

Plenary Presentation:2018.02.22.0100.

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**Talk Title:**

Developing a vision for a more just and humanizing mathematics education

<b>Date:</b>	02/22/2018	<b>Time:</b>	1:00 - 2:30	pm
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**Materials:**

- Martin's presentation (pdf)
- Related References
- Detailed notes from Notetaker (pdf)

**List 6-12 key words for the talk:**

Equity, Challenge, Vision, Rehumanizing mathematics education, Black Liberation, Critical Bifocality

**Please summarize the lecture in 5 or fewer sentences:**

Dr. Danny Martin provides an overview of the current state of dehumanization and antiblackness facing Black Learners in today's mathematics education system and presents three non-negotiable principles for framing the vision in Black Liberation Mathematics Education.

Dr. Rochelle Gutierrez then discusses in details the humanization of mathematics, discussing with critical bifocality through the lens of how rehumanization impacts students and teachers and then how it could change the large discipline of mathematics. She also presents current attacks on the field that she has personally been affected by and the strong support she has received from the broader community of mathematics.

The session ends with a moderated q&a from the audience.

Introduction to the speakers

Broad theme of this plenary in to discuss creating a vision.

**Act 2: Developing a vision for a more open, just, and humane mathematics education:**

Do open, fair, humane, and just mathematics education systems exist? What do they look like? What are key principles and practices of these systems? To cultivate mathematics as a thriving discipline, we must understand what institutional structures, pedagogies and expected outcomes are needed and how they affect students' identities, sense of themselves, and their mathematical literacy and skills.

1. Which aspects of our institution/field/discipline do we want to uphold, and which do we want to change? Are there multiple pathways to mathematical advancement? For instance, how might we rethink the hierarchical or linear sequencing of mathematics courses while maintaining rigor, access, and enjoyment for our students? Are specific priorities, such as those placed on algebraic proficiency or on placement tests to gain entry into college courses, consistent with the values we want to uphold?
2. What customs and practices in mathematics education are institutionalized in ways that lead to the systematic mistreatment of certain groups? What are the effects of this structural oppression and how can they be reversed? What would math education environments look like in the absence of these customs and practices?
3. What are the roles and responsibilities of mathematicians, mathematics educators, and teachers in creating such a vision?

Black Learners, Citizenship and the Desegregation of Mathematics education

Speaker: Danny Martin (University of Illinois at Chicago), dbmartin@uic.edu

These comments are based on two longer papers that Martin is currently revising for publication.

Since the middle of the 20th century there have been three major moments of mathematics reform (New Math in 1950's, Standards based movement in 1980's, and Common Core in 2009). Each reform was anchored in various discourses of access and inclusion. In context of Jim Crow reform and desegregation the new math reform focused on white males and never intended for Black males learners. In subsequent reforms, under the slogan system "Mathematics for all" Black learners have received increased attention in research and policy context focused on racial achievement gaps and underrepresentation.

Yet, despite the strategic use of equity and inclusion oriented rhetoric within Standards Based reforms and "the rising tide lifts all boats" assumptions of the Common Core, the implied promises of equity and inclusion for Black learners collectively have not come to fruition. Many Black learners continue to experience inhumane and emotionally violent mathematics education that relegates them to the lowest rungs of the taken for granted racial hierarchy within the domain.

While many previous analysis of Black learners in mathematics education reform have focused on remedying problematic achievement and persistence issues in service to equity and inclusion. The ideas of equity and inclusion in math education have for the most part escaped critical analysis.

In response I want to offer the following:

**My position: equity for Black learners in mathematics education is a delusion rooted in the fictions of white imaginaries and characterized at best by incremental changes that do little to threaten the maintenance of white supremacy and racial hierarchies inside or outside of mathematics education.**

Now, it might be tempting to view these statements as overly pessimistic and at odds with the many existing efforts to include more Black students into more mathematical practices. However the persistent reality of reform efforts producing only epsilon level changes in Black inclusion and participation bolsters the statement. History has shown that within the white imaginary incrementalism remains a substitute for Black Liberation in math education as it has in all areas of Black life.

**Related to these claims about equity and inclusion I want to raise 4 questions.** I will provide necessarily incomplete responses and I encourage you to continue to think about the questions in the following days, long after the talk is over.

**1. In what have we been asking Black learners to integrate?**

What is the fundamental character of mathematics education that has contributed to Black learners being less than full participants, and experiencing inhumane treatment when they do participate?

How apropos is Dr. King's suggestion when commenting more broadly on white America inability to being able to recognize Black humanity then Black people were being asked to integrate into a burning house.

## **2 Why have equity- and inclusion-oriented discourses in mainstream mathematics education reform managed to sustain themselves despite the failure of multiple reforms to radically respond to Black oppression and dehumanization?**

Why do these discourses remain so appealing to white and Black audiences?

## **3. If reforms have not been able to self-correct in the direction of Black Liberation, why do they necessarily self-correct in ways that sustain Black oppression and dehumanization?**

Math education as a field may need to grapple with the very real possibility that mainstream equity and inclusion oriented reforms may function and self correct in ways that maintain the status quo of white supremacy and racial hierarchy inside and outside of math education. Incrementalism continues to be employed as a substitute for Black Liberation.

## **4. As a response to status-quo-preserving nature of reforms and as a challenge to liberal calls for equity and inclusion, what can, and should, a Black Liberatory Mathematics look like in principle and practice?**

I hope this short presentation leaves us on the precipice of engaging in radical imagination and Black Liberatory fantasy about the form and structure of a Black Liberatory Mathematics education that allows Black people to flourish in their humanity unfettered by whiteness, white supremacy, and antiblackness.

In order to address these questions in is necessary to engage in a race critical analysis of mathematics that foregrounds white supremacy, antiblackness, citizenship, and desegregation. I have spent the last twenty years or so examining issues race and my previous race critical analysis of math education reforms have **surfaced several interrelated themes:**

- **Interpersonal and intrapersonal levels:** Mathematics learning and participation can be characterized as racialized forms of experience. That is, as experiences in which socially and personally constructed meanings for race emerge as salient in interactions related to math learning and participation. My research and the work of other scholars have found this to be true at all levels, not just for Black students.
- **Structure and Ideology:** Mathematics education is a white institutional space. The aims and practices of math education have been shaped not only by dominant white interest and logics within but also by conditions in the larger racial state which is foundationally a self-correcting antiblack system that successful adapts to and mitigate perturbations in the direction of Black Liberation. In the current political moment of the US racial state one can view the election of Donald Trump as a white supremacist correction to the presence of a Black man in the White House for eight years. Historically, Jim Crow racism was a corrective response to Reconstruction. Mass incarceration is a corrective response to Jim Crow. There are many such examples of how the US racial state self corrects away from Black humanity and liberation. Historically the second Brown vs Board of Education Ruling, with its emphasis on all deliberate speed,

became a correction to the first ruling, enabling public schools in the South to delay desegregation by more than a decade. Further, Jim Crow racism, as I said earlier, was a corrective response to Reconstruction.

This tendency of the racial state and its white institutional spaces to self correct is important when considering the history of math education reform.

FROM SLIDES:

Mathematics education research and policy contexts as instantiations of white institutional space. such spaces are characterized by:

1. the exclusion of non-whites from positions of power in various institutions, which results in the accumulation of white economic and political power,
2. the development of a white frame (rationality) that organizes the logic of these institutions and normalizes white racial superiority,
3. the historical construction of curricular models based on the thinking of white elites, and
4. the assertion of knowledge and knowledge production as a neutral and unconnected to power relations. (Moore, 2007)

Historical analysis reveal how each new wave of mathematics education reform is a self correction to previous reforms and that every math education reform can be linked to larger racial context in society. This is evidenced by the fact that math education has frequently been put into service to a number of political projects rooted in white supremacy including nationalism, xenophobia, and racial capitalism that are antithetical to Black humanity and liberation. The bottom line is that math education has never been an anti-racist vessel in the national sea of racial discord. The blood of our country and its institutions are white supremacy and antiblackness. Math education is just one part of the national body.

My recent work on race in math education shows that not only is math education a white institutional space, in is an antiblack space where systemic violence is often a defining characteristic of math learning and participation for Black learners. In my remaining time I focus on math education as an antiblack space and consequences of this framing addressing each of the questions that were raised earlier.

