, I use Greene's (1988) continuum from *Dialectic of Freedom* for naming structures, resisting them, and engaging in praxis—reflection and action—to transform systems and selves (Freire, 2011). Second, I answer: What avenues exist to enter meaningful, asset-oriented growth beyond limited frameworks for white teachers toward equity practices in mathematics?

Equity Definitions/Grounding

To enter the challenging spaces of equity work and the required critical self-reflection, I start by grounding my conceptions of the individual and institutional components of equity and racism. For Aguirre et al. (2013), equity involves considering each student in the context of their humanity to provide access, opportunity, and positive identity development. Positive identity development entails building experiences and reflections that build from student backgrounds and strengths. Equity requires teachers to provide differential educational practices, so each student “learn[s] rich mathematics that fosters meaning making, empowers decision making, and critiques, challenges, and transforms inequities and injustices” (Aguirre et al., 2013, p. 9). Equity work includes both

institutions and individual mentalities toward individuals or groups to either view cultures and backgrounds as an asset or deficit. Institutionally, normative structures of educational accountability based chiefly on standardized tests serve to reify inequity. Likewise, my conceptions of racism involve both the individual and the institutional. Jones' (2000) definition of racism includes personally mediated beliefs and prejudices and how institutions like educational systems serve groups differentially. White supremacy encompasses the perceptions and institutions that position white people as superior, abler, or more deserving of success and opportunity.

Greene's critical consciousness, reflective resistance, and action. For the bulk of this piece, I name institutional and individual features constructing racial inequity in mathematics teaching and learning. Greene (1988) considered seeing and naming the world as a necessary practice to push past the veil of the familiar, to understand what goes on underneath normative veneers, and to connect the individual experience within macro structures and ideologies. I deconstruct cultural, institutional, and individual features that mutually reinforce racial inequity. By engaging with the various levels of inequity's operation, I interrogate the world to understand its operation, build critical consciousness, and lead to reflective resistance—the connecting of self to the world. While acknowledging the nuance of inequity, I concentrate on laying the groundwork for reflective resistance in response. Thus, this piece may be read through the aim of reflective resistance with questions such as the following in the reader's mind: How do the ideas emerge in my experiences and worldview? What concepts or ideas bump against what I have previously known and/or cause me discomfort? Why? What question(s) come up for me?

As a product of U.S. schools and society, I breathed the normative discourses of colorblindness, meritocracy, and Manifest Destiny, accepting them and applying them to my experiences in my insulated childhood community. Especially in middle school and beyond, various ruptures occurred for me: talking to high school classmates from the Middle East about 9/11, living with all Native American students two summers

and with students of color from New York City another, and attending a private liberal arts college with a perceptible bloc of whiteness. My critical consciousness and the actions that emanate from my reflexion and experiences cycle and shift, as I embrace challenges to my comfort and beliefs as necessary to be in process against white supremacy. From self-inquiry grounded in critical consciousness, we can undertake deliberate actions to alter our own perceptions and to transform our classrooms, curriculum, instruction, and, together, institutions toward equity.

Cultural Features Upholding Mathematical Inequity

This section charts the various cultural factors that influence the existence and maintenance of mathematical inequities. Mathematics instruction is historically rooted in legacies of slavery and colonialism and its features are institutionally embedded through pedagogy, curriculum, and accountability mechanisms. These contextual features, then, construct individual mentalities and actions that often serve to reinforce inequity.

Historical Consciousness within Individuals and Institutions

First, I consider the overarching cultural terrain within which institutions and individuals operate. Mathematics is not neutral content and pedagogical terrain (Leonard, Brooks, Barnes-Johnson, & Berry, 2010); instead, it is entrenched in the “historical consciousness” of slavery, colonialism, and imperialism (West, 1989, p. 69). Attitudes and practices emerge out of historical context to become “so fixed as to become institutional” (Dewey, 1938, p. 29), maintaining the status quo. The status quo includes institutionalized features, such as assessment socialization, achievement orientation, banking education, and colorblind racism and individual mentalities that become normative, including deficit mindsets, racism, and beliefs in meritocracy.

