

BOOK REVIEW

Mathematical thought from ancient to modern times, by Morris Kline.
Oxford University Press, New York, 1972. xvii+1238 pp.

The history of mathematics is an enticing but neglected field.

One reason for this situation lies in the nature of intellectual history. For any theoretical subject x , telling the story of x is not a conceptually distinct undertaking from describing the theory of x , though the two presentations often appear in different guises. The readership of a serious history of x will thus be largely limited to the few specialists in x , a small circulation at best. Worse yet, mathematics, or science for that matter, does not admit a history in the same sense as philosophy or literature do. An obsolete piece of mathematics is dead to all but the collector of relics. Discovering that the Babylonians knew harmonic analysis may be an astonishing feat of scholarship, but it is a supremely irrelevant piece of information to working scientists. Few of the serious historians of mathematics have realized this; as a result, we are saddled today with competent histories of Greek and Renaissance mathematics, but we sadly lack such items of burning interest as “The Golden Days of Set Theory (1930–1965)” “Topology in the Age of Lefschetz (1924–1953)”, “The Beginnings of Probability (1932–···)”, to cite but a few possible titles.

Faced with these and many other problems, Morris Kline has chosen the courageous avenue of compromise. In his book, the Greeks get a 15% cut, the Egyptians are whisked on and offstage, the Arabs and Renaissance together make a fleeting 10% appearance, and the drama begins with René Descartes on Chapter 15 out of 51.

Synthetic geometry is Morris Kline’s first love, and he returns to it with predictable regularity. It is thus no wonder that his treatment of Greek geometry succeeds in being readable, at times downright interesting. Ancient mathematics has a way of appearing to us coated with a dusty layer of weirdness, which historians have occasionally attempted to brush off with a phony emphasis on the human angle, as if we could reconstruct what made the Greeks tick without the aid of science fiction. Kline’s solution, instead, is to translate into contemporary language and values the best of Greek geometry, with brief mention of the authors. His is a history of ideas, not one of men. Nonetheless, one is pleased to find throughout the book a scrupulous fairness in giving the little guy his due, and in emphasizing the greatness of some of the lesser known names. For example, Apollonius gets equal billing with Euclid, as he should.