

Preface

*It appears to me that if one wants to make progress in mathematics
one should study the masters and not the pupils.*

Niels Henrik Abel¹ (1801–1829)

Walk into an undergraduate philosophy classroom, and you will likely hear students engaged in lively conversations about the ideas of individuals such as Plato, Augustine, Spinoza, Kant, and Foucault. Classroom discussions are typically based on (or at least informed by) the students' reading of the original writings of the philosopher in question. The philosophers themselves, despite sometimes great separations in time and space, are generally seen to be in dialogue with each other. They are living beings concerned with finding answers to difficult and important questions that have perplexed human societies across centuries, or to new questions that have arisen from changes within a particular society or by encounters between diverse societies. Over time, they further considered methodological and conceptual questions that emerged from the evolving philosophical dialogue itself.

Replace the word “philosophy” by “literature” and substitute your favorite list of authors in place of “Plato, Augustine, Spinoza, Kant, and Foucault,” and the description in the preceding paragraph still holds. Our usual vision of an undergraduate mathematics classroom, on the other hand, looks quite different (and less exciting) than this. Teaching with Primary Source Projects (PSPs) provides a way to bring a new vision of mathematics classrooms to life. Specifically, the projects in this collection offer instructors of undergraduate courses in analysis, topology, and complex variables the opportunity to place their students in direct contact with the words and works of the mathematicians who were responsible for creating and shaping the mathematics taught in these courses — to allow their students to heed Abel's advice and learn mathematics by literally reading the masters.

¹As quoted in Ore, O. (1957). *Niels Henrik Abel, Mathematician Extraordinary*. University of Minnesota, Minneapolis. 2008 reprinting by the American Mathematical Society, Washington DC. Page 138.

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