Sherlock Holmes in Babylon and Other Tales of Mathematical History
edited by Marlow Anderson, Victor Katz, and Robin Wilson

Washington, DC: Mathematical Association of America, 2004. Pp. x+ 387. ISBN 0–88385–546–1. Cloth $49.95

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Over their long history, the expository journals published by the Mathematical Association of America have included many articles on the history of mathematics. The editors of *Sherlock Holmes in Babylon* have put together a selection of these articles. The topics covered range from ancient mathematics to the 18th century. The authors decided not to include articles on 19th and 20th century mathematics, which is a pity, since there would have been many excellent ones from which to choose. Perhaps we can hope for a second volume.

The earliest article ('Number Systems of the North American Indians', by W. C. Eells) appeared in the *American Mathematical Monthly* in 1913; the most recent ones are from 2002. Several of the articles included are well known classics: Judith Grabiner's 'The Changing Concept of Change' and Frederick Rickey's 'Isaac Newton: Man, Myth, and Mathematics', for example, have long been standard reading assignments in my history of mathematics classes. R. Creighton Buck's 'Sherlock Holmes in Babylon', which lends its name to the whole collection, is a famous account of the Plympton 322 tablet and its connection to Pythagorean triples. The articles by William Dunham on the Harmonic Series and the Fundamental Theorem of Algebra are also familiar and worth reading.

As a rule, historians of mathematics will not find anything new here; but they will find careful and readable expository accounts of important bits of the history of mathematics. Further, the book will be of great interest to mathematicians who want to learn a little history and to students who are beginning to learn the history of mathematics. In some ways, a collection like this one might actually be a better starting point than the standard compendia: reading

ISSN 1549–4497 (online) ISSN 1549–4470 (print) ISSN 1549–4489 (CD-ROM)
Aestimatio 2 (2005) 67–69

these articles will give the student a little bit more of the experience of historical research and debate than a textbook could.

The book suffers from some inevitable limitations. First of all, the editors were constrained to choose articles from the three expository journals published by the MAA. This, I am sure, was not a great burden. Second, and more serious, the editors decided to try to cover the major themes in the history of mathematics between Ancient Mesopotamia and the 18th century. This, at times, led to the inclusion of inferior articles. The most glaring example is the inclusion of Max Dehn's long article on Greek mathematics (tellingly entitled 'Mathematics, 600 BC – 600 AD'). This is a routine recounting of the 'standard story' about Greek mathematics, written in the 1940s when that story was taken as settled fact. Much of what Dehn says has since been challenged by one or another historian, and the book gives little indication of the new ideas on Greek mathematics that have been dominant over the last few decades. Another example is Eells' 1913 article, presumably included for the sake of covering Native American mathematics, but quite boring and not very insightful.

In their introduction, the editors say that their goal was to select the best articles and then to 'present them in the context of modern historical research'. I do not think that they quite succeed in this. Each section comes with a foreword and an afterword, but these do little more than set the stage and point to the literature. I would have liked to see a much fuller discussion of historiographical issues, particularly in the sections on ancient and medieval mathematics.

At times, the pool of available articles itself provided the m eans to put the older articles in the context of current research. Buck's 'Sherlock Holmes in Babylon' presents a historical interpretation of Plympton 322 which has since been challenged. Happily, the editors were able to balance Buck's article with Eleanor Robson's 2002 article, 'Words and Pictures: New Light on Plimpton 322'. This creates an interesting case study in historical method which can lead to productive class discussions. (It would have been even more fun to include Robson's 'Neither Sherlock Holmes nor Babylon', originally published in *Historia Mathematica*, which is a direct response to Buck. But *HM* is not an MAA journal.)

Such pairings are particularly helpful for students, who need to understand how historians investigate and discuss the issues. The

book includes a few other examples of this sort: a couple of articles on Descartes, several on Newton, several on Euler. None of these offer as direct a contrast as Buck/Robson, but they still offer different perspectives and thus open up possibilities for discussion and for deeper understanding. For me, these groups of articles are the high points of the collection.

The book is well produced and presented. My only complaint on that end is about the decision to lay the text out in two columns. The resulting pages look much more like those of a textbook that one consults rather than like pages from a book meant for reading. These articles are meant to be read, so this layout sends the wrong message.

Historians of mathematics will value *Sherlock Holmes* in Babylon because it provides easy access to some old favorites from the historical literature, many of which are well suited for class use. Mathematicians, students, and historians of science will find it a pleasant way to learn something about the history of mathematics, particularly if they are careful to note the original publication dates of the articles.