

SUPPORTING PROFESSIONALS TO COUNTERACT RACISM AND OPPRESSION IN THE DISCRETIONARY SPACES OF THEIR WORK

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SHARING WORDS FROM NA'ILAH NASIR AND MEGAN BANG AT THE SPENCER FOUNDATION

Our hearts are breaking as we witness the fall-out from the effects of the pandemic on our communities. We are holding so much in our hearts and minds.

- We are holding the worry of those who are sick and the sorrow of those who have already lost a loved one to this virus both here and abroad.
- We are holding undergraduate students who have had to move abruptly from their living spaces, and who may be housing or food insecure.
- We are holding graduate students whose dissertation studies may be irreparably altered, and who are anxious about what this means for their job-seeking process and their futures.
- We are holding faculty members and staff at universities across the country who are learning to teach and serve students online, while caring for young children and/or elderly parents and needing to attend to their own health and well-being.

From Na'ilah Nasir and Megan Bang, Spencer Foundation

- We are holding parents and caregivers at home with their kids, managing the tension between supporting their children's learning and just wanting to make sure they feel safe and loved in an unprecedented time.
- We are holding all of the teachers and school administrators and education leaders who are trying to figure out how to support children and families, and how to do so equitably.
- We are holding the junior faculty whose work and careers have been disrupted, in ways that may have reverberating effects for years to come.
- We are holding the scholars and students with disabilities who have been told for years that virtual participation was too cumbersome or not possible, and who are watching the world participate in work and school virtually over a very short span of time.

From Na'ilah Nasir and Megan Bang, Spencer Foundation

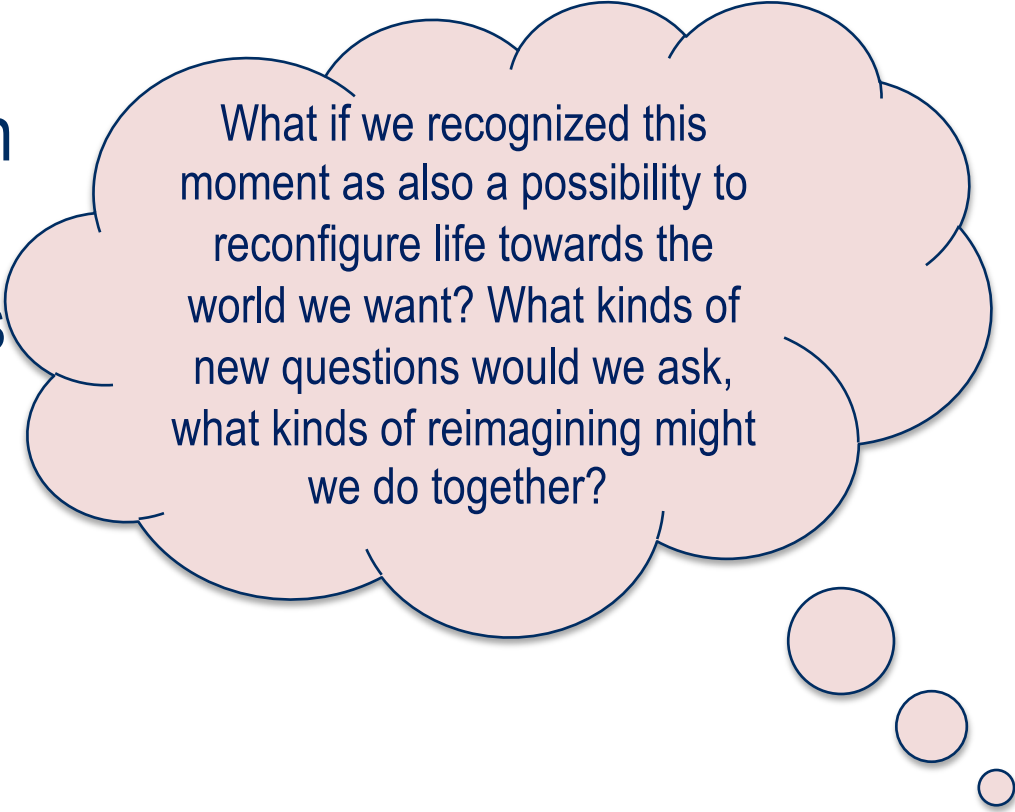
AND—

- We are holding the gravity of the reality that in this moment of collective trauma and crisis, the negative effects are experienced much more drastically by those who are already vulnerable in our society—those in poverty, immigrants, the undocumented, people of color, those with disabilities, those in foster care or without safe and loving family structures. This crisis is exposing the extreme fissures in our society and the deep and abiding obligation we have to put things right.

From Na'ilah Nasir and Megan Bang, Spencer Foundation

BUT ALSO—

More drastic change to education systems has occurred in the last week than it has in arguably the last 50 years. What possibilities does this open up for the future of learning, for the reorganization of our institutions, for the centrality of families and family life?



What if we recognized this moment as also a possibility to reconfigure life towards the world we want? What kinds of new questions would we ask, what kinds of reimagining might we do together?

From Na'ilah Nasir and Megan Bang, Spencer Foundation

WHAT IS OUR OPPORTUNITY IN MATHEMATICS TEACHING AND TEACHER PROFESSIONAL DEVELOPMENT?



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WHAT PROGRESS HAVE WE MADE?