The “authoritative discourse” (Lensmire et al., 2013, p. 428), or common discourse of everyday language, becomes institutionalized, creating a patterned environment of comfort where individuals operate. While easiest to operate within normative patterns, teachers retain the creativity, agency, and power to interrogate norms toward equity. However, without critical inquiry, institutions become hegemonic, “so quiet, so seductive, so disguised that it renders [teachers] acquiescent to power without their realizing it” (Greene, 1988, p. 133). Then, students and teachers accept traditional methods used to teach and learn mathematics as natural (Greene, 1988) without considering the complexity of inequity (Wang et al., 2014) embedded in mathematics pedagogies and content. Accepting the status quo closes space for creativity and changes in practice that may serve all students more effectively. Dismantling inequitable customs moves teachers from “certainty to uncertainty [which is] what I call fear... [teachers] don’t want those patterns of existence to be disturbed” (Krishnamurti, 1969, p. 42). Within a mathematics context, fear of conflict from colleagues or insecurity from teaching differently than personal experiences teaching and learning stagnates change. Consequently, many teachers “submit” to a system (Greene, 1988, p. 124), such as mainstream pedagogies, whether or not they understand their allegiance. The quiet force of hegemony hinders progress by conditioning personal beliefs and behaviors to match systems rather than seeking alternate paths “against the grain” (hooks, 1994, p. 26), sometimes alone.

Institutional Barriers to Equity in Mathematics Classrooms

Reflection on dominant discursive and institutional forces within mathematics education provides crucial ground to work toward educational equity because mathematics possesses gatekeeping power for college and careers (Cobb & Russell, 2015; Davis & Martin, 2008; Gutiérrez, 2012; Moses & Cobb, 2001). I start by examining the systems of thought that seductively influence mathematics teachers’ daily practices to move from the hegemonic pulls toward acquiescence to critical

action. Equity situates both within individual and institutional factors, perpetuating white supremacy. White supremacy is the way “racial patterns adapt in ways that maintain white dominance” (Bell, 2005e, p. 386). The structure of schools, assessments, and instruction in mathematics perpetuate white standards and norms for success, continuing and legitimating white supremacy (Davis & Martin, 2008; Martin, 2012).

Assessment socialization and achievement orientation.

Assessments have become normative, part of the way schools operate and analyze student achievement. An achievement focus—including tangible results like standardized test scores or participation—reinforces the status quo around who qualifies to move into certain classes, colleges, career, and economic pathways (Gutiérrez 2012). For example, No Child Left Behind (NCLB) Act of 2001 (NCLB, 2002) intended to increase accountability for all students, but it also augmented assessment as the normative center of mathematical success, creating a climate of “assessment socialization” (Cobb & Russell, 2015, p. 632) where testing seems natural. Legislated mandates pressure both teachers and school systems to perform on standardized tests, scoring district, school, and teacher efficacy on achievement and growth scores. Signed in 2015 to replace NCLB, the Every Student Succeeds Act (ESSA) intended to reduce the frequency of mandated testing, providing states with more authority around accountability measures. Whether or not this legislation alters the milieu of assessments depends on states, districts, and individuals to disassemble assessment mentalities.

Moreover, assessments carry immense significance for equity because white students' performance serves as the reference point for achievement (Davis & Martin, 2008; Martin, 2012), reinforcing a supposedly neutral and objective standard centered on white students. Achievement and access to resources, often called “opportunity to learn” (Cobb & Russell, 2015, p. 636), reinforce white dominance (Gutiérrez, 2012), signifying people as certain types of learners because of their race. Dominance emerged historically in science and politics, and assessments reinforced beliefs about the “intellectual superiority of whites” (Davis & Martin, 2008, p.

15). Standardized assessments underestimate students of color, in part because of the consistent exposure to deficit discourses (Cobb & Russell, 2015). Martin (2012) contended achievement focuses on if rather than how Black students learn, a gazing view that deficitizes students by disregarding causes—including structural—of achievement. Thus, the wide acceptance of rhetoric about achievement gaps, determined in large part by assessments, unintentionally supports the “social construction of Black children as inferior and lacking in intelligence” (Martin, 2007, p. 16). Assessments reify norms and ideologies around a white center, legitimizing inequity and justifying hierarchical rankings and differential treatment regarding career and education opportunities (Harris, 1995). Therefore, lack of achievement falls on students, schools, or teachers rather than the laws, policies, and systems creating the conditions.

