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★**The crest of the peacock.**
Non-European roots of mathematics.
I. B. Tauris & Co. Ltd., London, 1991. xvi+368 *pp*. $29.50. *ISBN* 1-85043-359-3

The purpose of this book is sympathetic, though more revolutionary with respect to certain general histories of mathematics (Kline, *Mathematical thought from ancient to modern times*, etc.) than in relation to actual research in the history of mathematics: to show that mathematics is not a subject created from close-to-scratch by a Greek, stored by the Muslims and resurrected in the Western European Renaissance. It makes the reasonable choice of concentrating on a restricted number of not Greek-to-European cultures in order to achieve some depth; even its actual choice of cultures seems sound, if the aim is to connect the "non-European roots" to the global mathematics of our day: Mayan numeration and calendars and Inca Quipu recording; Egypt; Babylonia; China; India; and Medieval Islam.

The outcome, however, is no less problematic than the ethnocentric books which the author wants to replace. Mathematics is invariably translated into modern formulas, often accompanied by verbal explanations which, however, are not translations of the original texts. One example of this from the chapter on Babylonia will suffice: on p. 109, the nebulous phrases "Multiply two-thirds of [your share] by two-thirds [of mine] plus a hundred qa of barley to get my total share, what is my [share]" are said to be "based on Taha Baqir's (1950) translation". The text in question is actually to be found in a different publication by Baqir, which is not listed in the bibliography; Baqir's translation runs "If I add to the two-thirds of my two-thirds a hundred qa of barley, the original quantity is summed up. How much is my original quantity?", which is indeed a precise translation.

A few additional examples from the same chapter will illustrate other problems. Example 4.2 (p. 103) lets the working method shine through: without telling his source, the author has used an Open University reader containing tidbits from a large number of scholarly publications, has misunderstood hypotheses for actual text, and has filled in whatever information was missing (e.g., dating) by guessing (wrongly, in the actual case). Example 4.10 (p. 119) overlooks a dating clearly given in the publication from where the example must have been taken (viz. Old Babylonian, the period of peak mathematical activity) and makes the sensationalist invention that it "belongs to a period (c. 1000 BC) for which evidence of mathematical activity is rather scarce". A table of Babylonian algebraic notations (p. 108) states (among other mistakes) that *kush* (cubit) means height, presumably because the author has read somewhere that this unit was used to measure heights.

General historical background information is no more conscientious. To judge from its crucial omissions, the presentation of Mesopotamian history may have been taken from a popularization written during the 1930s; what is worse, the attitude reflects a kind of contemptuous "Orientalism" which was current during the colonial era, with its description of a perennial cyclical society conquered occasionally by great rulers whose empires collapse at their death.

Other chapters may be less error-ridden, but the absence of references and the unreliability of the translations (verbal as well as symbolic) make it impossible for the reader to tell the difference between facts and free invention.

On the level of generalities, and relating to the proclaimed aim of the book, it is mischievous that no serious attempt is made to trace the mathematical thinking of the cultures dealt with. Instead, readers are told regularly to marvel that somebody else used a formula also to be found in a later Greek or Hellenistic text.

In short, the book does not give readers reliable knowledge on the level to be expected from a popularization; it does not tell them where to look for further information (obviously, the author has opened few of the publications referred to in his list of "specialist references"); in practice, and in spite of occasional lip service to other ideals, it teaches its readers that mathematical greatness is measured by comparison with Greek mathematics, understood as its formulas. It would be a pity if the existence of this book should have as its effect that a real popular history of mathematics in its cultural diversity would be deemed not viable by publishers.

Reviewed by *Jens Høyrup*