

HISTORY OF MATHEMATICS, MATHEMATICS EDUCATION, AND THE LIBERAL ARTS

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The goal of this paper is to discuss the meaning of history of mathematics in mathematics education, or, rather, the meaning of mathematics education informed by a conception of mathematics as a historical, human and, therefore, cultural enterprise. The discussion will comprise four parts. First, some contributions and ideas of D. E. Smith, one of the initiators of the ICMI will be discussed—his conception of mathematics and of the place of history in mathematics education. Next, it will be shown how a non-historical tendency enters mathematics teaching when history is viewed only as a tool to be used, and how that, in turn, leads to a dilemma for the teacher who has a serious interest in history. It will then be suggested in the third part that this dilemma may, in fact, provide us with an opportunity to review what we really mean by mathematics education and a mathematically educated person. Finally, there will be some reflections on the old idea of the liberal arts. Taking the term artes liberales literally, these are the “arts of a free human being,” but the intention was always that they are the arts of a fully human human being. Traditionally, the mathematical arts were always part of the liberal arts, maybe the most important part, even though today the liberal arts are typically set off from science and mathematics. It will be suggested that thinking about these arts in connection to history of mathematics, and with a somewhat broadened scope, has the potential of bringing us back to a mathematics education as a true liberal art aiming to make our students as fully human as possible.