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**Truth isn't everything: promoting aesthetically guided choice in mathematical work.**

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Summary: Most educational and philosophical thought about mathematics focuses on the logical structure of the subject and considers mathematicians and students to be people whose primary practices are verifying statements within this structure. We claim that acts of discernment – careful choices driven by aesthetic considerations – are as important as acts of verification in mathematical work. This paper offers a conceptualization of this “aesthetically guided choice” that differentiates between three interrelated acts of discernment: nominating ideas, arranging ideas, and balancing ideas. We argue that aesthetically guided choice should be supported in school, and that such acts are notably lacking from the “Standards for Mathematical Practice” in the Common Core State Standards. This paper is the development of a theory at heart, built around rich descriptions of a mathematics class with middle school students, in which young thinkers were engaged in aesthetic choice. It includes analyses of the history of mathematics and studies of mathematical work to support claims about the nature of mathematics and to interpret the work of young mathematics learners from the perspective of mathematics as a discipline.

*Classification:* D33 D20

*Keywords:* aesthetics; student choice; problem posing; mathematical practices; agency

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