FROM SLIDES:

- Antiblackness is not simply racism against Black people. Rather, antiblackness refers to a broader antagonistic relationship between blackness and (the possibility of) humanity. (Dumas and ross, 2016, p. 429)
- An interlocking paradigm of institutions, attitudes, practices and behaviors that work to dehumanize and oppress Black people in order to benefit non- Black people, and specifically, to benefit and maintain white supremacy.
- When social systems are racialized by white supremacy, whiteness becomes the default of humanity and Blackness is stripped of its humanity, becoming a commodity, becoming disposable. (Black Liberation Collective)

According to educational scholars [Michael Dumas](#) and Kihana Ross (Berkeley graduates and Berkeley faculty) antiblackness is not simply racism against Black people. Rather, antiblackness refers to a broader antagonistic relationship between blackness and (the possibility of) humanity.

As noted in other education literature, antiblackness is an interlocking paradigm of institutions, attitudes, practices and behaviors that work to dehumanize and oppress Black people in order to benefit non-Black people, and specifically, to benefit and maintain white supremacy. Further, within antiblackness, the Black cannot be human, is not simply an other but other than human. Recent research in psychology supports the concreteness of antiblackness with studies showing that many Americans subconsciously associate Blacks with apes and more likely to condone violence against Black people as a result of societies inability to consider Blacks as fully human.

The importance of considering antiblackness in math education is that its enormity and ubiquity are what allows it absorb incrementalism of equity oriented reforms. Small changes in individual and collective social standing of Blacks are celebrated and used as evidence of white institutions within the prevailing system. Yet small upticks in achievement, inclusion, and participation still represent the bottom rungs of social and mathematical hierarchy.

These incremental changes come about not only because of Black struggle but in many cases because they serve white interest, liberal imagination of care and benevolence and because they ultimately serve to maintain white supremacy and antiblackness. More generally, history shows that when societal reforms move toward radical realm of Black Liberation the system invokes the necessary violence to push back.

Within math education, however, one would be hard pressed to identify any reform that could be characterized as liberatory or radical for Black learners. Math education is not unique as an antiblack space. Like other spaces it merely reflects white supremacy and antiblack racism that are foundational to the United States and its institutions. If math education were unique that would perhaps represent a near best case scenario however other scholars have studied different school contexts such as educational policy and school disciplinary practices that are also characterized by antiblackness.

Antiblackness can be readily evidenced in mathematics education via several characteristic forms of symbolic violence: epistemological, intellectual, experiential, and symbolical that have inflicted to inflict injury of Black bodies and minds.

For example, in empirical social science, scholars have stated the **epistemological violence** occurs when:

FROM SLIDES:

when theoretical interpretations regarding empirical results implicitly or explicitly construct the Other as inferior or problematic, despite the fact that alternative interpretations, equally viable based on the data, are available. (Teo, 2010, p. 298)

Consider that until recently the study of in reference to Black children in mainstream education and policy context was typically the study of how they differ from white

children. This race comparative approach usually begins with Black inferiority and the normalization of white behavior where the outcomes of white and sometimes asian children serve as the benchmarks of competence and math ability. Consequently Black children are positioned at bottom of the racial hierarchy of mathematical ability and the primary modes of engaging them are through diagnosis, remediation, and repair rather than engaging them through their taken for granted assumptions about brilliance. Of particular importance is that the brilliance of Black children is the naturally unbelievable only in the context of antiblackness.

Within mainstream math education research, Black learners typically only come into existence through statistical descriptions of their so-called mathematical illiteracy.

FROM SLIDES:

each statistical report of Black children's so-called mathematical illiteracy is potentially an act of violence as well as an indicator of the violence that has been inflicted on Black children in mathematics education.

mathematical illiteracy is invented in the violence of knowledge production. it is not a naturally occurring trait of Black children, but has become a widely accepted signifier for Blackness.

It is quite the irony that on one hand equity oriented reforms rest on the appeals for Black inclusion in mathematics while on the other, it is mathematics itself, statistical accounts of Black underachievement, that is often used to refuse Black competency and ability. Mathematical illiteracy is not a naturally occurring trait of Black children but it has somehow become a widely accepted signifier of Blackness. Said slightly differently, mathematical illiteracy has become a decidedly Black geography, it is the place where Black children are supposed to live in some people's imaginaries.

Given that few, if any, Black parents and caregivers refer to their Black children as mathematical illiterate one has to wonder where these ideas originate and reside. My own idea is that the inhumane idea Black children illiteracy is invented in the violence of knowledge production and in the white frames and white imaginaries that support math education as a white institutional space.

FROM SLIDES:

- psychological and "pathological scripts"
- fictional narratives
- controlling images
- discursive dehumanization
- disconnect disparate outcomes from broader system of racial oppression
- create intimate and natural relationships between Blackness, inferiority, remediation, and repair

(Alves, 2014; Collins, 1995; Feagin, 2013)

These frames and imaginaries include a broad and persisting set of racial stereotypes, prejudices and ideologies, as well as a collection of fictional narratives, controlling

images, and processes of discursive dehumanization that create naturalized relationships between Blackness, inferiority, remediation, and repair.

Consider for example that within contemporary research contexts a number of studies have been conducted to show that poor, typically Black children, enter school with only pre-mathematical knowledge and before intervention lack the capacities to mathematize their experiences, engage in abstraction and elaboration, and use mathematical ideas and symbols to create models of their everyday lives.

The abstract of a recent article focused on improving the numerical understanding of children from low income families (ie: mostly Black) stated the following:

FROM SLIDES:

Children from low-income backgrounds enter school with much less mathematical knowledge than their more affluent peers. These early deficits have long-term consequences; children who start behind generally stay behind. (Name, 2009)

Excerpts from another research article also focused on intervening in young children's pre-kindergarten mathematics stated this:

The reason for the early SES-related gap in mathematical knowledge appears to stem, at least in part, from differential levels of support for early mathematical development that children receive in their early learning environments. Economically disadvantaged American children receive less support for mathematical development both at home and in preschool.... Middle SES parents, in comparison to lower SES parents, provide mathematics support that is more frequent, mathematically broader, accompanied by scaffolding, and richer in mathematical language.... In contrast, many economically disadvantaged parents provide a comparatively narrow base of support (Name, 2000, 2008).

Within this kind of epistemological violence, little effort is set forth to document the mathematical lives of you Black children in naturalistic everyday settings. Nor are there attempts to determine how black children's mathematical sense making in these naturalistic settings is supported by their cultural experiences and whether their preferred ways of engaging their mathematical worlds serve useful functions relative to those experiences.

In studies such as these, we often see that three, four, and five year old Black children are subjected to a few hours of treatment and remediation as a counter to having spent their entire lives around parents, siblings, extended family and community members. There are approximately 26,000 hours in life of three year old, 35,000 hours in the life of a four year old, and 44,000 hours in life of 5 year old. Yet we are expected to believe that Black parents and families can not accomplish in that time what strangers who know little about Black people and Black life can do in one to ten hours. These white imagination of Black children's inferiority also produce intellectual violence against Black children. In recent years Black children across the country have been subjected to racist curricular examples such as the following given to 8th grade students at Burns Middle School in Mobile Alabama, the school is 51% Black. Here are the four examples from the site:



Leroy has 2 ounces of cocaine. If he sells an 8 ball to Antonio for \$320 and 2 grams to Juan for \$85 per gram, what is the street value of the rest of his hold?

Dwayne pimps 3 ho's. If the price is \$85 per trick, how many tricks per day must each ho turn to support Dwayne's \$500 per day crack habit?

Tyrone knocked up 4 girls in the gang. There are 20 girls in his gang. What is the exact percentage of girls Tyrone knocked up?

Ramon has an AK-47 with a 30-round clip. He usually misses 6 out of every 10 shots and he uses 13 rounds per drive-by shooting. How many drive-by shootings can Ramon attempt before he has to steal enough ammunition and reload?

Other questions can be seen here:

<https://patch.com/us/across-america/see-8th-grade-math-quiz-got-alabama-teacher-put-leave-0>

A widely circulated video from 2016 shows a school resource officer at Spring Valley High School in Columbia, South Carolina throwing a 16 year old Black girl (identified as Shakira) from her desk and across her math classroom for allegedly refusing to put away her cell phone. Niya Kenny, an 18 year old female classmate who stood up protested during the event, was also arrested. Other Black students were subjected to psychological and emotional violence as a result of having to witness these incidents.

Amy Sorkin, a writer for the New Yorker, noted in her article that the main message from the local sheriff (Sheriff Leon Lott) was that Shakira needed punishment.

From <https://www.newyorker.com/news/amy-davidson/what-niya-kenny-saw>

"We must not lose sight that this whole incident was started by this student. She is responsible for initiating this action." He also said, "She was very disruptive, she was very disrespectful—she started this whole incident." And she had to be "held accountable."