The dominant ideals of racial hierarchy surface when students track into classes by their assessment and achievement levels, as assessment performance and considerations of achievement bias values and interests of the dominant group (Alon & Tienda, 2007). Tracking drives access to colleges and careers (Cobb & Russell, 2015; Davis & Martin, 2008; Martin, 2012; Moses & Cobb, 2001). In practice, schools often place students of color in lower tracked classes, what Bell (2005b) considered “second generation segregation” (p. 227). That is, students of color and white students attend the same schools, but not the same classes, often providing different content and pedagogical practices (Boaler & Staples, 2008). Veteran teachers rarely push to untrack classes as it requires the challenging work of altering content and instruction significantly (Cobb & Russell, 2015) to switch from mathematics as skill-based to contextualized, embedded concepts (Boaler & Staples, 2008). Tracking or de-tracking does not create or eliminate inequity by itself; regardless, teachers must present strong content and pedagogies across classes (Gutiérrez, 2012).

Mainstream instruction: “Banking” educational models. While reform mathematics emphasizes discourse and problem solving (National Council of Teachers of Mathematics

[NCTM], 2000), students of color largely remain in procedural-based mathematics classes (Boaler & Staples, 2008). These classes often use what Freire (2011) characterized as “banking” education, positioning students as receptacles to be filled by teachers. Banking education seeks compliant, manageable students: the easier students allow themselves to be filled, the better the students they are (see also Sfard, 1998). Alone, banking ignores community and culture, leading to the type of teaching Martin (2007) describes as “chalkboard-focused, technical, teacher-dominated, and ... sink-or-swim” (p. 19). With the focus on absorbing knowledge, students do not gain critical consciousness, the ability to analyze the world and mathematics relation to it (Aguirre et al., 2013; Gutstein, 2012; Moses & Cobb, 2001). Using mathematics for critical consciousness by connecting it to community or societal realities provides avenues for equity, as I discuss later.

This section delineated the normative features of schooling such as assessments, tracking, and compliance bolster dominant narratives. Dominant narratives inculcate individual beliefs; thus, individual and institution interdepend, cyclically reinforcing each other.

Individual Mindsets Informed by Institutions

In this section, I connect institutional features and historical consciousness to individual beliefs and pedagogies informing practice.

Racist mindset. Many white people do not talk about race (Lensmire, 2014; Smith, Constantine, Graham, & Dize, 2008), creating challenges in building teachers' and students' critical consciousness. Instead, teachers often ascribe to the simplistic idea that integration predominantly stopped racism in institutions (Bell, 2005b), thinking racism only endures individually, more of “matter of opinion” than “racism itself” (Smith et al., 2008, p. 342). Jones (2000) described society's primary perception of racism to be “personally mediated” (p. 1212), revolving around prejudice, intentions, and differential beliefs about capability. This type of racism typically occurs between individuals, such as in interactions where someone

says something that offends the other person. Blatant, discriminatory actions and words do happen; however, contemporary racism also involves the pernicious, less overt beliefs and ideologies of individuals that emerge in institutions and policies to drive differential impact, access, and success (Jones, 2000).

While contemporary racism exists, many people spin racism away from themselves (Smith et al., 2008), believing it external from them and, therefore, downplaying the role of race—including their own—in individual and societal events. For example, teachers use personally mediated racism when they provide varied instruction across classes, with lower level classes often occupied predominately by students of color and often receiving mainstream instruction (Boaler & Staples, 2008). When teachers explain differential instruction with a deficiency in the students' culture or capability rather than considering societal structures, curriculum, instruction, or their beliefs, the teacher spins racism away from themselves and institutions, rendering student-centered change difficult.

As a solution, some teachers attempt to bridge students' lives with mathematics by using culturally relevant teaching practices (Gay, 2000; Ladson-Billings, 2009). However, without deconstructing the racialized mentalities about students and communities that inform mathematics classroom, they often still marginalize students of color (Martin, 2012). Dominant ideology's influence on individual practice and beliefs then eludes teachers, and blame shifts from systemic racism to individual teachers or students. Teachers often do not contextualize Black children within the students' social realities but, rather, through dominant (white) frames of reference (Martin 2012). Teaching mathematics through a dominant ideology— "their own personal views of reality" (Freire, 2011, p. 94)—rather than considering experiences of students of color uses a colorblind ideology (Bonilla-Silva, 2002). Martin (2007) equated colorblindness with cannibalism: "teaching students without really 'seeing' them" (p. 19). Teacher's (often subconscious) beliefs about race and about particular groups inform instructional decisions, including how they position students mathematically. The "subtle, apparently

non-racial” (Bonilla-Silva, 2002, p. 42) practices of avoiding racial discussion, spinning away the role of race, and not viewing students within the full context of their lives create an institutional level system of contemporary, colorblind racism and maintain white supremacy.

