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Seeing And Squinting: Occasioning Imagination In Mathematics Learning

Our work is inspired by ideas outlined in the book *Imagining Numbers* (particularly the square root of minus fifteen), by Harvard University mathematics professor, Barry Mazur (2003). Mazur's work outlines and describes the imaginative work of mathematicians. Mazur's work led us to question whether the features and steps of his re-creation of imagination in his text could be appropriated as a pedagogical framework in a middle-school setting. Consequently, the research questions guiding this work are:

- (1) How might teaching and learning mathematics be structured as "a way of imagining"?
- (2) What are we attending to pedagogically when we are teaching mathematics as "a way of imagining"?

To examine these questions we collected data from a seventh-grade classroom. The students engaged in a task investigating the "Minimal Surface Theory" of bubbles (Taylor, 1993). In this talk, we present the "teaching mathematics as a way of imagining" framework, and some of our results.