Disrupting school is a crime in South Carolina, a misdemeanor carrying a possible penalty of ninety days' imprisonment or a thousand-dollar fine, and Sheriff Lott had no qualms about pronouncing the girl's guilt, even though what he meant by "disrupting" sounded singularly vague; there is no allegation, for example, that she was screaming or throwing things in the class, but, rather, as the Sheriff haltingly put it, "she wasn't doing what the other students were doing....He was trying to teach...she was preventing that from happening by not paying attention."

...

When Sheriff Lott was asked, at the press conference, if the charges against Kenny, at least, might be dropped, he sounded almost offended. "To my understanding, no charges have been dropped against anybody," he said. "And, to my understanding, the charge is going to continue. What they did was wrong. They violated the law."

The response from state empowered authorities exemplify the normalcy of violence with an antiblackness in the white racial imaginaire. Sheriff Lott's implicit suggestion is that violence again Shakira and Niya in their math classroom was not the problem but rather

the solution, after all they violated the law. His insistence that they broke the law is also a reminder of the state's right to contain, discipline, and violate the black body. In the context of antiblackness one has to wonder about the proximity of death to Shakira's experience. This is not a far fetched consideration given the deaths of other unarmed Black children and young people at the hands of the State.

The incident with Shakira, Niya, and other Black children whose experiences we will not hear about serve to further index the forms of violence that are regularly and willfully inflicted on Black bodies and minds of Black children.

Why does math education continue to be a site of antiblackness. If reforms have not been able to self correct in the direction of liberation, why do they necessarily self-correct in ways that sustain anti-blackness and Black oppression?

Contrary to what is professed or implied in the associated discourses of equity and inclusion, mainstream math education reform has never been an anti-racist enterprise. Math education is no different from the larger racial context of society in maintaining, supporting anti-blackness and white-supremacy.

I don't have time here but you should read the paper for more details about this table which shows a simplistic but helpful depiction of the coevolution of various math reforms in the prevailing racial contexts.

## mathematics education reform and racial politics

Reform Context	Reform Appeals	Racial and Political Context
New Math (1957)	Best and the Brightest National Security	Jim Crow racism, New right racial project, heightened nationalism, Cold War politics, Civil rights movement
Curriculum and Evaluation Standards (NCTM, 1989)	Mathematics for All	
Everybody Counts (NRC, 1989)	Mathematics for All Economic Necessity Global Competitiveness Human Resource Development	Post-civil rights era, neo-conservatism, Reagan-Clinton-era neoliberalism, New Jim Crow, neo-liberal racism (colorblindness)
Principles and Standards for School Mathematics (NCTM, 2000)	Mathematics for All	
Final Report of National Mathematics Advisory Panel (USDOE, 2008)	Mathematics for All Economic Competitiveness National Security	Bush-era neo-conservatism, neoliberal racism, Post-911 nationalism, New Jim Crow, Far right racial project, NCLB
Common Core State Standards-Mathematics (2009) U.S. Education Reform and National Security (2012) Principles to Action (NCTM, 2015)	Mathematics for All College and Career Readiness	Obama-era post-racialism, neoliberal racism, New Jim Crow, Black Lives Matter, Far right racial project, corrective politics of Trump election and presidency

Column 1 - Reform Context. Begins with New Math Reforms in the 1950's and 1960's and proceeds through the Common Core.

### Column 2 - Reform Appeals

A number of previous analysis has documented about how each reform is a self-correction to the previous one brought on partially by the crisis discourse about American education more generally, and philosophical and ideological differences about math education in particular.

Each successive reform is also characterized by its inheriting the largely unchanged status of Black learners despite optimistic equity oriented language.

### Column 3 - Racial and Political Context

Traces the evolution of various racial projects at the societal level, parallel to various math reforms in Column 1. Racial theorists have detailed how racism reinvents itself and self-corrects, often through policy and law and other societal mechanisms that work to maintain white supremacy and Black dehumanization.

In my published and forthcoming papers you'll see more details about one and three columns.

Returning to a previous question...

**Why have equity- and inclusion-oriented discourses in mainstream mathematics education reform managed to sustain themselves despite the failure of multiple reforms to radically respond to Black oppression and dehumanization?**

In addition to the tendency for math education to self-correct in ways that are consistent with the racial state, I suggest that equity and inclusion have been offered up to White and Black audiences with similar appeals but with different promises and consequences.

Column 2 of this figure shows that after the New Math Era all new math reforms have anchored themselves in the slogan system of "Math for All". This week euphemism for desegregation of mathematics resonates with white liberalism. Mainstream math education has remained content with metering out incremental slow growth changes in Black achievement and representation. The appeal to White benevolence for equity and inclusion rest on the implied promise of not radically altering the status quo of white supremacy and anti-blackness.

Equity reforms have typically maintained incrementalist orientations that focus on inclusion into math education as it is, not fundamentally new and different math education. Tinkering with and tweaks to pedagogy, curriculum, assessment, standards and teacher attitudes and beliefs produce the impression/illusion of equity while Black Liberation remains elusive.

As an example of how White sensitivities attended to consider how NCTM (a White institutional space) has crafted one of its most recent equity argument:



Our vision of equity and access includes both ensuring that all students attain mathematics proficiency and increasing the numbers of students from all racial, ethnic, gender, and socioeconomic groups who attain the highest levels of mathematics achievement. Attending to access and equity also means recognizing that mathematics programs that have served some students, in effect privileging some students over others, must be critically examined and enhanced, if needed, to ensure that they meet the needs of all students. That is, they must serve students who are black, Latino/a, American Indian, or members other minorities

; students who  
who are female ;  
students of poverty ;  
students who are English language learners as well ;  
students who have not been successful in school ;  
; and students whose parents have had  
limited access to educational opportunities

. (p. 60)

Vs

Look at how White sensitivities were attended to, in service to the status quo

## reform as the status quo



Our vision of equity and access includes both ensuring that all students attain mathematics proficiency and increasing the numbers of students from all racial, ethnic, gender, and socioeconomic groups who attain the highest levels of mathematics achievement. Attending to access and equity also means recognizing that mathematics programs that have served some students, in effect privileging some students over others, must be critically examined and enhanced, if needed, to ensure that they meet the needs of all students. That is, they must serve students who are black, Latino/a, American Indian, or members other minorities, **as well as those who are considered white**; students who who are female **as well as those who are male**; students of poverty **as well those of wealth**; students who are English language learners **as well as those for whom English is their first language**; students who have no been successful in school and in mathematics **as well as those who have succeeded**; and students whose parents have had limited access to educational opportunities **as well as those whose parents have had ample educational opportunities**. (p. 60)

This is in service to the status quo. It has the hallmark of appealing to and appeasing the sensitivities of an overwhelmingly white constituency by suggesting that All Lives Matter as a reaction to the specificity that Black Lives Matter.

What are the appeals offered up to Black learners in math education reform? For Black learners the lure of inclusion and increased participation in math education have always been accompanied by implied promises of integration and fuller citizenship. But rarely are these discourses of inclusion, access and broader participation interrogated to ask, what kind of the participants and citizens the Black Learners are expected or allowed to be within math education or the larger society.

The forms of inclusion offered up in equity oriented reforms often involve two trajectories. One trajectory involves inclusion but marginalization. A second version involves assimilation into the existing culture of math education, thereby reproducing the fundamental antiblackness of the domain. Said differently, inclusion into antiblack spaces results in a type of enclosure that keeps black people in their same relative position. Existing frames of equity and inclusion often given the false impression that white supremacy and antiblackness can be transcended only by eliminating exclusion.

Inclusion and citizenship have never been counterweights to antiblackness and white supremacy. History shows that very clearly.

Philosopher Tommy Curry noted the following important point about segregation and citizenship:

FROM SLIDES

With desegregation, and the promise of equality, that sacred ideal offered to Blacks as a reward for their loyalty to the American state and its foreign endeavors was a Pyrrhic victory. **On the one hand, Blacks became citizens**, but on the other, they became complicit capitalists—**duty-bound exploiters of the darker races abroad, but impoverished at home**—a condition they hoped the political designation of citizenship would slowly improve, raising them from laborer to capitalist owner.... **The danger of citizenship was that it gave to Blacks a freedom to participate in America's colonial imperialist drive toward empire.** (Curry, 2015, pp. 37)

There is always a deal to be made in terms of participation and inclusion. When it comes to citizenship there is a similar deal.