Jones (2000) described the institutionalized level of racism as practices that provide different access to resources or opportunity by race, either through law or normalization. In mathematics classrooms, the differential access to high-quality coursework across race reflects institutionalized racism, “codified in our institutions of custom, practice, and law, so there need not be an identifiable perpetrator” (p. 1212); individual practices become the institution. Tracking students into classes based on discrete measures and providing remediation-oriented rote instruction becomes normal and mechanizes inequities’ persistence (Boaler & Staples, 2007). Math content and pedagogy become static knowledge, passed via banking models, rather than transactional and critical (Frankenstein, 1983; Freire, 2011). Thus, mindsets diminish the role of race and block asset-oriented, equitable teaching and effective learning for students of color (Aguirre et al., 2013).

“Missionary” or “cannibal” mindset. Because of deficit thinking, achievement orientation, and colorblind racism, Martin (2007) maintained teachers often interact with their students of color either as “missionaries” or “cannibals” (p. 23). Sometimes teachers of color, too, enact missionary or cannibal stances because of internalized (Jones, 2000) racist norms and stereotypes about their racial group influence how they see themselves and their students. For example, if a teacher of color uncritically accepts standardized assessments (both the practice and the results) without deconstructing the connected inequities, they may have internalized the neutrality of tests and adopted the tests’ racial categorization that places students of color at the bottom. As missionaries, teachers feel that they must save and “insulate poor black children from the risks of ghetto life” (Bell, 2005c, p. 269)—a form of cultural racism that deems home cultures of certain races as detrimental to their success (Bonilla-Silva, 2003). Cultural racism surfaces in some educational programs such as Knowledge Is Power

Program (KIPP) schools where long school days and the requirement for students to call teachers with all homework questions (Mathews, 2009) perhaps serves to protect students from their home lives.

Even when well-intentioned, teachers cannot escape savior ideologies if they do not engage their students with academically rigorous and relevant teaching practices fitting their sociocultural identities (Martin, 2007). Freire (2011) disavowed treating students as objects to be saved, especially without embracing student agency and engaging personal reflexivity. Conversely, without commitment to students and their sociocultural lives, teachers act as cannibals, destroying students' assets within the classroom and instead assimilating normative thinking and behaviors. *Brown v. the Board of Education's* (1954) desegregation of schools demonstrates the mentalities of missionary or cannibal toward Black students. People considered white schools an improvement regardless of the circumstances (missionaries) and/or primarily ignored students of color as they integrated into the school system, minimizing students of color and their experiences in school spaces (cannibals; Bell, 1980, 2005b).

Meritocratic mindset. Colorblindness also emerges in the U.S.'s script for success: Individuals hold the freedom and power to advance, educationally or otherwise (Greene, 1988; Wang et al., 2014; West, 1989). American culture focuses on creative democracy, individuals' ability to use their intellect and resources to transform the world (West, 1989). Individualism and meritocracy, a belief that the merit and hard work of individuals creates success, highlights individual qualities, rather than institutional barriers (Bell, 2005c; Chakravartty & da Silva, 2012; Wang et al., 2014). For example, schools analyze standardized test performance by the efforts and performances of individuals, not the structures of society, education, or the discourse surrounding the test-taker.

The ideology of the American Dream preserves the ahistorical, individualistic belief that each person holds the responsibility and freedom for their decisions (Bell, 2005d; Greene, 1988) rather than taking into account the influence of laws, policies, and actions intended to disenfranchise. Not

remnants of the past, inequitable laws serve the on-going kinesis of racism that maintains relationships of power over time (McAfee, 2014; Thompson Dorsey & Venzant Chambers, 2014). For example, police stop and arrest more people of color (White, 2015), standardized tests preference white students (Aguirre et al., 2013; Cobb & Russell, 2015), and home loan policies maintain racial debt (Chakravartty & da Silva, 2012). The belief in institutional and legal equality ignores the on-going racial dynamics knit into our history, ideologies, and institutions.

