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## **Response to *Gutstein Generalized* – A Philosophical Debate**

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It is a pleasure, challenge, and an honor to respond to the thoughtful and innovative debate started by Braver, Micklus, Bradley, van Spronsen, Allen, & Campbell on teaching mathematics for social justice. They take seriously the issues in, and raise many interesting views about, my article, *Teaching and Learning Mathematics for Social Justice in an Urban Latino School* (JRME, January, 2003). I would like to respond to (connected) two points in particular: the relationship of functional to critical literacies, and the relationship of “critical thinking” in mathematics to learning mathematics for social justice. However, I would first like to clarify certain points about my article.

First, my notion of *agency* is about *social*, not personal, agency. By agency, I do not mean personal drive, sense of self-efficacy, nor motivation. Rather, I use agency in the sense in which Paulo Freire (1970/1998) spoke, of people becoming *subjects*, or individuals who see the possibility of being able to change the world and become part of historical processes. To have social agency means to see oneself as a potential agent of *social* change. Second, I taught multiple classes in Rivera’s three programs: bilinguals honors, bilingual “general,” and “general.” The JRME article is about my almost-two years with a class in the bilingual honors program; that class was the only one I taught for more than one year, and I have much better data from that class. But my main point is that virtually *all* Rivera students, regardless of program, come from similar backgrounds: immigrant, bilingual, working-class and low-income families. Of the 28 students I taught in the class I discuss in the JRME article, only one did not qualify for free lunch—barely. All the parents were Spanish-dominant immigrants in that class, and all families lived in low-income, working-class Latino/a communities. Third, these same families strongly supported my curriculum and pedagogy of social justice. The evidence is that there was an outpouring of parental support when that curriculum/pedagogy came under attack from a replacement principal, after the original principal who had been for years strongly supportive of my work left Rivera (see Gutstein, forthcoming). And fourth, yes, I agree wholeheartedly with Braver et. al—the constraints, pressures, time limits, and high-stakes accountability tests and strictures under which I operated at Rivera are real and nontrivial. That is precisely why we need to educate the very students in front of us to the political realities of these repressive systems. We need them to join the struggles to fundamentally reconfigure the unjust, stratified educational and societal structures under which we live. This is the essence of teaching (mathematics) for social justice, as I understand it.

On functional and critical literacies—Michael Apple (1992), in his commentary on the NCTM Standards, drew out the distinction between functional and critical literacies by asking: “Whose definition of mathematical literacy is embedded in the Standards? Literacy

is a slippery term. Its meaning varies in accordance with its use by different groups with different agendas” (p. 423). Apple, citing Lankshear & Lawler (1987), contrasted a form of domesticating, functional literacy designed to make “less powerful groups...more moral, more obedient, more effective and efficient workers” versus a critical literacy that would “be part of larger social movements for a more democratic culture, economy, and polity” (p. 423). Critical literacy means to approach knowledge critically and skeptically, see relationships between ideas, look for underlying explanations for phenomena, and question whose interests are served and who benefits. Being critically literate also means to examine one’s own and others’ lives in relationship to sociopolitical and cultural-historical contexts. Although critical literacy includes acquiring or constructing knowledge of particular concepts, ideas, skills, and facts, it is also avowedly political—helping people recognize oppressive aspects of society so they can participate in creating a more just society (Macedo, 1994).

I believe it is a mistake to think that the NCTM Standards, by *themselves*, will bring us any closer to students having critical literacy. For example, one can have mathematical literacy (a goal of the Standards) without being critically literate. After all, Pentagon defense analysts and Wall Street stock forecasters certainly are mathematically literate, but the real question is: In whose interest do they use their mathematical competencies, those of capital and empire, or of the peoples of the world?

The question of “critical thinking” in mathematics versus learning mathematics for social justice is closely related. The argument is essentially the same as the one about functional and critical literacies. One can think critically in, and with, mathematics, but that in no way guarantees that one will be predisposed towards justice and equity. When one learns mathematics for social justice, the goal is that one not only seeks to deconstruct aspects of inequality, but also to change them. While critical thinking in mathematics is a necessary component of that process, it is not sufficient, as we can see in the Pentagon and Wall Street examples.

I appreciate the attention to my article that Braver et al. paid, and I agree with their conclusions. Teaching mathematics for social justice is not easy, nor uncomplicated. It is fraught with places where we can “go wrong,” and make mistakes. But we fundamentally have to take chances and live bravely in times like this, where there is both danger and opportunity in front of us. As Freire (1994) said, “It is impossible to live, let alone exist, without risks. The important thing is to prepare ourselves to be able to run them well” (p. 79).

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