Speaking more broadly about education, Curry raises another point I want to leave you with here regarding inclusion and desegregation, noting the following myth that is perpetuated in the white imagination around equity:

FROM SLIDES

Because Black children have now been allowed into white spaces and are able to call white children classmates and, in some cases, friends, the collective psyche of white America has chosen to rewrite the historical realities of the imperial agenda ... and tout integrationism as an evolutionary success whereby the contact of white children with Blacks developed in whites a new faculty: **the ability to perceive Black people's humanity.** (Currey, 2015, p. 34)

An interview of a mother from a previous study offers a challenge to this fiction:

FROM SLIDES

This system is not designed for African American children to learn. This system is designed for European children .... And I believe that until the day I die. That is the reason why these kids are not doing well. . . . African Americans have got to stop giving so much power to this system, that's why we are in the condition that we are in. We gave up the power so now we're in this dilemma. We thought [de]segregation was it and that's the worse thing that has ever happened to us. **People didn't care about our kids. We were shoving our kids into places where people hated them. How are you going to teach somebody you hate?** (African American mother and math learner)

I opened up my presentation with a claim

My position: **equity for Black learners in mathematics education is a delusion rooted in the fictions of white imaginaries and characterized at best by incremental changes that do little to threaten the maintenance of white supremacy and racial hierarchies inside or outside of mathematics education.**

A fundamental point that I have attempted to make is that equity and inclusion agendas in mathematics education do little to change fundamental antiblackness or produce the fundamental change that we call for in truly radical agendas. Although historical framings of equity and inclusion have been inadequate for Black Liberation, these framings have been self-serving within the context of liberal white imaginaries, white supremacy and antiblackness. Reform agendas are not necessarily limited because they exist within not in opposition to the dominant structures of math education or the racial state. They are no separate and apart. Math education reform are welcomed and accommodated within the self correcting systems of white supremacy and antiblackness. The system loves reform it doesn't like radicality.

I also suggest that mainstream equity work continues to maintain a safe moral and intellectual space and comfortable weighpoint so that the road to Black Liberation does not have to be fully traversed. Moreover the marrying of reform equity and inclusion perpetuates the fiction that Black humanity is recognized in the White imaginary. Expecting the system to reform itself from its foundational purposed to a new state of valuing Black humanity in unrealistic in the face of evidence otherwise. I am not suggesting that Black learners avoid learning mathematics, I spent 30 years teaching math to Black students. I am suggesting that pursuit of math knowledge should not solely for the pursuit of being accepted into antiblack and white supremacist spaces. For example, we should appreciate and celebrate all the Black hidden figures and those who are making inroads today. But we should also be careful about valorizing mathematics and mathematics education in ways that obscure their contributions to racial oppression, white supremacy, and antiblackness.

I want to end with some thoughts about premises on which a different math education for Black Learners could be built. In response to mainstream math education traditionally inviting Black people to participate on its terms I want to frame this visioning as a Black Liberation math education rooted in the ideas of Black self-determination.

### **Three non-negotiable principles for Framing the vision in Black Liberation Mathematics Education**

#### **1. Take Black children's brilliance as axiomatic.**

Refusing all research practices that promote antiblackness. This does not mean we will not conduct research on Black children's' learning, instead I would ask one simple question to those who want to do so, what do you know about Black people? Too often the answer is "very little" or is couched in deficit stereotypes. Imagining Black children's' brilliance could easily be envisioned as a proposition or conjecture, subject to proof. For me this proposition or conjecture doesn't need to be tested, proved or applied to so called "good" Black children. It is a statement in service to Black humanity, one that can only be denied in the context of antiblackness.

#### **2. Exercising the right of refusal, dismantling over reform.**

I would like to see boycotting and walk-out. Students at the receiving end of inhumane treatment should get up and walk out. Parents should get up and walk out. That doesn't mean privatization, charters, or public. They should reject the entire system. National protest Community based math programs and spaces. Mathematic schools on Saturdays. Math guides for Black parents and caregivers. And refusing anti-black knowledge production.

#### **3. Liberation above all else.**

For many Black learners, math learning and participation in school in mainstream school context are about compliance and obedience. While creativity and independence are valued in the liberal imaginary, Black children often learn in spaces where their minds and bodies are regulated and controlled. The freedom to participate in antiblack spaces is not freedom. Rather a math education worthy of Black children is a math education that prioritize their liberation from antiblackness, dehumanization, from systemic violence- above all else.

Mathematics Educator SE Anderson writing in 1970 offered this sobering thought to end on.

#### **FROM SLIDES**

It should be stressed that [learning mathematics] is necessary not because American capitalism's advanced forms of technology require this background, but because Black Liberation Struggle against the American racist-capitalist system requires knowledge of [mathematics and] 20th century technology. (Anderson, 1970, p. 25)

## References:

- Ansley, F. L. (1997) 'White Supremacy (And What We Should Do about It)', in R. Delgado and J. Stefancic (eds) *Critical White Studies: Looking Behind the Mirror*, pp. 592-655. Philadelphia, PA: Temple University Press.  
<https://books.google.com/books?hl=en&lr=&id=UNtUW9PV8WcC>
- Martin, 2006
- Moore, 2007
- Dumas, Michael J., and Kihana Miraya Ross. "'Be Real Black for Me" Imagining BlackCrit in Education." *Urban Education* 51.4 (2016): 415-442.
- Black Liberation Collective, <http://www.blackliberationcollective.org/>
- Thomas Teo. What is Epistemological Violence in the Empirical Social Sciences? (pages 295–303). *Social and Personality Psychology Compass*. May 2010.
- Alves, 2014
- Collins, 1995
- Feagin, 2013
- NCTM Principles to Action,  
[https://www.nctm.org/store/Products/\(eBook\)-Principles-to-Actions-\(PDF-Downloads\)/](https://www.nctm.org/store/Products/(eBook)-Principles-to-Actions-(PDF-Downloads)/)
- Tommy J. Curry 15, Ph.D., Philosophy, Southern Illinois University, "Back to the Woodshop: Black Education, Imperial Pedagogy, and Post-Racial Mythology Under the Reign of Obama",  
[https://www.academia.edu/8212290/Back\\_to\\_the\\_Woodshop\\_Black\\_Education\\_Imperial\\_Pedagogy\\_and\\_Post-Racial\\_Mythology\\_under\\_the\\_Reign\\_of\\_Obama](https://www.academia.edu/8212290/Back_to_the_Woodshop_Black_Education_Imperial_Pedagogy_and_Post-Racial_Mythology_under_the_Reign_of_Obama)
- S. E. ANDERSON. *The Black Scholar*. Vol. 2, No. 1, BLACK STUDIES (September 1970), pp. 20-27.  
[https://www.jstor.org/stable/41202955?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/41202955?seq=1#page_scan_tab_contents)



Rehumaning Mathematics: For Classroom and Citizens.

Speaker: Rochelle Gutierrez (University of Illinois), [rg1@illinois.edu](mailto:rg1@illinois.edu)

**Critical Bifocality** from Michelle Fine and Lois Weis to argue that we should be thinking on this at global and local levels and thinking about how those interact. We'll be thinking about classroom and teachers and student interactions and then thinking about the bigger system.

[http://hepg.org/her-home/issues/harvard-educational-review-volume-82-number-2/herarticle/expanding-critical-ethnographic-theory-and-design\\_](http://hepg.org/her-home/issues/harvard-educational-review-volume-82-number-2/herarticle/expanding-critical-ethnographic-theory-and-design_)

Check out the presentation from last year on rehumanizing mathematics which discusses Dr. Gutierrez's experience in seeing the ways that mathematics is dehumanizing and led to her discussion about rehumanizing:

<https://www.msri.org/workshops/836/schedules/21847>

### **Classrooms and teachers and student interaction**

Recognizing the dehumanization. This could feel like too strong of a word but if you think about violence over years (slow violence) while the notions of what math is and who can do it is repeated over the years and finally leads to who gets what jobs. That slow violence is a form of dehumanization.