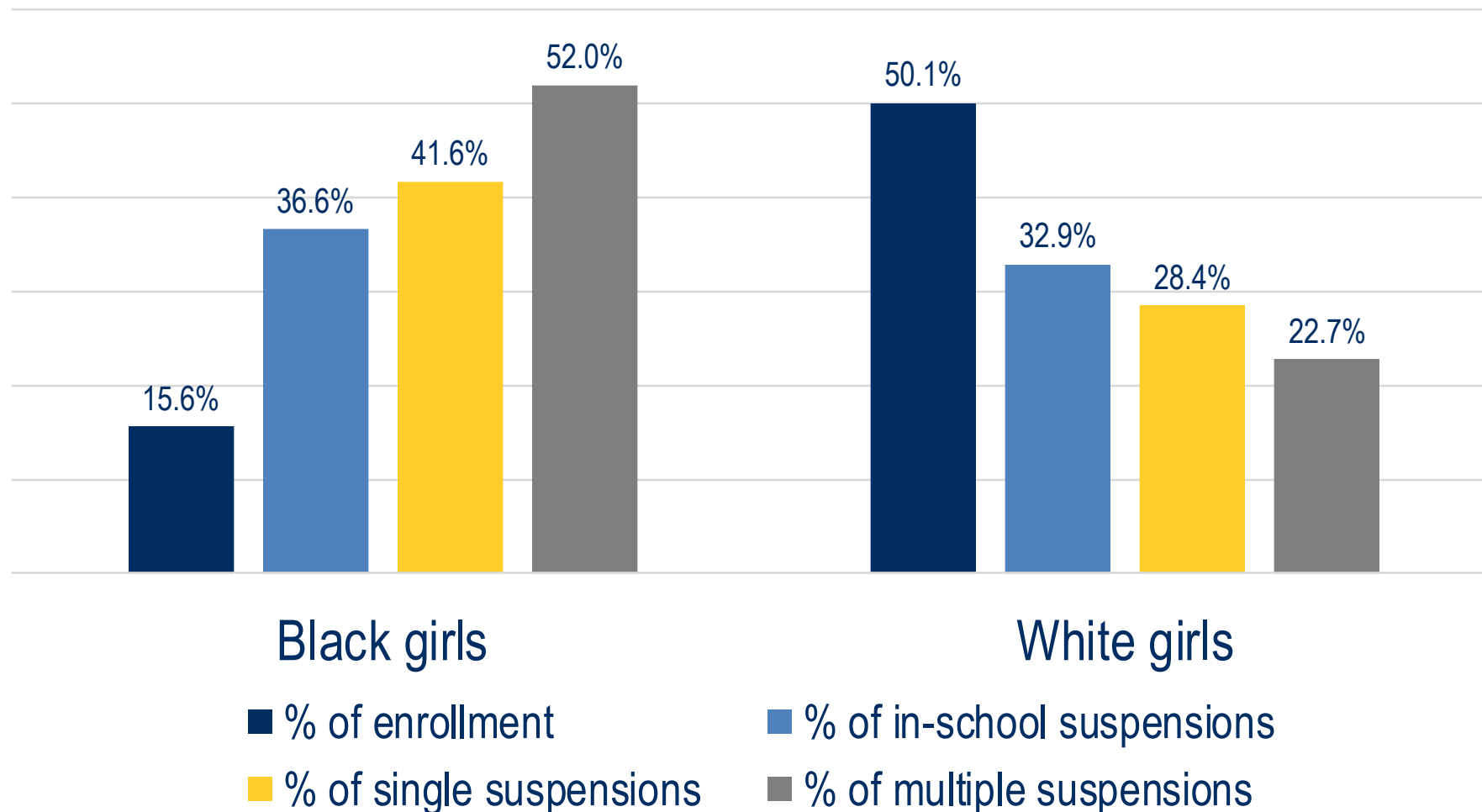
- Articulated mathematical practices as fundamentally intertwined with mathematical content
- Organized as a community to catalyze change
- Developed many structures and practices to support mathematics teachers
- Common progress on understanding the “mathematical knowing” demands of mathematics teaching

What are some other big areas of progress?

WHERE DO WE NEED TO MAKE PROGRESS?

We need to confront the perpetuation of marginalization and oppression in mathematics classrooms.

EXAMPLE #1: BLACK GIRLS' RATES OF SUSPENSION



Epstein, Blake, & González (2017)

10 March 30, 2020



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EXAMPLE #2: DISPROPORTIONALITY IN ASSIGNMENT TO “ABILITY STATUS”

- Black students: 16.7% of student population; 9.8% of those selected to gifted programs
- Latinx students 22.3% of student population; 15.4% of those selected to gifted programs
- 6.2% of all students are assigned to gifted programs; 10% of Asian students, 7.5% of White; 3.6% of Latinx; 3% of Black
- Black students are 2x as likely to be classified as having learning or emotional problems (special ed)
- Exclusion from class reduces opportunity to learn
- Exclusion from rigorous content; long-term effects of labeling
- Lack of access to accelerated and enrichment programs

1. [Teacher's race affects gifted program selections](#), Joan Brasher, Research News @ Vanderbilt , January 18, 2016
2. Grissom, J. & Redding, C. (2016). Discretion and disproportionality: Explaining the underrepresentation of high-achieving students of color in gifted programs. *AERA Open*, 2(1), 1–25.

Many taken-for-granted practices in mathematics classrooms reflect and reproduce patterns of marginalization and oppression.

What are some of these common practices?



My Behavior Today...

Name: _____ Date: _____

Today I made some bad choices. I broke some of our classroom rules / procedures.

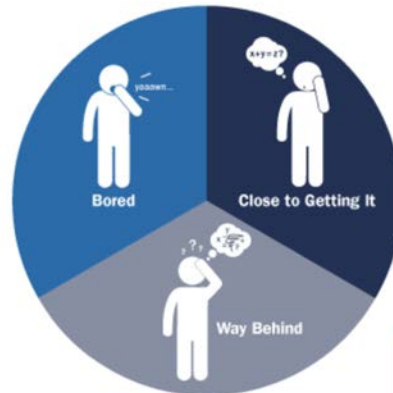
- Not Following directions
- Being disrespectful to the teacher
- Being disrespectful to my classmates
- Misbehaving in specials
- Getting out of my seat
- Not paying attention
- Too much talking
- Distracting others
- Incomplete class work
- Incomplete homework
- OFF task behavior

Comments: _____

Teacher Signature: _____

Student Signature: _____

Parent Signature: _____



"A third of my class was bored and ready to move on, a third was close to understanding but not quite there, and another third was so far behind that continuing to try might have seemed like a fool's errand."

But even our efforts to make change
are still high-risk for reproducing
patterns of racism and marginalization.

WHAT ARE SOME OF THESE POPULAR EFFORTS THAT COULD STILL REPRODUCE RACISM AND OPPRESSION?

ADVOCATED “REFORM” PRACTICES


- Small group work
- Situating word problems in contexts
- Revoicing students’ ideas
- Group discussions
- Going to the board to show one’s ideas
- Constructing mathematical arguments
- Discourse norms

POTENTIAL RISKS

- Can foreground status and power dynamics (Langer-Osuna)
- Can reinforce racial and gendered narratives (Nasir, Shah)
- Can reduce or remove students’ own voices
- Can reinforce narrow views of what it means to be good at math
- Can reinforce competitive individual orientations
- Can reinforce competitive individual orientations
- Can reinforce white dominant values and norms

Let's look at one one of these:
Going to the board to show
one's ideas.

GOING TO THE BOARD TO SHOW ONE'S IDEAS



Why do we
do this?

