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Reflections from two case studies of imagery and meaning in eighth grade mathematics.

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The significance of this research lies in its evidence, through two contrasting paradigm cases, for symbolic violence experienced in a mathematics class by a creative student who prefers to make meaning for mathematical ideas through visual imagery and diagrams. His teacher is enthusiastic about her profession and shows interest in pedagogical innovation. Yet this teacher's lack of appreciation for a student who uses methods which are not the ones she taught, and her applauding of another student who memorizes her methods without constructing deeper meanings, illustrate issues which relate to whether or not creative visual students will continue to study mathematics and take up mathematics-related careers. Since much technological innovation is bound up with creative use of visual imagery and sound knowledge of mathematics (McFarlane Smith, 1964; Senechal, 1990), the loss of such students in higher mathematics is a loss of present and future creativity in the workforce. Awareness of these issues and a deeper understanding of their consequences is therefore needed in teacher education.

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