I've been traveling the country and discussing this issue with students (high school/college) and teachers. These are their very similar responses:

**Practices that Dehumanize Students**  
**Practices that Dehumanize Teachers**  
[Gutiérrez, 2018]

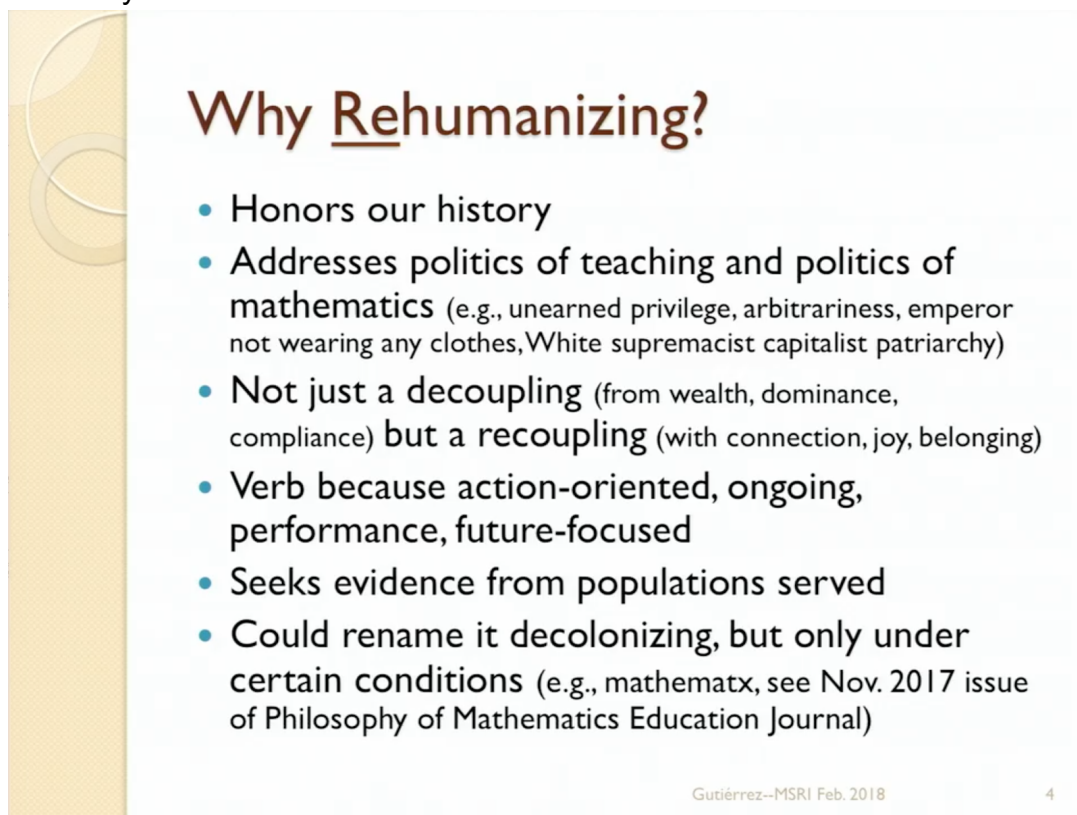
- Measuring/categorizing bodies
- Speed over process
- Evaluation that doesn't honor complexity, context, or own goals
- Being asked to leave identity at door
- Focus on control/domination (of others or environment)
- Rule following instead of rule breaking (standards that stifle creativity)
- Separation of practice from politics/values/ethics

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Notice that both groups have very similar responses.

- Measuring/categorizing bodies:
  - Students: Tracking
  - Teachers: Assigning who gets to teach courses and who gets valued for teaching those courses.
- Speed over process - whoever gets the fastest answer is the smartest
  - Students: Drilled timed test.
  - Teachers: Pacing guides, sense of need to get through curriculum.
  - “The rest is obvious”... We have become complicit in the ways structured around us.
- Evaluation that doesn't honor complexity, context, or own goals
  - Rather it is feeding into capitalist system where people are being deemed mathematically illiterate and then products are sold back to these student populations and their paying for their own colonialism.
- Being asked to leave Identity at the door:
  - Students: Don't get to use home language, use algorithms from my own country. Don't bring your body or anything else to the classroom, just bring your brain.

We can go down list and see how this is a similar experience for students and teachers. We should ask ourselves: If the very things that are things that are dehumanizing for students is also dehumanizing for teachers, why do we continue the violence and why are we complicit in this form of dehumanization that continues to take its toll on people in society?



## Why Rehumanizing?

- Honors our history
- Addresses politics of teaching and politics of mathematics (e.g., unearned privilege, arbitrariness, emperor not wearing any clothes, White supremacist capitalist patriarchy)
- Not just a decoupling (from wealth, dominance, compliance) but a recoupling (with connection, joy, belonging)
- Verb because action-oriented, ongoing, performance, future-focused
- Seeks evidence from populations served
- Could rename it decolonizing, but only under certain conditions (e.g., mathematx, see Nov. 2017 issue of Philosophy of Mathematics Education Journal)

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### Why Rehumanizing?

REhumanizing is important and is different than humanizing research.

- **Honors our history** -  
REhumanizing - highlight that for millennia living beings have been doing mathematics in ways that are humane (indigenous perspective)- we're bringing

back that which has been erased. Everyone goes to school being mathematical and then get to school and learn in US schools and begin believing they can't do mathematics in certain ways.

- **Addresses politics of teaching and politics of mathematics-** Humanistic mathematics was more of an individual approach to mathematics. It was about you as a learner/person understand yourself and the space of the world that you are moving through. This is part of the rehumanizing effort but there are politics involved in this. If we want to rehumanize it's going to challenge the status quo and there is going to be backlash. If there isn't backlash then we are tinkering and we aren't changing the system.
- **No just decoupling** (from wealth, dominance, compliance) **but a recoupling** - (with connection, joy belonging). A sense of moving forward to think about connection, joy, and belonging.
- **VERB because action-oriented, ongoing, performance, future-focused** - interventionist. It's performance so it requires constant vigilance. Not a space/destination we're trying to get to. It's an ongoing process that is not dealing with today's realities only but instead preparing for future situations on this planet and potentially others.
- **Seeks evidence** - I alone as a teacher can't decide that my work is rehumanizing for my students, need to seek evidence from the population that I'm saying that I'm seeking to rehumanize this mathematical process with. It's an ongoing manner to check and see that it is happening, not just one day thing. Constant vigilance.
- **Decolonizing** - only under certain situations, only if we take very seriously that decolonizing is not a metaphor but rather that it seeks to understand and connect deeply with the notion of land, sovereignty, and the notion of erasure of language and culture.

## Windows & Mirrors

- Not just culturally relevant pedagogy
- Opportunities to see out onto a new world that may not be familiar, stretch yourself (Window); connect with others
- Opportunities to be affirmed, see yourself in the curriculum (Mirror); reconnect with self
- Connection to In Lak'ech (seeing yourself in others and others in you)

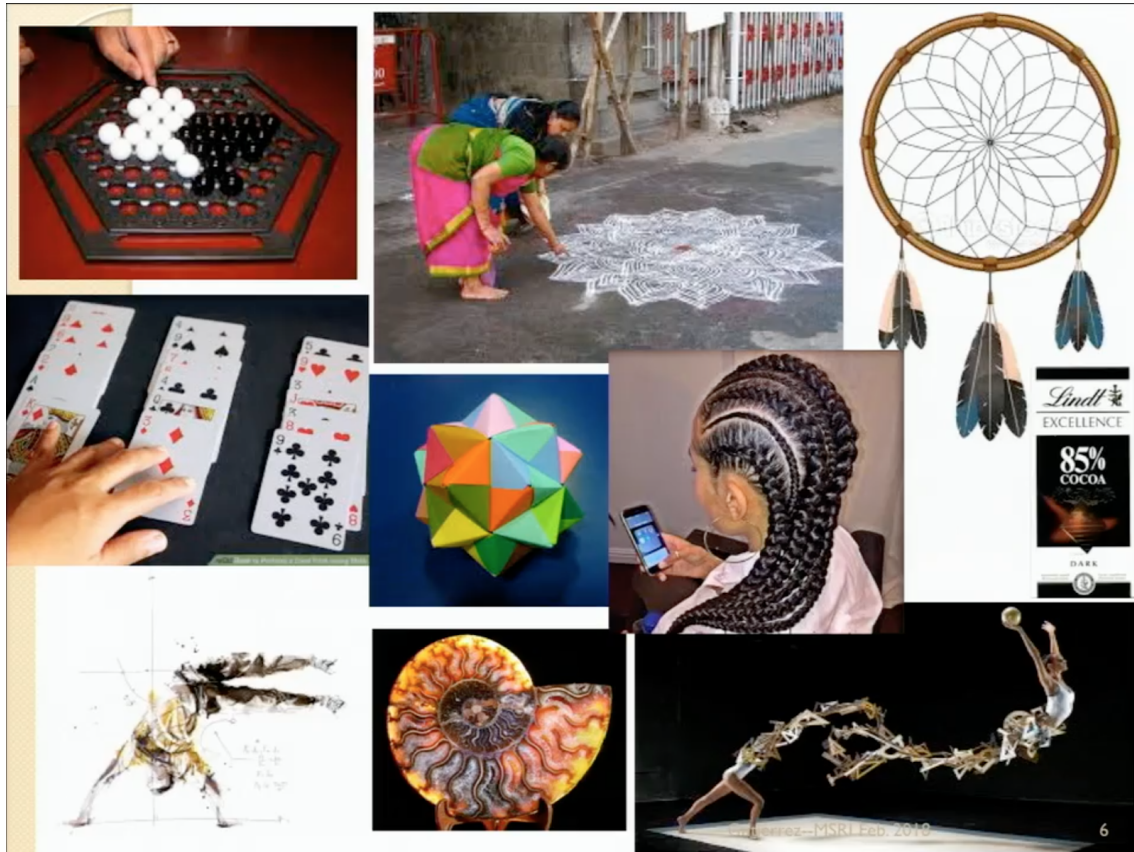
(Style, 1996; Gutiérrez, 2007; 2015)

Another way that rehumanizing mathematics makes me think about things is that oftentimes equity is something that is done for other people, culturally relevant/bridge program/etc that seeks to separate us and not see this project as beneficial for us as humans and as living persons.

