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In the Shadow of the Palms: The Selected Works of David Eugene Smith (Book Review)

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Abstract

Reviewed Title: *In the Shadow of the Palms: The Selected Works of David Eugene Smith* by Tristan Abbey, ed. Alexandria, VA: Science Venerable Press, 2022. 155 pp. ISBN: 9781959976004.

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IN THE SHADOW OF THE PALMS: The Selected Works of David Eugene Smith by Tristan Abbey, ed. Alexandria, VA: Science Venerable Press, 2022. xii + 155 pages, including a Glossary of Biosketches. Paperback; \$22.69. ISBN: 9781959976004.

David Eugene Smith (1860–1944) may not be a house-hold name for readers of this journal, but he deserves to be better known. An early-twentieth-century world traveler and antiquarian, his collaboration with publisher and bibliophile George Arthur Plimpton led to establishing the large Plimpton and Smith collections of rare books, manuscripts, letters, and artefacts at Columbia University in 1936. He was one of the founders (1924) and an early president (1927) of the History

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of Science Society, whose main purpose at the time was supporting George Sarton's ongoing management of the journal *ISIS*, begun a dozen years earlier. Smith also held several offices in the American Mathematical Society over the span of two decades and was a charter member (1915) and President (1920–1921) of the Mathematical Association of America (MAA).

Smith is best known, however, for his pioneering work in mathematics education, both nationally and internationally. In 1905, he proposed setting up an international commission devoted to mathematics education (now the International Commission on Mathematical Instruction) to explore issues of common concern to mathematics teachers on all levels, worldwide. He was actively involved in reviving this organization after its dissolution during the First World War and served as its President from 1928 to 1932. Nationally, Smith was instrumental in inaugurating the field of mathematics education, advancing this discipline professionally both in his role as mathematics professor at the prestigious Teachers College, Columbia University (1901–1926) and as an author of numerous best-selling mathematics textbooks for elementary and secondary schools. These texts were not focused solely on mathematical content; they also dealt substantively with teaching methodology, applications, rationales for studying the material, and significant historical developments.

Throughout his life Smith championed placing mathematics within the wider liberal arts setting of the humanities, highlighting history, art, and literary connections in his many talks, articles, and textbooks. For him there was no two-cultures divide, as it later came to be known. While acknowledging the value of utilitarian arguments for studying mathematics (he himself published a few textbooks with an applied focus), he considered such a rationale neither sufficient nor central. For him, mathematics was to be studied first of all for its own sake, appreciating its beauty, its reservoir of eternal truths, and its training in close logical reasoning. But again, for him this did not mean adopting a narrow mathematical focus. In particular, given his wide-ranging interest in how mathematics developed in other places and at other times, he tended to incorporate historical narratives in whatever he wrote.

This interest led him later in life to write a popular two-volume *History of Mathematics*. The first volume (1923) was a chronological survey from around 2200 BC to AD 1850 that focused on the work of key mathematicians in Western and non-Western cultures; the second volume (1925) was organized topically around subjects drawn from the main subfields of elementary mathematics. His *History of Mathematics* was soon supplemented by a companion *Source Book in Mathematics*

(1929), which contained selected excerpts in translation from mathematical works written between roughly 1475 and 1875. Smith wrote at a time when the history of mathematics was beginning to expand beyond the boundaries of Greek-based Western mathematics to include developments from non-Western cultures (Egyptian, Babylonian, Indian, Chinese, Japanese, and Arabic), a trend he approved of and participated in professionally.

