History as Travel Guide and Companion: Mathematical Itineraries to Excite, Educate and Entertain

Janet Heine Barnett
MAA Joint Intermountain and Rocky Mountain Sections Meeting
Grand Junction, April 8-9, 2016

As a travel companion, history intensifies our experiences by enhancing our understanding and appreciation of mathematics’ rich culture, world-famous landmarks and exquisite natural landscapes. In addition to the usual fare of any travel guide – tips on recognizing and avoiding tourist traps, practical advice to make the journey run safely and smoothly, and suggested itineraries that enable travelers to make informed choices – history offers opportunities to create memorable experiences through unexpected discoveries and the rewards of wandering off the beaten track. By encouraging us to explore and respect the unfamiliar, history also has potential to broaden our intellectual horizons beyond mathematics, and to teach us new ways of measuring the quality and value of our work in mathematics and teaching.

In this talk, I share highlights from 20+ years of travels that my students and I have enjoyed with history as our companion in a variety of mathematic courses. In addition to specific examples of how I have used history in the classroom to enhance students’ mathematical understanding, I discuss some less explicit ways in which history has informed my teaching practice and philosophy. In closing, I comment on how historical expeditions have shaped my broader thinking about mathematics and its teaching, and offer travel tips and resources for those who wish to venture out on historical journeys in their own classrooms.