Not just culturally relevant pedagogy, it's recognizing that everyone needs a window and mirror. Everyone needs opportunities to see themselves in the curriculum and to see a new version of the world that isn't themselves, to see yourself in a different way. I relate this to the Mayan concept of **In Lak'ech - I see you in me and me in you.**

Acknowledgement and affirmation that we are all related. In doing so, that kind of thing can't happen if we are separate and looking for education for particular people that is packaged and sold to those groups and not someone else.

In these images we see the beauty, the complexity, the interconnectedness of mathematics. It's already out there and people are doing this. These images hint at the brilliance that is hiding in plain sight, it's all around us. We see these people as playful, joyous, expressing themselves.



Often students don't see this as math, they see the hard cold numbers and don't see it as something they want to participate in.



We have to ask ourselves, is the goal within the practice of mathematics just to have students perform practices in ways that have come before them? That's the current practice. If we're thinking for the future, do we want students to question the practices and/or create new ones for the field?

Back in 2012 I wrote about this, Not just people need mathematics but mathematics need people.

... when teachers can recognize a student's unique perspective along side of but equally important to a mathematician's or math educator's view, there is greater potential for connection between the teacher, student, and new possible forms of mathematics."

(Gutiérrez, 2012, Embracing Nepantla, p. 38)

## What might count as rehumanizing classrooms?

Here are 8 dimensions, things in blue - what I would see in a classroom if you were rehumanizing. This is the evidence we would see if we're rehumanizing the classroom.

### What Might Count as Rehumanizing Mathematics Classrooms? [Gutiérrez, 2018]

- **1) Participation/Positioning**—status, hierarchies in the classroom/society, legitimate participation (authority shifts from text/teacher to other students; students as meaning makers); teacher aware of positioning
- **2) Cultures/Histories**—students reconnecting with their own histories or ancestors/roots (funds of knowledge, algorithms from other countries, ethnomathematics, politics)
- **3) Windows/Mirrors**—students being able to see themselves in curriculum & in others (appreciation, not just critique), also a new world (standing alongside of peers, seeing new things, new axioms, goal is not always consensus); fostering respect/dignity; becoming the best person in their own eyes
- **4) Living Practice**—understanding mathematics as something in motion (ethnomathematics, history, debates, highlighting breaking the rules, axioms leading to divergent answers, mathematics for one's own purpose; politics); students thinking of maths as a verb, not noun

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### What Might Count as Rehumanizing Mathematics Classrooms? [Gutiérrez, 2018]

- **5) Broadening Maths**—Decentering of: Algebra/Calculus/ Number Sense, symbolic representation, & favoring the general case to make room for other forms that allow students to see more qualitatively or other forms that would count as maths
- **6) Creation**—students inventing new forms of mathematics not just reproducing what has come before (e.g., invented algorithms, new ways of naming/seeing patterns, breaking rules)
- **7) Body/Emotions**—Invitations to and examples that draw upon other parts of the self (e.g., voice, vision, touch, intuition over logic), the senses matter for any real world problem (can't just pretend); a critical element is joy
- **8) Ownership**—mathematics as something one does for oneself, not just for others (e.g., school), questions and answers are useful/ reasonable for one's own purposes, desire to "play" or "express oneself" through mathematics

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Going to talk about Participation/position (more details about the others are in last year's talk, <https://www.msri.org/workshops/836/schedules/21847>) :

## What Might Count as Rehumanizing Mathematics Classrooms? [Gutiérrez, 2018]

- **Participation/Positioning**—status, hierarchies in the classroom/society, legitimate participation (authority shifts from text/teacher to other students; students as meaning makers); teacher aware of positioning
- **Body/Emotions**—Invitations to and examples that draw upon other parts of the self (e.g., voice, vision, touch, intuition over logic), the senses matter for any real world problem (can't just pretend); a critical element is joy

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**Participation/Positioning** - When authority shifts from teacher/text to students then it offers another opportunity for interaction in the room. If you think of a math classroom, a common thing is to see kids with their hands raised and there are lots of other children around them and no sense that anyone else around them could answer the question, only the teacher can come and tell you that your work is valid/correct. You don't want to listen to others, you want the teacher to tell you what you are doing is correct.

Think about assessment. This is a huge driver in dehumanization. How can we be rehumanizing here? Think about when our assessment is for continuing learning vs stopping people to test what they know. For example, if you have a class where every week the students have to take a quiz, have students take cell picture of their quiz. They go how and analyze the quiz. They write notes to themselves and the professor, what is it that they were doing? What is something they were excited/proud about? What is something that you would do differently now that you are in a different space?

That may be something that feels like it's a good/easy thing to do but there are many things we don't do because we are in this process of thinking that assessment has to happen in a specific way, we aren't used to getting out of those ways. Some people have shifted to having students choose a postulate of their choice and then proving it from the other side. Start from different places and respond to each other.

Think about Common Core- Math practices - construct viable argument and critique the reasoning, Think about first \*appreciating the reasoning of others\*, and then critique the

reasoning of others. This is training students to dehumanize each other's work, you aren't listening to each other you are just waiting for them to pause or stop to tell them why their work is wrong and why they should come to your way of thinking.

**Rehumanizing Mathematics - what are some low risk things we can do in our own classrooms?**

## Rehumanizing Mathematics [Low Risk?]

- Refuse a “standard” algorithm (as opposed to invented or international)
- Require the body in the classroom in order to do mathematics
- Refuse to privilege abstraction over context
- Refuse terms like “misconceptions,” “abilities,” “achievement gaps” when talking about students
- Interrogate the idea that our society will improve if everyone goes into STEM fields
- Affirm *intuition* as just as important as *logic*
- Survey students, colleagues: What is dehumanizing? What are we prepared to do about that?
- Challenge the unearned privilege that mathematicians have in society (adulation/confession response)
- Invite students to present their ideas in languages that are familiar to them

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Start with notion of **misconceptions** - students don't have misconceptions, they have conceptions that work for them until they come up against something that doesn't make sense. It's misconception when we make them come to our way of viewing the world. If we change the frame, and ask students to stand in other students' shoes and see myself in you and you in me, how does that change the nature of what the classroom can be?

**Take surveys of students, colleagues to find out what they find to be dehumanizing? What are we prepared to do about it?**



Rehumanizing Mathematics - what are some high risk things we can do in our own classrooms?

## Rehumanizing Mathematics [High Risk?]

- Bypass typical policies to place students into honors courses or “gifted” groups (creative insubordination)
- Make transparent the culture and history of mathematics and how those relate to power structures in society (whose mathematics?)
- Choose not to be on the same page as colleagues every day (because students are unique)
- Call a meeting with someone in authority to propose a new curriculum or way of learning
- Organize informational sessions for community members
- Organize protests/walk outs/die-ins with lists of demands

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**Make transparent the culture and history of mathematics and how that plays a role in power structures in society.** Everytime you hear “mathematics” ask, whose mathematics? By doing that we come to realize when we say Geometry we mean Western Euclidean Geometry. We can do that for many different ways of thinking about whose mathematics?

If we can think about that relationship to power and think about the ways that mathematics has been a project, that helps support and underscore this notion of white settler colonialism then that’s part of what we could be doing.