GOING TO THE BOARD TO SHOW ONE'S IDEAS

COMMON PURPOSES

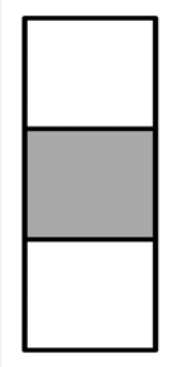
- To show that there are different ways to solve math problems and sometimes also different solutions
- To provide opportunities for children to practice talking and explaining their ideas



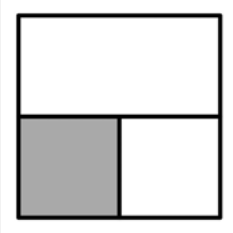
Let's take a look.

What might be reproductive of oppression within the practice of going to the board?

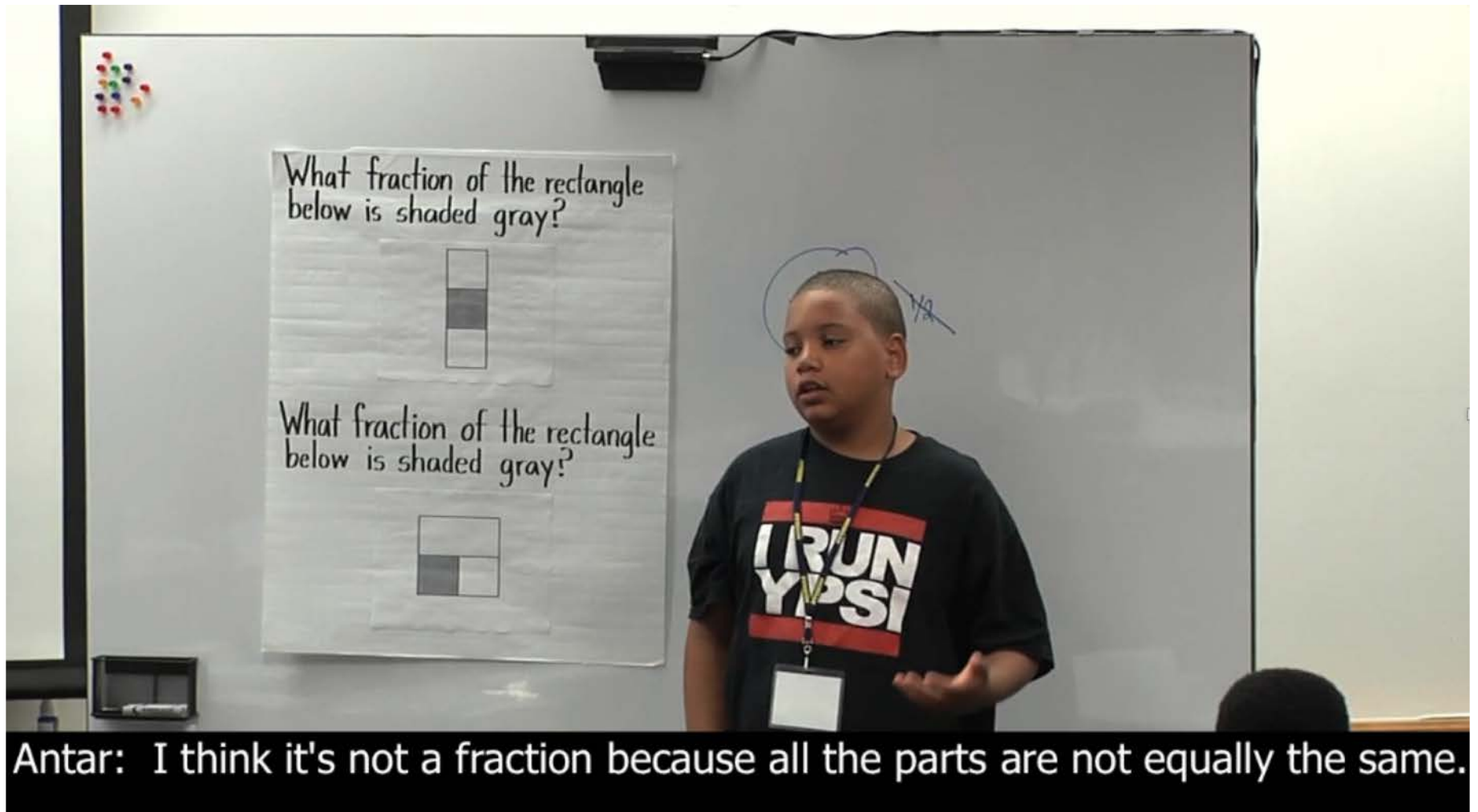
What part of the rectangle below is shaded gray?



What part of the rectangle below is shaded gray?



VIDEO: ANTAR



WHAT IS LIKELY TO HAPPEN NEXT?

LIKELY NEXT MOVES

- “Who can help Antar out?”
- “Good, Antar, the parts are not equal. So what do we need to do?”
- “Thumbs up if you agree with Antar; thumbs down if you disagree.”

RESULT

- Antar, a Black boy, is positioned as not knowing and needing help.
- Antar’s contribution is taken over by the teacher.
- Antar, a Black boy, might face many people disagreeing with him that it is not a fraction.

Any of these might reinforce narrow and exclusionary views of mathematics.

