

*Beyond Gaps and Pipelines:
New Theoretical Perspectives on
Equity in Mathematics Education*

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What's Wrong with Focusing on the Achievement Gap?

(Gutiérrez, 2008; 2009)

- ⇒ Static picture of inequities
- ⇒ Many assumptions in measurement
- ⇒ Accepts a static & essentialist notion of student identity
- ⇒ Suggests a comparison group necessary
- ⇒ Divides and categorizes students

What's Wrong...Cont'd

- ⇒ Safe “proxy” for talking about students, low achievement without racism, etc.
- ⇒ Perpetuates myth that problem/solution is technical
- ⇒ Supports deficit thinking and negative narratives about students of color
- ⇒ Narrow definitions of learning, equity

What's Wrong with Focusing on the Math Pipeline?

- ⇒ Often merely counts bodies (objectifies)
- ⇒ Views marginalized people from deficit perspective (people need math, not math needs people)
- ⇒ Doesn't adequately capture the many ways in which people use math in a global society (interdisciplinary careers, non-sanctioned ways)



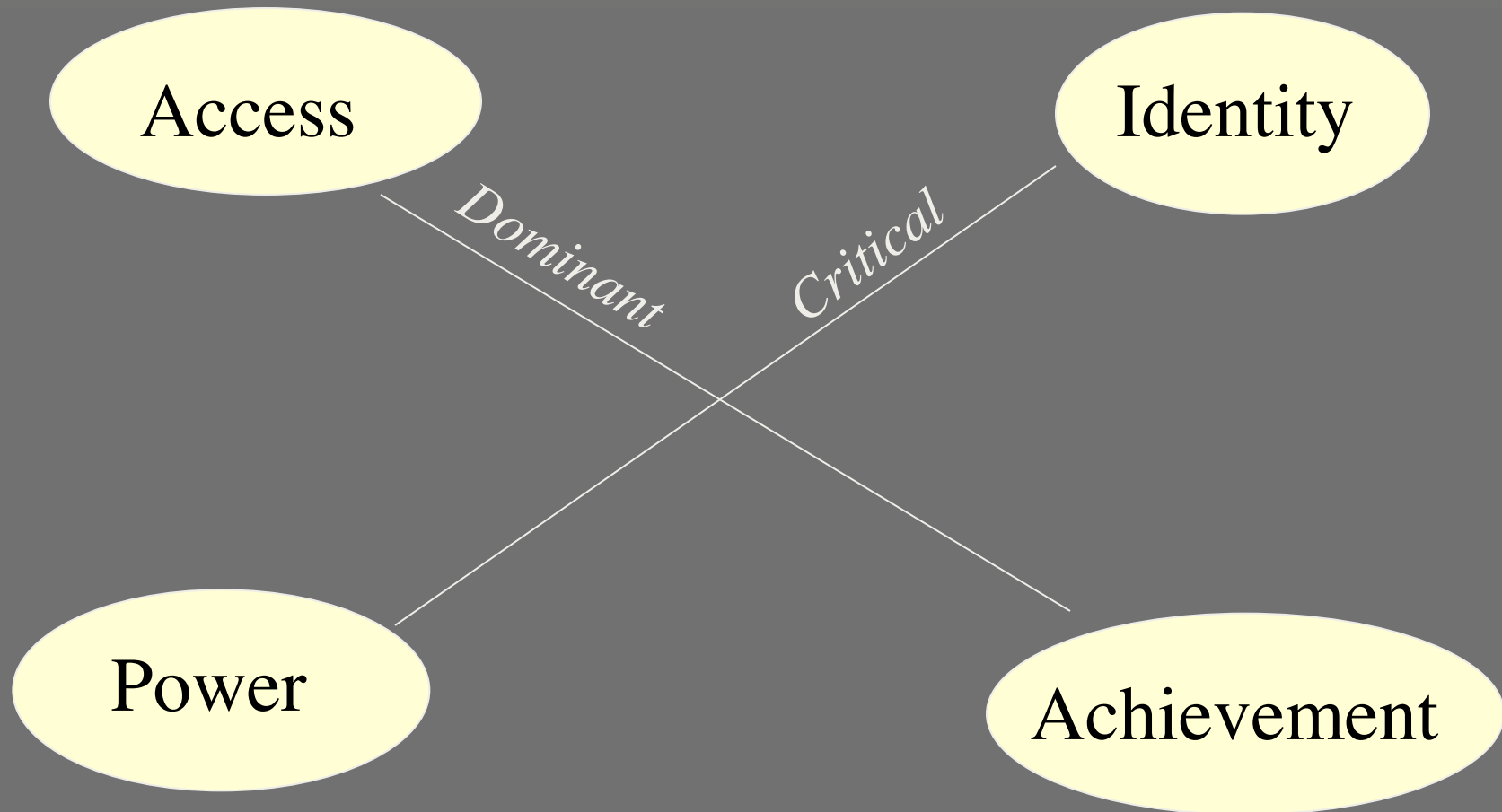
What's Missing in *Gaps* Analyses and Math Pipeline Goals?