However, many white teachers adopt colorblind mentalities and pedagogies to avoid the discomfort and fear that accompanies deep grappling with the material realities of racism, instead maintaining their relative comfort and superiority in the face of changing societal demographics and mentalities (Harris, 1995). Teachers want to believe that inequities in achievement stem from cultural or natural factors or students' lack of hard work rather than discrimination. Otherwise, they may uphold white supremacy and their success may come from unearned privileges (Bonilla-Silva, 2002; Bonilla-Silva, 2003; Ghabra, 2015). Meritocratic rhetoric emerges around programs like affirmative action, programs that broaden admission criteria to be more inclusive of various student qualities to increase access to college for students from historically marginalized backgrounds. If meritocracy worked, then affirmative action would be "reverse discrimination" (Bonilla-Silva, 2002, p. 51), but if individual and institutional factors hinder the success of some groups, then affirmative action attempts to address systemic issues (Harris, 1995). Consequently, meritocracy blocks efforts to address the deep structural fissures maintaining inequity (Cobb & Russell, 2015). Meritocratic stances perpetuate the comfortable but oppressive dominant perspectives toward students of color in mathematics, stymying alterity and upholding white supremacy.

Deficit mindset. Teachers' deeply rooted prejudices and stereotypes, born from institutions and societal power dynamics, underlie the achievement of students of color. Deficit views stem from history, science, media, and

authoritative discourse. These views position students of color and their communities, families, and values as pathological. Without deconstruction, deficit mindsets often consciously or unintentionally impact teachers' perceptions and practices so they do not supply rich learning opportunities and environments (Martin, 2012). Bonilla-Silva (2003) defined this as cultural racism wherein (mostly) white people attribute differential outcomes to a lack within a culture. White teachers may lack the experiences and understanding to overcome stock images and deficit mindsets. For example, I interiorized beliefs of Native Americans as savage and my superiority until I worked with a summer program for Native American students that disrupted and forever altered my stock beliefs. Likewise, teachers may shift blame toward students and families without making sense of their students' realities (Martin, 2007) and capabilities (Yosso, 2005) or having the requisite experiences to dismantle harmful beliefs.

Deficit mindsets relate to colorblind racism and imply that "good teaching is transcendent" (Martin, 2007, p. 18). Teachers, thus, view students of color as white children who need more help attaining white achievement (Martin, 2007). Recognizing their inefficacy with students of color, teachers neglect the complexity of factors influencing how students of color learn, position students as lacking (Aguirre et al., 2013), and limit their perception of student ability (Martin, 2007) to preserve a positive self-image. Newton (2002) distinguished between Western society that largely views contradictions such as racist and not racist as external, so a person can be either racist or not. In societies that view contradiction as internal, such as in African societies, all people hold both racism and resistance to racism. The degree to which behavior and thoughts evince one aspect of the contradiction over the other depends upon the level of critical examination and subsequent actions, an ever-shifting dynamic. When people consider the complexity in holding internal contradictions with both "good" and "bad" pieces, they can face the racist aspects of themselves without the immobilizing fear of being wholly racist.

Often avoided because of colorblindness, teachers' perceptions of capability tied to race influence student success

and mathematical identity. Even when Black students come from the middle-class or higher, they typically “encounter *ideologies of Black intellectual inferiority*” (Martin, 2012, p. 52), stereotypes and biases that situate them as less capable academically. Deficit ideologies negatively influence students view of themselves as mathematics learners and their subsequent achievement (Aguirre et al., 2013). Race, not the socioeconomic reasons commonly cited within cultural racism that minimizes the role of race, predicts mathematics achievement over economic class (Martin, 2012; Singleton & Linton, 2006). Rather than dialoguing about the pervasiveness of race on economic and educational outcomes, Singleton and Linton (2006) described the school systems’ focus on socioeconomic factors as circumlocution of the deep impact of race and culture on students. Similarly, individuals and educational systems must name and deconstruct the centrality of race to move toward equity (Crenshaw et al., 2006).

In this section, I named the strands influencing mathematics classrooms where Black and Latinx students occupy the lowest achievement levels. I juxtaposed the individual mindsets of colorblindness, meritocracy, and individualism with the institutional features of schools that include assessment socialization and the primacy of achievement, always to a white norm. Together, normative dimensions construct an on-going educational milieu that serves white students most effectively while reifying inequity.