WHAT DOES IT MEAN TO SAY—

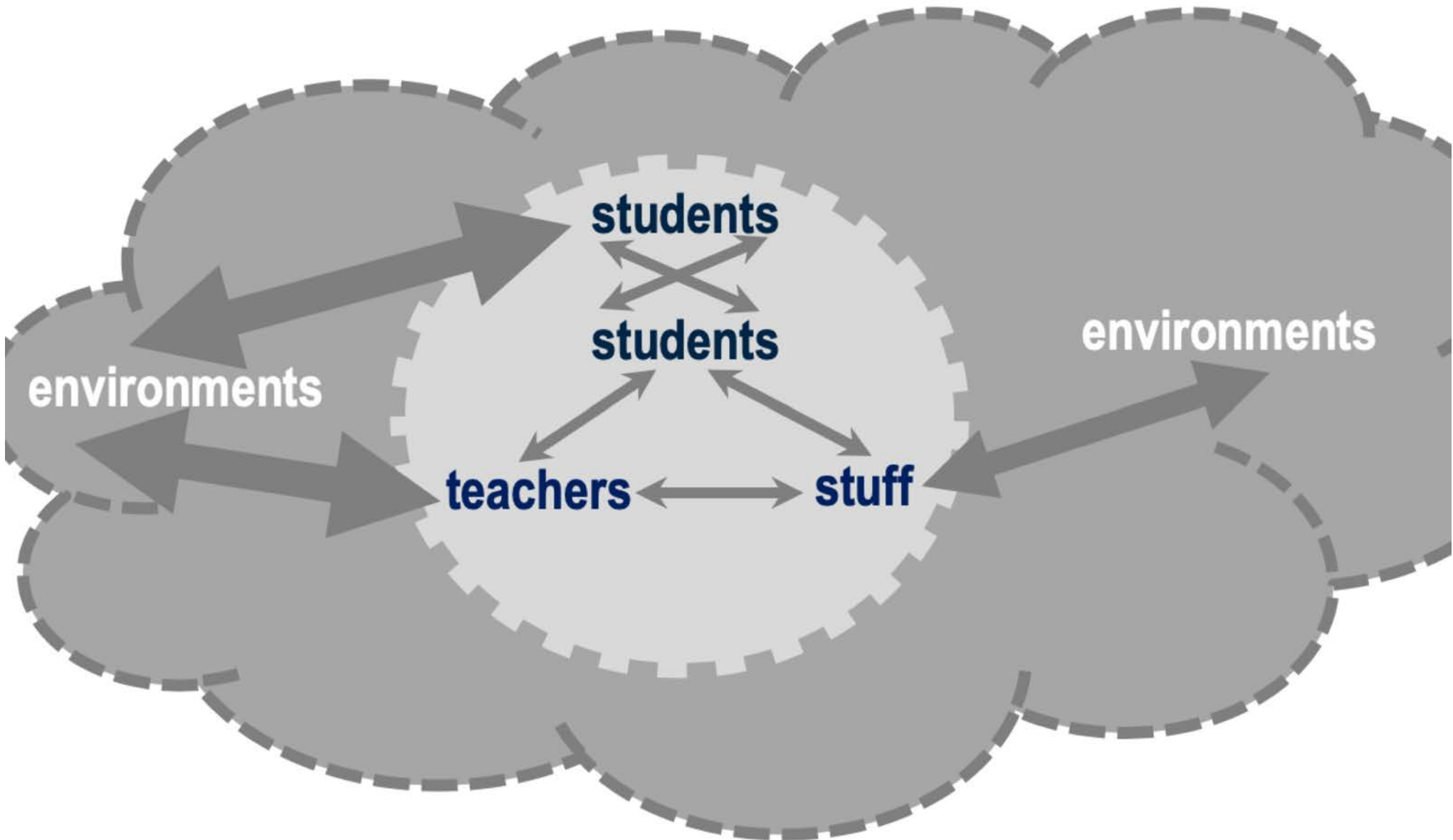
. . .that our efforts to make change might still be
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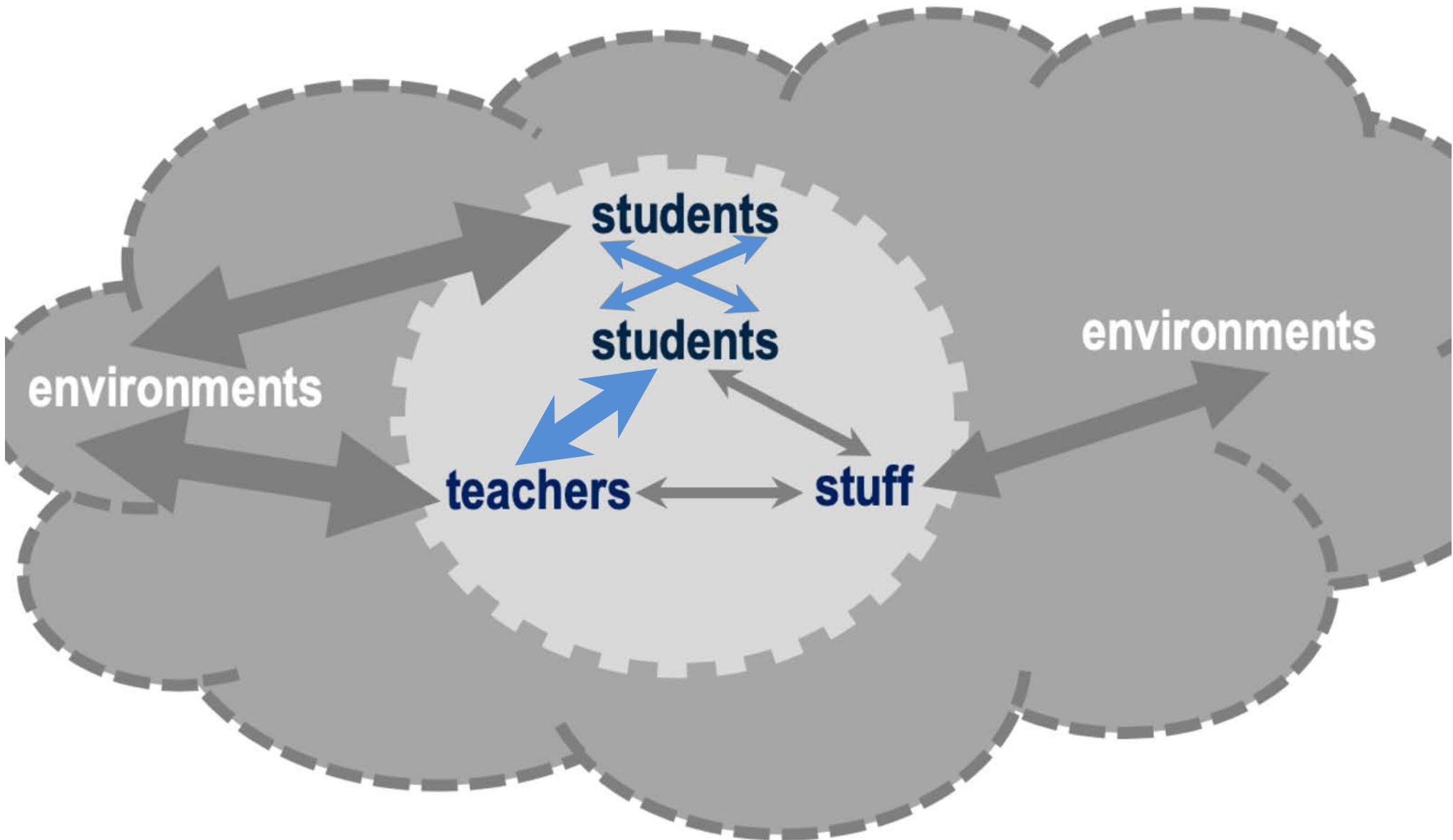
Many taken-for-granted teaching practices insidiously reproduce patterns of racism, sexism, and ableism.