**Organize informational sessions for community members.** There are many people out there, part of whom may disagree. People are so afraid for their child. We can name what is dehumanizing for students and teachers but no one wants to be the person who is left out of this high stakes game. No one wants their child to not be in the gifted class even when you know participating in gifted class will strip them of their sense of self.

**Organize** - informational sessions, protests/walk outs/die-ins with lists of demands. Do the survey and then stage a walkout with a list of demands that address that survey. Under these terms we’ll learn mathematics... Where could that go?

# How Might Rehumanizing Mathematics Affect your Everyday Work?

- Office hours?
- Assessment?
- Identity?
- Bridge programs?
- Evaluation systems for faculty?

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**How would rehumanizing the math affect your everyday work? How might it affect how you feel?**

Critical bifocality - we've talked about students and teachers, now we're going to head higher up and talk about the discipline.

## Rehumanizing the Discipline

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## Rehumanizing the Discipline - what might the discipline look like and what backlast can we anticipate if we take this seriously?

When our pedagogy or scholarship involves challenging the status quo, especially on behalf of students who are Indigenous, Latinx, and Black, some people will go to extreme measures to silence us... (Gutiérrez, 2017, *Journal of Urban Mathematics Education*)

Last Oct Gutierrez wrote a book chapter for a secondary mathematics textbook (28 page book chapter) that came under attack, specifically for a page and a half that talked about mathematics and white supremacy, discussing how mathematics operates as whiteness:

### Mathematics operates as whiteness

- 1) When the contributions of all groups are not represented or acknowledged (e.g., when people think only of White men as mathematicians)
- 2) Mathematics = norm/standard in society = whiteness

See in particular:

Gutiérrez, R. (2013). Why (urban) mathematics teachers need political knowledge. *Journal of Urban Mathematics Education*, 6(2), 7-19.

Gutiérrez, R. (2015). Nesting in Nèpantla: The importance of maintaining tensions in our work. In Joseph, N. M., Haynes, C. & Cobb, F. (eds.), *Interrogating Whiteness and relinquishing power: White faculty's commitment to racial consciousness in STEM classrooms*, (pp. 253-282). New York: Peter Lang.

Gutierrez argued in that chapter that mathematics operates as whiteness when:

- (1) All groups are not represented/acknowledged.
- (2) When we use mathematics as the standard that we use to judge other people in society.

Gutiérrez has been writing about mathematics/power/whiteness for many many year. It wasn't until recently that we came under attack like this and what they claimed she was saying is that mathematics is racist and we should no longer teach math.

It was picked up by Campus Reform and Fox News and it became a national attack.



The image is a screenshot of a Fox News website article. At the top, there is a navigation bar with categories like U.S., World, Opinion, Politics, Entertainment, Business, Lifestyle, TV, Radio, and More. Below the navigation bar, there are some hot topics listed: 'New twists in Roy Moore scandal', 'UCLA players thank Trump', and 'Trump talks Asia trip'. The main headline of the article is 'White privilege bolstered by teaching math, university professor says'. Below the headline, there is a sub-headline 'Teaching Math is Racist'. At the bottom right of the article, it says 'Gutiérrez--MSRI Feb. 2018' and '18'.

## But, this attack was not really on me

- Attack on all of us who unapologetically stand up for the rights of people who are Black, Indigenous, Latinx, Muslim, undocumented, who identify as LGBTQIA, or labeled with dis/abilities. [TODOS/NCSM, Dr. Luis Leyva, Texas State, Kennesaw State, Laurie Rubel]
- “Slow violence” happening to tons of teachers/scholars on the ground—“Where’s the math?” “Don’t bring your politics”
- Social media has intensified response

This was an attack on all of us and it's a slow violence, not just hitting people with these kinds of troll attacks, it's the notion that as a teacher when you choose to adopt a social justice mathematics activity in the class, or when you are a professor who have

students write their own math autobiographies or doing a math autobiography on a famous mathematician that they may identify with, that this is called into question as bringing your politics into the classroom as opposed to recognizing mathematics is already political, is always political. It is a human endeavour so mathematics bring in all the power dynamics that we are participating in within these systems of oppression.

The social media has intensified that response but we stood together as a community:

## We stood together

- Professional organizations created public statements
- Individuals blogged
- People developed petitions and wrote to administrators
- Universities used it as a teachable moment
- New alliances were created
- People offered resources for supporting public scholars under attack
- Journals decided to publish commentaries or dedicate space to a special issue to continue dialogue
- Pop-up sessions at conferences to discuss risks
- Working groups were launched
- Useful website pulls everything together  
MathEdCollective.wordpress.com

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As scholars we looked at how we could use this to build up the energy and push it back out as something for our communities.

People have blogged about this, written about this:

- Evelyn Lamb, <https://www.math.utah.edu/~lamb/>
- Brian Katz, <https://www.augustana.edu/academics/faculty-directory/brian-p-katz>
- Stacey Brown,  
<http://www.cpp.edu/~sci/mathematics-statistics/faculty-and-staff/full-time.shtml>
- Dagan Karp, <https://www.math.hmc.edu/~dk/>
- Others

We've been holding pop-up sessions at conferences to discuss the politics, the backlash risk, etc.

## Recent Attack on Our Field

- Proud moment (blogs, public statements, pop-up sessions, etc.)
- Others under attack, more will come
- What is our future as mathematicians & mathematics education researchers?

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This recent attack on our field was different because the attack didn't come from our community. We are at a different place at this moment in history and we don't want to take that for granted. Something that was Gutierrez published was a commentary that maybe we haven't been doing enough and that is why we're late to the backlash party, as other disciplines have already had these attacks.

### COMMENTARY

Journal of Urban Mathematics Education, Dec. 2017

## Why Mathematics (Education) was Late to the Backlash Party: The Need for a Revolution

- Developing a Set of Principles to Guide the Field

Other movements have begun with a set of unwavering principles. See, for example, those of the Black Lives Matter movement.<sup>14</sup> If womyn scholars of color in mathematics education were to write a manifesto or develop a statement of principles relating to a decolonized or rehumanized mathematics, what might it include? How might we use such a set of principles to hold ourselves accountable to a standard? How might that set of principles guide the field on the aforementioned areas (e.g., reframing of scholar, decolonizing reading list, rethinking programming and professional development, networking among mathematicians and mathematics education researchers)? Given those principles, what is the next set of critical conversations we must have in and about our field?

Contact me: [rgl@illinois.edu](mailto:rgl@illinois.edu)

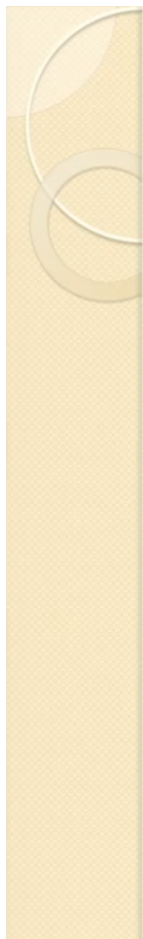
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Why Mathematics (Education) was late to the Backlash Party: The need for a revolution. View it here: <http://ed-osprey.gsu.edu/ojs/index.php/JUME/article/view/347/224>  
The paper argues that we need a set of principles and the community of people most ready to give us those principles have been the most affected, most dehumanized.

The article also suggests that there are places that already exist, there are people who are doing this work. We need to study those, like the professors at Harvey Mudd! We need to document how this place came to be, how is it a math department (not math ed program) came to understand and develop the sensibilities that their professors have, that their students are learning, and is embedded in how they recruit new faculty, that is embedded in the courses that they offer.

You might ask yourself how a book chapter get so much backlash? Many mathematicians aren't trained on these issues. Look at the training that mathematicians experience:



## Training of Mathematicians

Consider first the training of the scientist. In the classroom and laboratory the **myth of an apolitical, benevolent science prevails**. Graduate school, and often undergraduate education, involves a near total submersion of the student in technical material with little if any historical or philosophical perspective. Research productivity is the measure of worth as the student acquires skill in a specialized field. Technical questions are isolated from their social and economic context (e.g., the use of science) except for perhaps consideration of the prestige and financial status of the researcher. Thus **the end product of this training is a narrow specialist-one taught to perform scientific miracles without considering their political implications**-a reliable tool of the power structure. Another aspect of this training is an **ingrained sense of elitism**. Courses are designed to select and separate out potential scientists from their fellow students. Those who succeed are led to view themselves as members of an elite intellectual class. (SESPA Teaching Group, 1974, p. 7)

Gutierrez--Rehumanizing Mathematics,  
UConn Feb. 14, 2018

Much of the training of mathematics is perpetuating the myth of a apolitical scientist that prevails. We get the that end product of training is a narrow specialist taught to perform miracles without considering their political implications. We want to highlight that this is a reliable tool of the power structure with an ingrained sense of elitism.