Avenues to Critical Consciousness: The Convergence of Interest and Identity

In this section, I ponder entry points toward institutional change using Bell’s (2005a) concept of interest convergence, the idea that racial equality will come when it benefits white economic and sociopolitical interests. Then, I consider the institutional influence on individuals to argue for the moral and humanizing necessity for change. The individual moral imperative must connect with institutional factors and extend beyond the frameworks of naming privilege and racial identity. Transformation requires reflection and action toward identity

convergence (see also Greene, 1988), the understanding that alteration requires interconnectedness of various backgrounds and races and the mutual pursuit of a “project” (p. 17)—in this case, mathematical equity.

Interest Convergence

Economic factors. Economic incentives exist to reward schools for student achievement on assessments, and many schools plaster posters with statistics of lifetime earnings by education level to motivate students to achieve. But, economic competition breeds fear of other people’s success diminishing their own (West, 1989), causing people to latch onto their status and view resources through competition rather than seeing their struggle as part of the human collective (Harris, 1995).

Bell (2005a) depicts the historic economic reality of slavery, where a few plantation owners maintained the bulk of the wealth. Rather than the economically-dispossessed working class whites and slave uniting to resist exploitation, ruling whites convinced working class whites that whiteness gave power, inscribing racial superiority with economic status and bolstering racial hierarchy (Harris, 1995). Lensmire (2014) argued white people consume stereotypes about people of color as a “scapegoating rite” (p. 6) to ensure racial superiority and economic position. Consequently, political and legal changes occur most readily when they serve the white power structure—and, therefore, are not enough to create paradigms outside of the white center. For example, Bell (2005b) argued the Civil Rights Movement and *Brown v. Board of Education* transpired because economic benefits converged in the interest of the white power structure. Civil Rights’ success occurred because it maintained the comfort and position of most white people (Greene, 1988), even benefitting them. Damaged by segregation in the perceptions of the world, Bell (1980) asserted that the U.S. needed to solidify the appeal of democracy against communism, prevent the dissatisfaction and subsequent violence of Black veterans of World War II, and facilitate Southern industrialization. Therefore, interest

convergence necessitated policy changes to civil rights and educational systems while maintaining white supremacy through increased backing for U.S. democracy, building the U.S. economy in global and local matters, and neutralizing resistance by people of color.

U.S. society maintains relative affluence globally, but inadequate systems of health care, education, and childcare comparatively reflect its continued white supremacist power structure (Bell, 2005d). Failure to address basic social necessities roots in racist and deficit beliefs; many white people interiorize stereotypes that equate supporting social programs with bailing out people of color—subsidizing lazy people or criminals (Bonilla-Silva, 2003). These constructions stem from the individualism of the white economic elite, who strives to sustain their standing (Harris, 1995).

Just as slave-owners garnered support from working class whites against slaves by focusing on the social benefit of white superiority, conflating “issues of race and economic neglect serves to rationalize the policies of inaction” (Bell, 2005d, p. 329). For example, deficit perspectives that consider people of color as less deserving of education since they are lazy or criminal (da Silva, 2001) justify inadequate funding of urban public schools. Dehumanizing groups of people through discursive packing of economic deservedness destructs notions of democracy, freedom, and equality. Educators must unpack colorblind racism and meritocracy because they allow people to rationalize disadvantages by socioeconomic class, cultural deficiencies, or a lack of work ethic rather than addressing the salience of race (Singleton & Linton, 2006). To Bell (2005d), “deepset racial fears [are] the real barrier” (p. 330) to economic and mathematical equity.

The economic benefits of supporting the mathematical success of all students—not only the white, male norm—will take years to realize, after initial economic costs of investing in teachers, teacher training, and rethinking curricula, school structures, and relationships between teachers and students. However, Moses and Cobb (2001) insisted on mathematics pivotal role in racial progress. The initial cost burdens of pursuing mathematical equity overshadow the eventual

opening of enterprise and opportunity by engaging the collective brilliance and potential of all people. Mere inclusion of people, however, will not achieve the necessary dismantling of the ideologies and systems rooting white supremacy (da Silva, 2001), deeply challenging work. Nonetheless, Leopold (1966) posited issues must be considered beyond their economics, but also “what is ethically... right” (p. 262) and what will develop more human interactions between people. Immediate changes that persist and alter systems must involve individual development and action—not only economic imperatives of wage, job security, or funding.