- Many of these we have inherited or absorbed from our deep immersion in schools as children and as educators.
- We often have not had opportunities to stand back and consider their effects.
- Some of these we have deliberately learned as part of “mathematics reform” or professional development.


Why does this happen?







GOING TO THE BOARD TO SHOW ONE'S IDEAS



Why do we
do this?

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March 30, 2020



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GOING TO THE BOARD TO SHOW ONE'S IDEAS

COMMON PURPOSES

- To show that there are different ways to solve math problems and sometimes also different solutions
- To provide opportunities for children to practice talking and explaining their ideas



Why do we
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GOING TO THE BOARD TO SHOW ONE'S IDEAS

COMMON PURPOSES

- To show that there are different ways to solve math problems and sometimes also different solutions
- To provide opportunities for children to practice talking and explaining their ideas

CRITICAL PURPOSES

- To represent mathematics as collective work by building mathematical ideas and solutions together
- To disrupt patterns of who and what is seen as competent



Why do we do this?

VIDEO: ANTAR AND GABRIELLA



VIDEO: GABI

What fraction of the rectangle below is shaded gray?

What fraction of the rectangle below is shaded gray?

$\frac{1}{3}$ ~~$\frac{1}{2}$~~

Gabi: I divided it down the middle because, since it's not equal, you have to make it equal.



Antar's right.
It's not equal.

GOING TO THE BOARD TO SHOW ONE'S IDEAS: WHAT ARE THE RISKS OF REPRODUCING OPPRESSION?

RISKS

- Gabi, a Black girl, is seen as having the “right” answer and Antar, a Black boy, is seen as “wrong”
- These narratives affect Antar and Gabi, but also their classmates
- Math is seen as about getting the right answer

PRINCIPLES FOR AVERTING THESE RISKS

- Position each student's contributions at the board as part of a trajectory to construct collective knowledge, language, and ways of justifying, not as competing one-by-one for the “right” answer
- Represent mathematics as collective construction of sense-making and knowledge

WHAT IS THE IMPERATIVE AND THE CHALLENGE FOR MATHEMATICS TEACHER EDUCATION AND PROFESSIONAL DEVELOPMENT?



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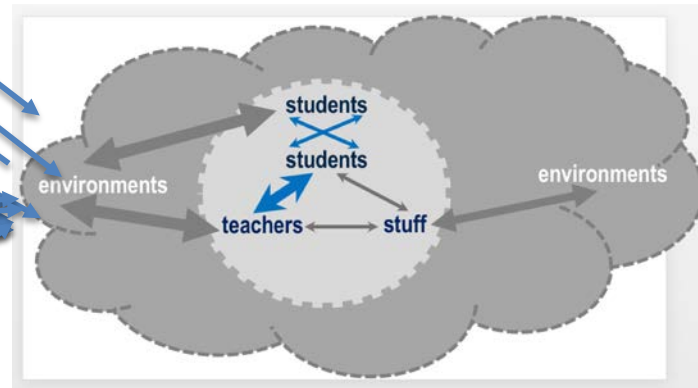
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Teacher:	Here's a marker. Can you explain your thinking?
Antar:	I think it's not a fraction because all of the parts are not the same shape.
Teacher:	Can you say that one more time to the class?
Antar:	I think it it's not a fraction because all of the parts are not equally the same.
Teacher:	Can someone repeat what Antar said? Very nice, Antar. What did he say? Gabriella?
Gabriella:	Oh. He said that he doesn't think it's a fraction because not all the parts are equal.
Teacher:	Is that what you said?
Antar nods.	
Teacher:	Okay, would someone like to comment on that? Agree or disagree with him?
	<i>Pause.</i>
Teacher:	Okay, let's see, how about Gabi?
Gabi:	I disagree.
Teacher:	What do you think?
Gabi:	I think the fraction is one-fourth.
Teacher:	One-fourth?
Gabi nods.	
Teacher:	Do you want to come up and say why you think it is one-fourth?
	<i>Gabi stands up and walks toward the board.</i>
Teacher:	Antar, do you want to stay there or do you want to sit down?
Antar:	Sit down.
Teacher:	Thank you very much. You did a good job of explaining your thinking. So let's hear what Gabi's thinking.
Gabi:	I think it's one-fourth because, like he said, all the fractions aren't the same, but you can make them the same by dividing them down the middle.
Teacher:	Can you go ahead – want to show us – Here. Here's something you can use for that. Wait one second.
	Instead of drawing it, why don't you just use this. That way, if someone wants to take it off again, they can.
	<i>Gabi puts removable black line down the middle of the figure.</i>
Teacher:	Okay, so now explain what you have done. Talk to the class, okay?
Gabi:	I divided it down the middle because, since it's not equal, you have to make it equal.
Teacher:	And so then you decided?
Gabi:	It's one-fourth.
Teacher:	Okay, so can someone repeat what Gabi said? What she did and what she said? This actually goes very nicely with what you said, Antar, because Antar noticed that the parts weren't equal and what Gabi is doing has to do with equal parts.

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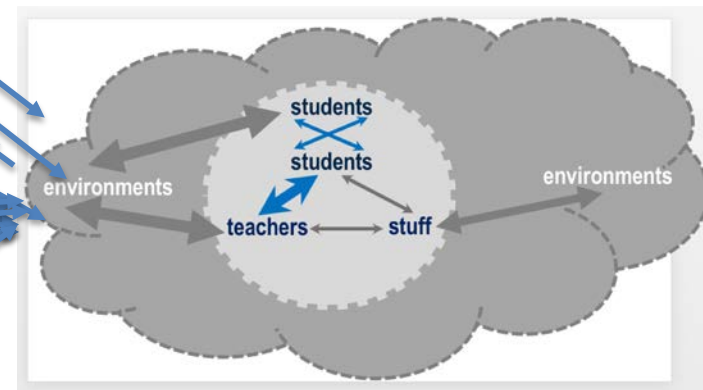
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59 in 2:21