Smith's interest in broader issues extended even to exploring possible linkages between religion and mathematics. His unprecedented parting address to members of the MAA as its outgoing President is titled "*Religio Mathematici*," a reflection on mathematics and religion that was reproduced a month later as a ten-page article in *The American Mathematical Monthly* (1921) and subsequently reprinted several times. Smith's article "Mathematics and Religion" appearing in the National Council of Teachers of Mathematics' sixth yearbook *Mathematics in Modern Life* (1931) touched on similar themes. These two essays maintain that mathematics and religion are both concerned with infinity, with eternal truths, with valid reasoning from assumptions, and with the existence of the imaginary and higher dimensions, "the great beyond," enabling one to draw fairly strong parallels between them. Thus, a deep familiarity with these facets of mathematics may help one to appreciate the essentials of religion. Mathematics itself was thought of in quasi-religious terms, as "the Science Venerable." Smith's farewell address partly inspired Francis Su in his own presidential retirement address to the MAA in 2017 and in its 2020 book-length expansion *Mathematics for Human Flourishing* (see *PSCF* 72, no. 3 [2020]: 179–81). Su's appreciation of Smith's ideas also led him to contribute a brief Foreword to the booklet under review, to which we now turn.

First a few publication details: *In the Shadow of the Palms* is an attractive booklet produced as a labor of love by someone obviously enamored with his subject. Tristan Abbey is a podcaster with broad interests that include being a "math history enthusiast," but whose primary professional experience up to now has been focused on the environmental politics of energy and mineral resources. This work is the initial (and so far the only) offering by a publication company Abbey set up. Its name, Science Venerable Press, was chosen in honor of Smith's designation for mathematics.

One might classify this work non-pejoratively as a coffee-table booklet. It contains 50 excerpts (Su terms them "short meditations") from a wide range of Smith's writings, selected, categorized, and annotated by Abbey, along with full-page reproductions of eight postcards mailed back home by Smith on his world travels, and

two photos, including Smith's Columbia-University-commissioned portrait. Smith's excerpted writing occupies only 109 of the total 167 pages, nearly two dozen of which are less than half full. The amply spaced text appears on 3.25 inches of the 7 inch-wide pages, the outer margins being reserved for Abbey's own auxiliary notes explaining references and allusions that appear in the excerpt. This gives the book lots of white space; in fact, eighteen pages of the booklet are completely blank. Another nine pages contain 75 short biographical sketches of mathematicians taken from Smith's historical writings; these are unlinked to any of the excerpts, but they do indicate the breadth of his historical interests. Unfortunately, no index of names or subjects is provided for the reader who wants to learn whether a person or a topic is treated anywhere in the booklet; the best one can do in this regard is consult the titles Abbey assigns the excerpts in the Table of Contents.

The booklet gives a gentle introduction to Smith's views on mathematics, mathematics education, and the history of mathematics. The excerpts chosen are more often literary than discursive. Smith was a good writer, able to keep the reader's attention and convey the sentiments intended, but these excerpts do not develop his ideas in any real length. They portray mathematics in radiant—sometimes fanciful—terms that a person disposed toward the humanities might find attractive but nevertheless judge a bit over-the-top: mathematicians are priests lighting candles in the chapel of Pythagoras; mathematics is “the poetry of the mind”; learning geometry is like climbing a tall mountain to admire the grandeur of the panoramic view; progress in mathematics hangs lanterns of light on major thoroughfares of civilization; and retirement is journeying through the desert to a restful oasis “in the shadow of the palms.” Some passages are parables presented to help the reader appreciate what mathematicians accomplished as they overcame great obstacles.

While the excerpts occasionally recognize that mathematics touches everyday needs and is a necessary universal language for commerce and science, without which our world would be unrecognizable, their main emphasis—in line with Smith's fundamental outlook—is on mathematics' ability on its own to deliver joy and inspire admiration of its immortal truths. These are emotions many practicing mathematicians and mathematics educators share; Smith's references to music, art, sculpture, poetry, and religion are calculated to convey to those who are not so engaged, some sense of how thoughtful mathematicians value their field—as a grand enterprise of magnificent intrinsic worth.

In the Shadow of the Palms offers snapshots of the many ideas found in Smith's prolific writings about

mathematics, mathematics education, and history of mathematics. It may not attract readers, though, who do not already understand and appreciate Smith's significance for these fields. Abbey himself acknowledges that his booklet “only scratches the surface of [Smith's] contributions” (p. 4). A recent conference devoted to David Eugene Smith and the Historiography of Mathematics (Paris, 2019) is a step toward recognizing Smith's importance, but a comprehensive scholarly treatment of Smith's work within his historical time period remains to be written.

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