Identity Convergence Beyond Linearity

Because racial experiences inform educational decisions and cut across lives, white teachers must avoid colorblind racist discourse to grapple with their social identity, their engagement with students, and math content (Aguirre et al., 2013; Bonilla-Silva, 2002; Lensmire, 2014). Simply naming white identity development and white privilege, trademarks of white teacher development, fails to address racism with action (Smith et al., 2008). Privilege serves a purpose of identifying and describing inequity, but, alone, it closes the space for action, as the action becomes only confession of privilege (Lensmire et al., 2013). Addressing threatened concepts of white humanity and self-image serve important loci of reflexivity, but they also may create defensiveness and less openness without additional unpacking or action. Since white privilege is an effect of white supremacy, not the cause, naming alone both does not address structural roots of privilege and creates paralysis for white people. Instead, individual privileges must be identified and, moreover, connected to the institutions that maintain the privilege. Then, teachers can interrogate their privilege in the context of systems to conceive of systemic alternation, realizing the interconnection between privilege and history. White people must address the historical roots of racism without discursive avoidance of complicity by deploying a fixed and teleological view of racism as relic.

Interrogating teacher identity and privilege should consider historical complexity and nonlinearity while also focusing on student learning (Lensmire et al. 2013; Martin, 2012). Lowenstein (2009) recognized the discursive process of equity work, requiring the experiences of white teachers as an opening for discussion. The “philosophical and ideological underpinnings” (Ladson-Billings, 2009, p. 162) of teachers’ view of themselves and their students undergirds how they structure classroom interactions, conceptualize knowledge, and frame knowledge construction. Therefore, teaching environments rely on teacher perception of students, but also on the teacher’s sense of self. Teachers must possess a strong self-concept (Wang et al., 2014; West, 1989) and view themselves as effective while also interrogating their practice to increase their success and vision (Aguirre et al., 2013). Greene’s (1988) continuum provides a nuanced process for white teachers to build mathematical equity, cycling nonlinearly between critical consciousness, reflective resistance, and action.

Mechanisms of Asset-Oriented Teacher Growth

Critical consciousness: Seeing and naming the world.

Greene (1988) defined consciousness as “seeing what [is] normally obscured by the familiar” (p. 122) to interrogate the world. Critical questions allow people to see beyond “fragments” (Freire, 2011, p. 104) and stereotypes to participate in dialogue, discover nuance, and uncover possibilities for transformation. Strong, critical leadership and support of colleagues moves teachers from using avoiding conflict with colorblind ideologies to addressing inequity directly and working through conflict (Lensmire, 2014; Matias, 2016). Educators must center race to push mathematics communities and re-imagine mathematics education, dialoguing about how hegemonic individual and institutional factors surface in their classroom and schools.

Reflective resistance: Strong self-concept and contemplation. Naming and dialogue alone do not prompt transformation; the “problematics of power, agency, and

history” (Freire, 2011, p. 17) must be connected to identity and experience (Greene, 1988). Reflexivity examines the interplay between the personal and the institutional. Analyzing the various interlinks between self, mathematics content, pedagogy, and systems demands both time and commitment (Aguirre et al., 2013). It requires dismantling normative conditioning and addressing individual complicity upholding white supremacy. It requires facing the role history in shaping the present, particularly the role of racism. It requires openness, authenticity, humility, and communication with students and communities to unlearn and relearn. When teachers do engage a critical perspective “in search of [their] own freedom” (Greene, 1988, p. 14), they open space for students. Then, teachers, students, and parents share responsibility for mathematical learning and embrace their strengths to begin the process of transformation (Aguirre et al., 2013).

Action. People often wait for a leader to compel action (Bell, 2005d), rather than recognizing how their minute actions affect institutions. Critical action toward transformation stems from reflection (Freire, 2011) and self-belief (Wang et al., 2014). Greene (1988) argued self-concept cannot remain “as an interiority” (p. 21); once educators recognize the world’s mechanization of racism and their complicity within it, they must act. Reflexivity establishes angst as individuals realize the dimensionality of injustice, and this augments to action. Assessment-based accountability will not press change because tests bias by race; teaching to white norms, then, can produce test results that bolster achievement within current accountability systems. Thus, a “humanizing pedagogy” (Freire, 2011, p. 68) insists that teachers extend beyond the teaching structures and strategies of their experiences and traditions (Moses & Cobb, 2001) to the human need of dismantling racism.