TEACHING IS DENSE WITH DISCRETIONARY SPACES

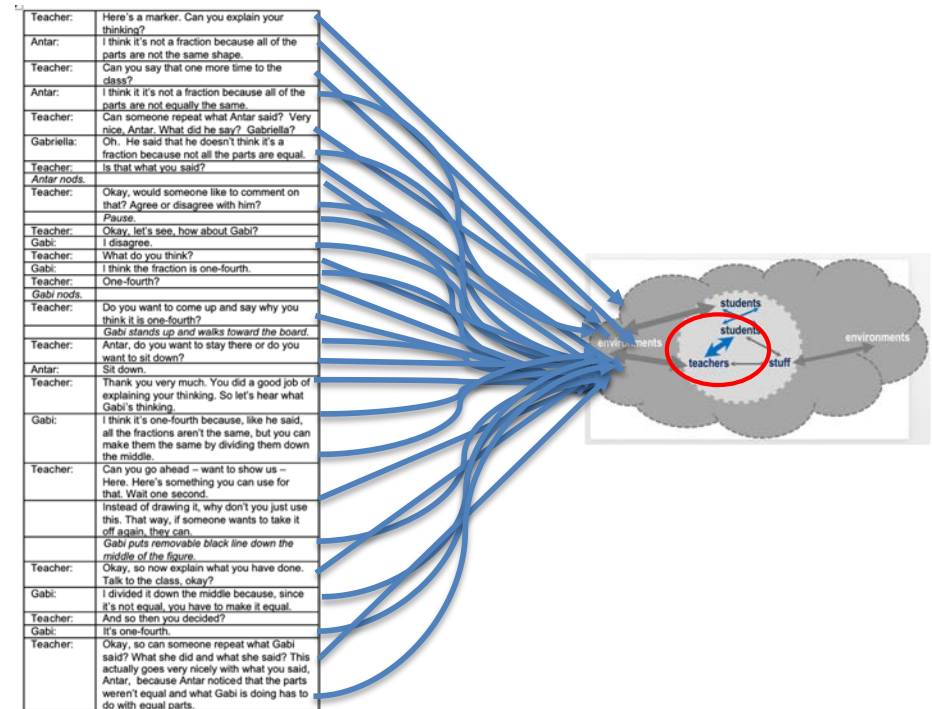
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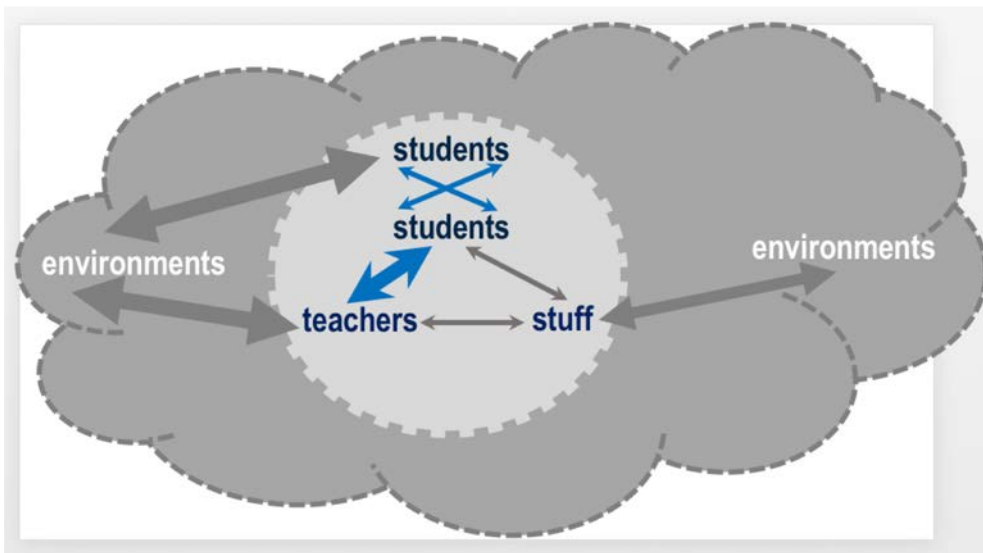
DISCRETIONARY SPACES AND THE POWER OF TEACHING

- A discretionary space is where the next move or comment or question is necessarily determined by the teacher—and not by a policy, a curriculum, or a principal.
- In these discretionary spaces teachers have the power to reinforce or disrupt patterns of racism, sexism, and marginalization.
- Often we act without even realizing we have discretion to do something different. Countering these patterns requires habits of consciousness and alternative moves to make.



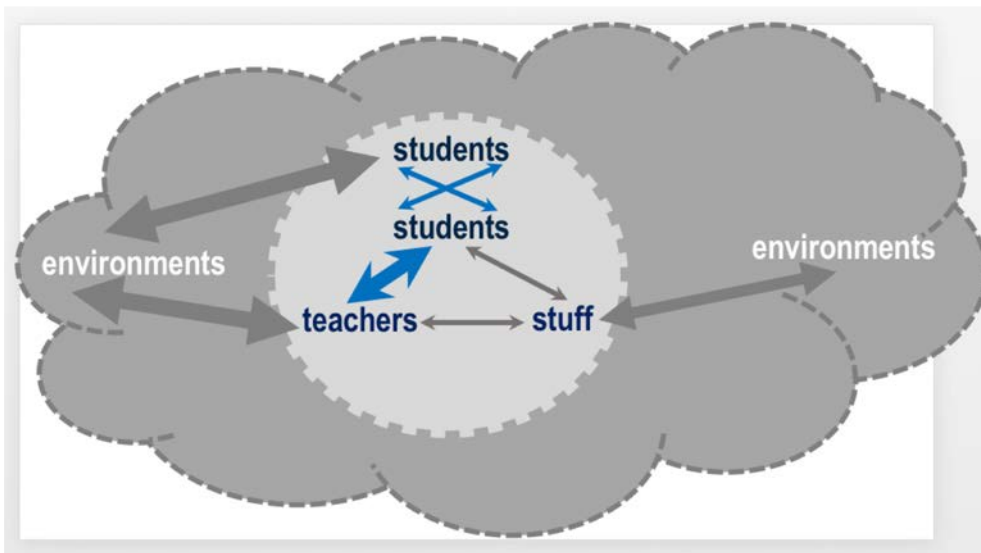
WHAT REGULARLY FILLS THE DISCRETIONARY SPACES IN TEACHING?

1. Teachers' experiences in a society filled with racism and oppression.
2. Normalized practices in schools that institutionalize dominant values and habits.



Lortie (1975), Banks, Grant and Koskela, Moll
Anyon (1981), Heath, Martin, Tuck
Ball (2018)

WHAT REGULARLY FILLS THE DISCRETIONARY SPACES IN TEACHING?



Professional education does not effectively intervene on these.