If you consider that it is surprising that so many mathematicians came out to have their back during this political backlash. We should ask ourselves about this as a field:

## Some Questions to Consider

- How does the practice of mathematics perpetuate violence in the kinds of **products/technologies** developed or supported?
- How does the **elitism** that is created by specializing in STEM fields justify the dominance of others who are outside the field?
- How does the **separation of mathematics from politics** allow STEM workers to justify creating products or technologies that dehumanize or cause violence to other living beings?
- How do we recognize **anti-social elements of mathematics** and how they are affecting our relationships with each other on this planet?
- How do we involve **everyday citizens in deconstructing the relationship between mathematics and dominance & compliance?**
- How do we involve **everyday citizens** in radically **reimagining** a more humane practice of mathematics?

Gutierrez--Rehumanizing Mathematics,  
UConn Feb. 14, 2018

Think about the everyday practice in the school where in many classrooms students are learning procedures that they're learning to follow even though they seem arbitrary. Think of that slow violence, think of 15 years of life being taught that you have to follow arbitrary rules and that that will guarantee you a place of status and economic mobility in society. Think about the violence that is happening and the preparation for a docile society.



Look at this quotes from the 1973 SESPA (Science for the People):

This came out of an anti-war movement and it's starting up again.

<http://science-for-the-people.org/>

If we can look at this and replace the word science with the word mathematics then we can then look at the violence:

“Science [**mathematics**] provides the ideology necessary for the **camouflaging** of **social and economic problems** by labeling them as technical problems with technical solutions. Science [**mathematics**] provides for the **intellectual intimidation of the public**. Technical knowledge is mystified by special jargon and useful knowledge developed by the people is appropriated if it serves to support the system or stigmatized if it serves humans needs against the system. Academic institutions and professional societies serve to institutionalize the monopoly on knowledge and to **legitimize as “neutral and objective”** the political functions of science [**mathematics**]. . . . Science [**Mathematics**] for the People means the explicit recognition of the **political nature** of science [mathematics] in this society. Science [**Mathematics**] for the People means **access for all people** to useful human knowledge. Science [**Mathematics**] for the People means the alliance of those who presently have access to scientific [**mathematical**] knowledge with **movements for social change.**” --SESPA (1973)

Gutierrez--Rehumanizing Mathematics,  
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We need to move from:

Humans  
in the service of  
mathematics

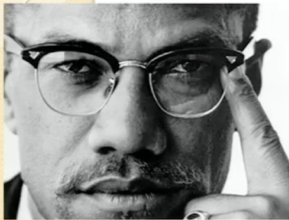
We need to move to a space where a different practice of mathematics can serve to heal our society.

# Humans Mathematics in the service of Mathematics Humans

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If we agree that mathematics needs to be rehumanized we need to ask, what are we prepared to do at these different levels?



If we agree that mathematics needs to be **rehumanized**, what are we prepared to do about it?

- In our K-12 classrooms?
- In our teacher education programs?
- In university mathematics departments?
- In the streets?

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UConn Feb. 14, 2018

Dolores Huerta said, "Get off the sidewalk, get into the street and make history with us".

Julia: To start, can you talk a little bit about the evolution of some of your work and how you have come to this particular place at this particular time thinking about the math education work, and why your still in it?

Danny: 30 year trajectory of math educator. Came to Berkeley, started teaching right away and the rest was history. Got to where I am now from my personal experience and life experience. I have a five year old male child that I have to protect from the things that I see in the world. Protect his brilliance, his identity. Things I've seen over the last 30 years, this is an unfolding, a convergence of a number of experiences. Hearing about the 13 year old gunned down, 7 year old shot in her sleep, can go on and on. Context - it's a long road and my perspective will continue to develop. Thinking about my advisor (Allen Schoenfeld) and he challenged me. Thinking, thinking, thinking and thinking about next steps to take.

Rochelle: I have three teenages and the sense of urgency. You seem very passionate, very angry. What if you used a softer approach? (1) I accept no responsibility for the violence. And (2) we should be more outraged. A soft message doesn't get us anywhere. BE outraged and passionate. You need to show that it is math specific and related to other things. Math is different. What is our responsibility? What further evidence/violence do we need to see? My scholarship has changed to think about how to dismantle larger systematic things.

Open discussion:

**Rochelle, I read your book chapter on the way here. First part of the paper challenge the economic basis behind standardized testing and the economics there to be oppressive in society and the classroom. I am wondering if the backlash of the 2nd part of the paper was to discredit the 1st part of the paper which seems to be threatening.**

R- That is plausible. I also think these days anything with "social justice" in it "whiteness", "white supremacy" are algorithms that they have google searches on that they are prepared to take down. The state of Virginia introduced legislation so K-12 and universities should not be allowed to do anything with social justice or identifiable politics. They were also going to have a required 6 hours of professional development to make sure you are trained on what you are not allowed to do. We're at a scary point in our nation right now where things are being framed with themes of anti-intellectualism, that campuses are leftist idocternationation, etc. What struck many people what that of all places this is how ridiculous it's gotten that people in mathematics are saying their work is related to racism and whiteness. But it could relate to to the capitalism argument, it's all packaged together.

Response: Well you've been saying these things for a long time, why now? That was my thoughts.

**When we go into the classroom we have to give the students a grade and the students work towards that grade - x amount of points, A in class to do well. Devaluing the grade- thinking more of what the students are taking away from the Icas. More of the overall system - GPA at the end vs what they learned in the class. Also thinking about exams and assessments, they don't reflect what they know. Do you have thoughts on that?**

D- don't minimize the goals students and family might have. Help students/families to broaden perspective so they have a broader set of ideas to work with. If you want to live in narrow lane/channel and your exposed to the sense of what is possible. Wouldn't want to minimize the goals of any student/family.

R - We get ourselves in a trap if we think of it as either-or (rigorous or humane).

**I'm a highschool teacher at June Jordan School for Equity in San Francisco and I was thinking about what you mentioned with ethnomathematics with culture and history. How do you seek evidence? As a high school teacher I have students that have experienced math trauma. When they are introduced to Mayan math, patterns of drum beats. How do you address that, move forward, and collect evidence vs just sharing?**

R -Look for as many opportunities as you can of students making sense of your classroom. Some students have students write in a journal, exit ticket, worksheet where they have to discuss: what did you most enjoy from what you did? What was the most challenging? Not getting into notion that it's always about ethnicity framed culture, could be that I came up with a word problem and I had to talk about what I liked. Maybe what happened is I got to see another way of doing something. Mathematics is relatively young. Not saying find the culture of kid and find their kind of mathematics and instead trying to look at the broader contradictions/debates/ and many cultures that have contributed to it.

**Graduate student at UM - you mentioned schools, kids that can get up and walk out of classroom. Public schools are under attack, what do you see as the future of schools? School can be a very traumatizing and dehumanizing, where do you see it going?**

D - There is School with Education and there is literature out there that describes the trajectory out there about that. I don't want to be predictive but you can look at the trends and School is very slow to change. Little s-school with very small communities and pockets, individual sites are different, context matters. You can look at one school and then go 6 blocks down and have a very different school. Context matters: Larger political context, changing demographics, there is a movement back towards desegregation. Need to look at S-Schools, s-schools, and society. It's very complicated and not singular, you need to look at how many things are moving. Sometimes they move fast, sometimes they move slow. There is no magic thing that will change School but you can do things in a small way to move s-school. Think about how you can get that take shape and spread.

R- Education vs schooling. Education happens everywhere, when you are standing inline, older siblings, prescription bottles, etc. all the time and everywhere. There are

sites outside of school that are providing a message. Black Panther is that. If you haven't seen it you can't understand how important the roles in that movie is. When you see it you'll understand that it's changing people's scripts in their head. Afterschool programs and church group do that too, working outside the system while recognizing the system.

D- Schools aren't just schools. There is research that says that schools are carceral for many kids, functioning like prisons. What we think school is an important consideration also. You may be surprised about the work that shows disproportionate punishment that doesn't let children be children. Adulthood. Very young children being treated as adults by the adults that are teaching them, getting subsequent punishment. Schools aren't just the things we think about, they are many other things as well. What those things are is something we need to read deeply and think deeply about those other possibilities and realities.

Julia: We have to shift gears. First, thank the speakers and know that there will be a popup session tonight at 6pm. Violence is heating up because we're getting close. The urgency is here. We invite you to come.