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**Adriana Monica Solomon\*** ([monicadriana.solomon@gmail.com](mailto:monicadriana.solomon@gmail.com)), Department of Philosophy, University of Notre Dame, 100 Malloy Hall, Notre Dame, IN 46556. *The Correspondence Between Cantor and Dedekind: the case for a surprising dialogue between mathematicians, historians, and philosophers.*

A recent panel for the MAA presents an exchange between educators within mathematics about the types of mathematical knowledge they encountered. While the discussion is relevant to curriculum guidelines and methods to improve teaching, here I connect the discussion to the common reaction of surprise as a crucial element for learning mathematics. The ability to be surprised in mathematics is essential to a process of reverse engineering by which we relate ourselves to other people's expectations and interests. In the main part of my paper, I show how a historical example (the correspondence between Cantor and Dedekind) should make us more interested in developing types of mathematical knowledge that admit of multiple epistemic stances with respect to some result or some proof. Drawing inspiration from Wittgenstein's later works, I show that there are types of mathematical knowledge that make no mystery of someone knowing something, but find it hard to believe. My contribution is part of an interdisciplinary approach that can provide philosophers and mathematicians with new perspectives on old questions, as well as pointing to further questions that are "worthy of philosophical attention." (Leng, Passeau & Potter (2007), p. 15). (Received September 18, 2013)