1. Teachers' experiences in a society filled with racism and oppression.
2. Normalized practices in schools that institutionalize dominant values and habits.

Professional education and teaching experience often teach these.

Lortie (1975), Banks, Grant and Koskela, Moll
Anyon (1981), Heath, Martin, Tuck
Ball (2018)

OUR RESPONSIBILITY, AND CHANGING THE PATTERNS

Given the ubiquity and density of discretionary spaces in teaching, what is the imperative for teacher support and development?

TEACHING IS POWERFUL

Teaching either reinforces/reproduces *or* it can avert and disrupt patterns.

1. AWARENESS OF PATTERNS

- Becoming critically conscious of common patterns of thinking about “ability”
- Understanding one’s own identity and how that shapes one’s assumptions and interpretations
- Understanding that these patterns are historical and embedded in our institutions and systems

2. AVERTING /DISRUPTING PATTERNS

- Consciously NOT following or reproducing the patterns
- Developing specific new habits and practices that counter the patterns
- Strengthening your own mathematical knowledge for teaching

WHAT WOULD IT TAKE TO DISRUPT PATTERNS THAT REPRODUCE INJUSTICE?

PROMOTING JUSTICE

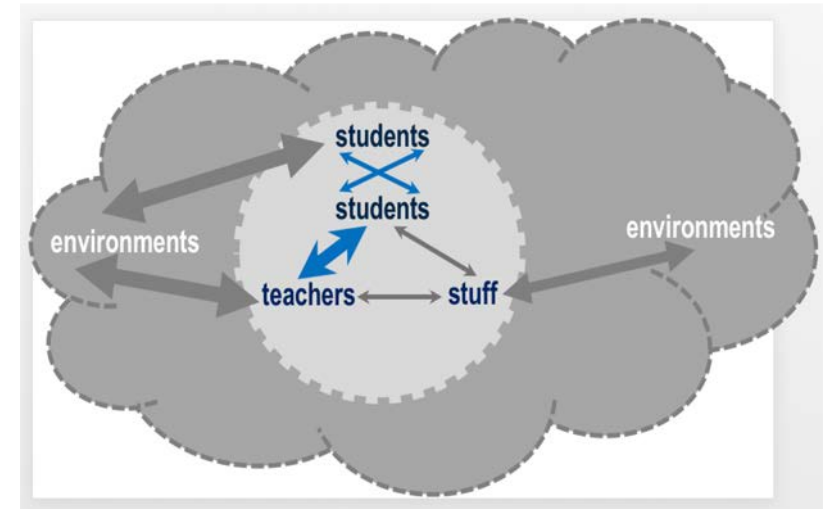
- Choosing tasks and problems that engage all students in high-level mathematical thinking, are centered in community and home knowledge and resources
- Working to ensure access for all to participate
- Ensuring that every student has opportunities to contribute their ideas
- Assigning competence strategically

PREVENTING INJUSTICE

- Disrupting persistent patterns that marginalize particular groups of students
 - Discipline and punishment
 - Deficit orientations
- Challenging notions of smartness in mathematics
 - Focusing on reasoning and meaning
 - Collective knowledge-making
 - Welcoming non-standard methods and solutions

LEARNING TO SEE AND USE THE DISCRETIONARY SPACES IN OUR PRACTICE

- Become aware of the density of taken-for-granted and normalized practices that reflect whiteness and oppression
- Notice and understand how much of our practice is based on these, and that these are *habits*
- Work on *breaking habits* that are rooted in racism and oppression (Noel, 2018)
- Develop new repertoires of practice and new habits and learn to scrutinize these critically



BROADENING OUR REPERTOIRES OF PRACTICE FOR STUDENTS TO SHOW THEIR IDEAS AT THE BOARD

- Considering whom to ask to show their work and the sequencing of who goes to the board
 - Positioning students
 - The trajectory of the math
- Developing a broad array of moves to distribute turns (*e.g., purposeful selection, pairs*)
- Broadening the array of contributions that can be shown at the board (*e.g., an approach that didn't work, a method that a student is trying*)
- Extending the questions we ask to prompt students to come to the board (*e.g., Who has an idea that they are still developing? Who has something that didn't work? What would not be a solution to this problem?*)
- Developing individual and affirming relationships with each student
- Building a classroom culture that values and supports collective work and that welcomes each person's contributions

GOING TO THE BOARD TO SHARE ONE'S IDEAS

Is a crucial practice for—

- Supporting the development of positive identities
- Developing students' ownership of ideas
- Engaging in collective mathematical work in school

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But must be enacted with care:

- To anticipate, avert, and disrupt normalized patterns that reproduce racism and oppression

GOING TO THE BOARD TO SHARE ONE'S IDEAS

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- Supporting the development of positive identities
- Developing students' ownership of ideas
- Engaging in collective mathematical work in school

But must be enacted with care:

- To anticipate, avert, and disrupt normalized patterns that reproduce racism and oppression

... But no matter what we do, these risks are always there and we must constantly be aware of the discretion we have to attend to them.

CONTINUITY AND DISCONTINUITY IN MAKING CHANGE

BUILD ON PROGRESS

- Intertwine mathematical practices with mathematical content
- Organize as a community to catalyze change
- Use and develop new structures and practices to support mathematics teachers
- Continue to emphasize the necessity of knowing and using mathematics in teaching

BUT CONFRONT AND DISRUPT THE PERSISTENCE OF RACISM AND OPPRESSION

- Become critically conscious of patterns even in “reform” practices
- Understand how own identities shape our assumptions and interpretations
- Understand that these patterns are historical and embedded in our institutions and systems

CENTERING THE INTERCONNECTEDNESS OF PRACTICE

- Developing mathematics and practice
- Advancing justice through curriculum, explicit attention to relationships, identities, and place
- Noticing and using discretionary spaces
 - Learning to connect macro and micro, systems and individuals
 - Changing habits, learning moves that counter patterns, developing repertoires of alternatives (Noel, 2018)

DESIGNING TO TEACH TEACHING: ATTENTION TO *DOING* THE WORK OF TEACHING

DECOMPOSING PRACTICE

- Breaking teaching practices into smaller elements that can be focused on
- Doing so in careful ways that do not distort or atomize teaching