Avenues to Enter: Action

What will converge teacher identity to equitable instruction beyond the models and institutions they know? I provide spaces to enter the complex work of altering practice for equity

as teachers' identities toward mathematics, themselves, and their students either reifies or disrupts inequity. Aguirre et al. (2013) recommended teachers start with naming and reflection, perhaps by writing a mathematical biography because the most impactful alterations of practice will follow intentional reflection. Teachers, then, can create a practice-reflection cycle, constantly building their "vision for mathematics" (p. 119) to share with parents through letters and conferences (see Aguirre et al., 2013 for examples). Parents can help co-construct the mathematics community through feedback and participation in class, thus incorporating expanded ideas of capital—called cultural wealth—in the classroom such as the strengths of familial connection (Yosso, 2005).

Teachers can use models (Aguirre et al., 2013; Boaler & Staples, 2008; Frankenstein, 1983; Gutstein, 2012; Leonard, 2008; Moses & Cobb, 2001) of "problem-posing" (Freire, 2011, p. 81) education to build students' critical consciousness of the world. For example, in Aguirre et al. (2013), a teacher and his students collected and mathematically analyzed school data regarding the claim that the school suspended a student for "being Mexican" (p. 50). With confidence and purpose, the students used mathematics to relate to their social positions and serve as a tool for understanding the world. Additionally, Moses and Cobb (2001) recommended nonlinear teaching practices to help students build conceptual knowledge such as discussing the problem in their own language and using symbols to represent their ideas. Students work from what is concrete and understandable to them—their body, their drawings, their language—as an entry to understanding complex mathematics. Concretizing mathematics for students avoids the frustration and negative identities that surface in the abstract (Moses & Cobb, 2001).

Teachers must also reflect on what and how they assess, interrogating the content and use of assessment to create alternatives that broaden conceptions of competence, such as mathematics journals (see Aguirre et al., 2013 for specific guidelines). Mathematics journals can provide students space to think and make important mistakes, promote high-level discourse and multiple solution methods, reinforce

mathematical identities, and shift responsibility for learning to students (Hufferd-Ackles, Fuson, & Sherin, 2004). Teachers can use targeted, narrative feedback to shift from grade-oriented to growth-oriented (Aguirre et al., 2013). Boaler and Staples (2008) recommended de-tracking classes to provide high-quality, conceptual instruction for all students that incorporates varied forms of capital for collective learning. Regardless of whether schools de-track, teachers and schools must consider how assessments place students into mathematics classes and what mathematics experiences they provide across classes.

Implications and Next Steps

Transformation will occur if individuals perceive and reflect to the point of action where they cannot continue life in stasis (Greene, 1988). “An amalgam of... necessity, chance, and, most importantly, love” (West, 1989, p. 52) drives evolution, and teachers and teacher educators must not rely on economic necessity or job mandates. Instead, they must move beyond fear to realize that their fullness of self—and resistance to complicity in injustice—requires interrogating the living realities of racial inequity that root historically, engaging with the sometimes-painful work of praxis. Interior work toward person freedom encourages others, including other educators and students, to do the same. Together, the individual strands of deep grappling compose a web of critical consciousness that can nuance and alter what is currently known. But, questions and spaces for further work remain: How can we frame racial dialogue and gain tools to work through honesty and conflict without becoming immobilized or hopeless? How can we embrace plurality of students and selves, connecting for transformational mathematics, especially given competing demands on time and energy? How can we gain the competence and imagination to work differently than our daily experiences and what we have been told? What languages, frameworks, and strategies would allow us to consider the complex and kinetic nature of racial contradiction, operating both institutionally and within us? Because of its complexity,

equity—pushed by identity convergence—requires commitment and growth, necessitating that we move beyond “simplistic remedies that cannot work” (Eisner, 1998, p. 115). As Greene (1988) described, “At the point of encounter there are neither utter ignoramuses nor perfect sages; there are only people who are attempting, together, to learn more than they now know” (p. 90). Therefore, we must guide each other and our institutions by focusing on ourselves. Progress emerges from the intersection of individual and institutional, starting with each individual.

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