- ⇒ Critical dimensions of equity (identity & power)
- ⇒ Voices of subordinated populations (counternarratives)

Should We Stop Focusing on Gaps & Pipelines?

- ⇒ No
- ⇒ BUT...need to stop focusing on these perspectives to the exclusion of others
- ⇒ In July 2008, “achievement gap & math” produced 8,000 hits; April 2009 was over 102,000

Equity Dimensions (Gutierrez, 2007; 2008a)



Some New Theoretical Perspectives on Equity

- ⇒ Transparency, subjectivity, voice/agency (McCarthy et al., 2005; Yosso, 2005)
- ⇒ Contextualization (D'Ambrosio, 2006; Martin, 2000)
- ⇒ Dynamic processes (production of power) (Foucault, 1977; Walshaw, 2007; Brown & McNamara, 2005)
- ⇒ Negotiation (resignifying, rejecting, subverting) (Butler, 1999; Stinson, 2008)
- ⇒ Fluidity/hybridity (Solórzano & Bernal, 2001; Bernal, 2002)
- ⇒ Education as more than schooling (Gutiérrez, in press; Varenne, 2007; FitzSimons, 2002)

What is Excellence?

- ⇒ High standardized achievement (not parity)
- ⇒ Strong participation
- ⇒ Internally defined goals
 - Maintaining identities (language, cultural values, ways of seeing the world)
 - Ability to critique society using math

How Might We Consider Gains?

- ⇒ Increased test scores and participation
- ⇒ Positive dispositions towards math
- ⇒ New identities around math
- ⇒ More positive images of self and future
- ⇒ Relationship with students and teachers
- ⇒ Use of preferred language and styles in math classroom
- ⇒ Ownership/control of narratives in mathematics education
- ⇒ Ability to challenge the “formatting power of math”

Maintaining Ties to Multiple Identities

We're all Mexican in the group. Specifically Mexican. So, we usually communicate always in Spanish over there, always talk in Spanish... We're all gonna try to speak together and communicate in Spanish. You know, we're all calm about [the math] that way. We all speak Spanish and we are comfortable. [Gutiérrez, 2002, p. 1075]

--bilingual calculus student

Maintaining Cultural Values

The definitions of excellence at school and home were different. In the classroom, it was assumed that excellence was defined as being white and speaking English. At home, the definition of excellence was working hard, trying your best, and remembering where you came from and where you are going. (p. 2, Kurzweil, 2003)

Controlling/Owning Narratives

⇒ Recognizing that calculus is “no big deal”

THEN...

⇒ Taking out the “calculus card”

Where Can I Find More People Using These Ideas?

- ⇒ CEMELA scholars
- ⇒ Journal for Research in Mathematics Education (JRME) special issue on identity and power (due out in June 2010)