“LAYERING” ELEMENTS OF PRACTICE

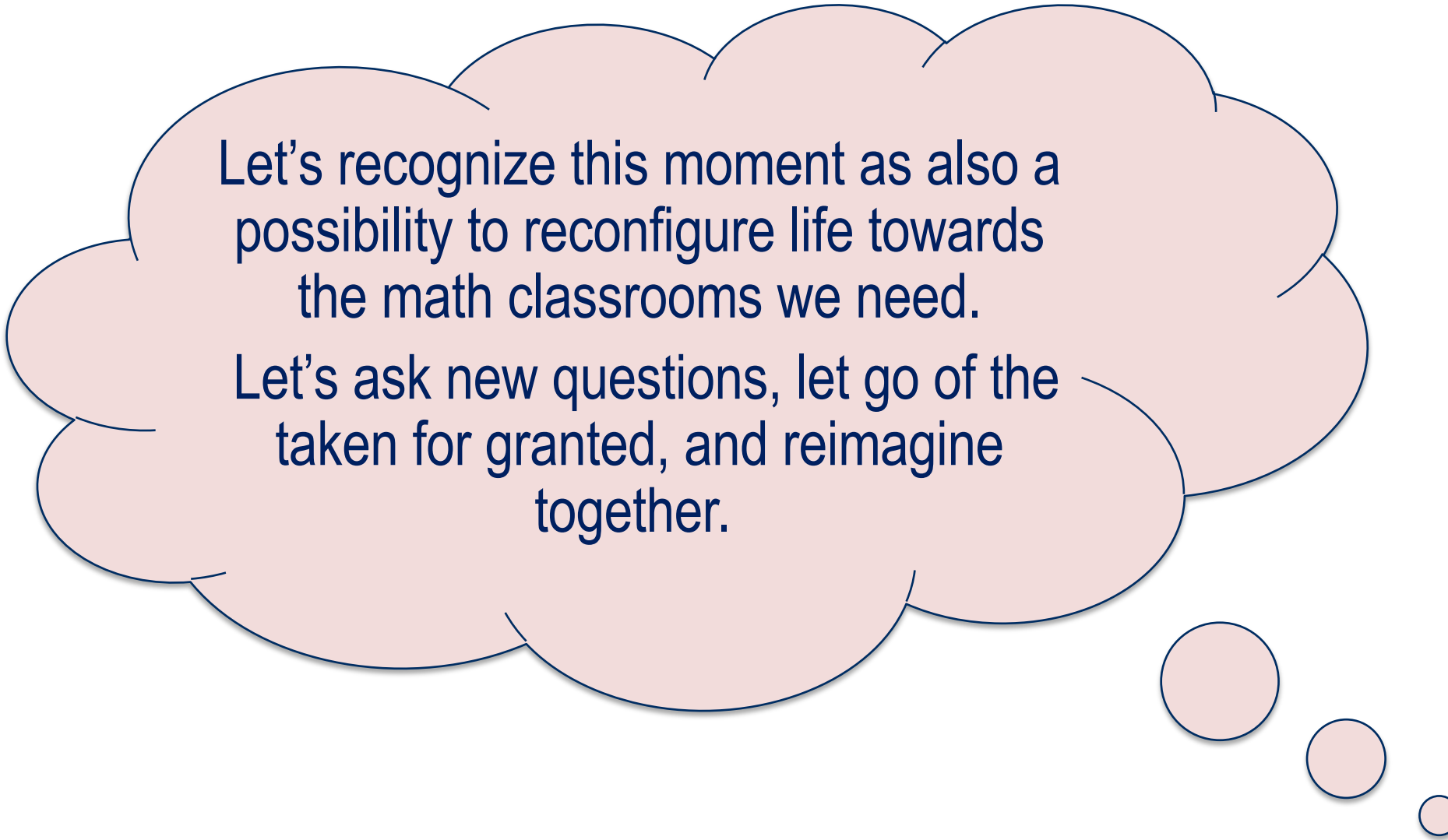
- Choosing small parts of teaching that intersect content knowledge for teaching, specific HLPs, disrupting racism and inequity
- Example: Centering work in recurrent situations in the work of teaching, such as dealing with students’ unexpected ideas, or positioning students during a discussion

AND . . . PRACTICE!

- Designing instructional activities that provide opportunities to do things that teaching actually entails

TEACHING HAS INCREDIBLE POWER FOR GOOD—OR HARM . . .

. . . through the infinitely many
discretionary spaces in our practice.



Let's recognize this moment as also a possibility to reconfigure life towards the math classrooms we need.

Let's ask new questions, let go of the taken for granted, and reimagine together.

Thank you to Na'ilah Nasir and Megan Bang of the Spencer Foundation, for their inspiration to see our current situation in a new light.

“We are going to have to take upon ourselves a disciplined and continuing effort, with no real hope that, in our lifetime, we are going to be able to take a vacation from the struggle for justice.”

Rev. James Reeb



Reaching for the possibilities and the power is our collective work.

THANK YOU!

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Slides will be available on my website

<https://deborahloewenbergball.com/>

(“Google” Deborah Ball)



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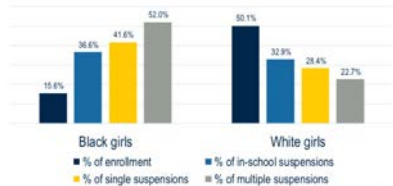
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CREDITS



Data on slide 10:

Epstein, R., Blake, J., & González, T. (2017). *Girlhood interrupted: The erasure of Black girls' childhood*. Washington, DC: Georgetown Law Center on Poverty and Inequality.



Image on slide 13:

Image from “New function - homework assignments with automatic checking,” by push to learn

Retrieved from <http://pushtolearn.com/post/homework-assignments>



Image on slide 13:

Photo from “Using reward charts successfully”

Retrieved from <https://raisingchildren.net.au/toddlers/behaviour/encouraging-good-behaviour/reward-charts>

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Photo from “8 Common Core Math Standards, Explained [+ Examples],” by Maria Kampen

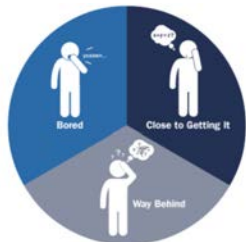
Retrieved from <https://www.prodigygame.com/blog/common-core-math-standards/>



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Image from “Classroom Behavior Management Student Notice – Editable”

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Images on slide 13:

Images from “Making It Work for Everyone: Seven ways to create a classroom that meets the needs of all your students,” by Zachary Herrmann

Retrieved from <https://www.gse.harvard.edu/uk/blog/making-it-work-everyone>

"A third of my class was bored and ready to move on, a third was close to understanding but not quite there, and another third was so far behind that continuing to try might have seemed like a fool's errand."

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Image on slide 56:
Photo of James Reeb.
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