

wedded to the text, the pictures do much to carry the reader's interest through the thicket of data and interpretation. One cannot reasonably demand too much from such a formula. At best it offers a clear outline of the component elements, expresses them in terms of up-to-date scholarship, offers as much selected detail as the brief narrative will bear, and whets the appetite for the more extensive offerings displayed in its bibliography.

Gabriel Jackson meets these standards in his *Making of Medieval Spain*, and with a topic particularly timely as the attention of historians turns ever more strongly toward this shamefully neglected center of Medieval civilization. The general shape is inevitably predictable: six brief chapters on Islamic background, the awakening of the eleventh and twelfth centuries, the thirteenth-century Reconquest and synthesis, currents of peninsular civilization from the thirteenth through the fifteenth centuries, literature and painting, and some closing reflections on the problems of the late fifteenth century. The appetizer is well confectioned, easily digestible, and reasonably priced. I have consumer-tested it on the students of my Medieval survey, who volunteered favorable opinions; they are ready perhaps for more substantial fare, but something along the lines of this small study must first lure them into the banquet hall.

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A Navigator's Universe: The Libro de Cosmographía of 1538. By PEDRO DE MEDINA. Translated by URSULA LAMB. Chicago, Illinois, 1972. Published for The Newberry Library by The University of Chicago Press. Facsimile. Bibliography. Index. Pp. ix, 224. Cloth. \$18.50.

The *Libro de Cosmographía* of 1538 was the first of four sixteenth-century cosmographies written by Pedro de Medina, yet it was the last to be discovered. The 62-page document turned up quite by chance (in 1959) among a collection of 2,000 volumes that had been purchased in 1817 by the Bodleian Library at Oxford, England. Its translation, editing, and accompanying commentary by Ursula Lamb are, in and of themselves, superb pieces of scholarship. This, as do each of her other published works, reveals a deep understanding of the times, places, and people that created such exceptional books as the *Libro de Cosmographía*.

A Navigator's Universe consists of three parts, a section of notes pertaining to the translation, an extensive bibliography, and an index.

Part I ("Introduction") is further subdivided into three sections: (1) "A Cosmographer's World," (2) "The Author: El Maestro Pedro de Medina," and (3) "The Cosmographic Manuscripts by Pedro de Medina: A Commentary." Part II is a black-and-white facsimile reproduction of the original manuscript. Part III is the translation of the *Libro de Cosmographía*.

The *Libro de Cosmographía* is written in dialogue form—an ancient technique. There are two questioners who are answered by Medina. One of the questioners, a pilot, is interested in technical matters (tides, altitudes of stars, distance, direction, etc.); the other, an educated layman or *licenciado*, is more philosophical (What is an hour, a day, a week, or a month? What is an eclipse? What is wind? Why do not people on the bottom of the earth fall?). All told, 82 intriguing questions are posed. The maestro's answers are direct and skilled. The style does not permit a lengthy narrative, and the result is unusual clarity and a dramatic insight into the mariner's knowledge of the period.

Medina was born in 1493, probably in Medina but maybe in Seville. He took holy orders before 1538, while he was serving as a tutor in the household of the dukes of Medina Sidonia. The *Libro de Cosmographía* was submitted to the Royal Council of the Indies in order to support his application for a cosmographer's license, which was granted on December 20, 1538. From then until his death in 1567, the maestro lived and worked in Seville. He was a senior member of the scientific office of the pilot major (which controlled the pilots and masters involved in the voyages to America, as well as their equipment). As a cosmographer it was Medina's job to collect and interpret new knowledge and assimilate it with all that was useful from the old. Cosmography was, in the 1500s, a mixture of astronomy, geography, and hydrography. Today virtually everything considered by Medina falls within the general field of physical geography.

As Ursula Lamb so aptly expresses it (p. 30): "Pedro de Medina put into his book the world of the discoveries. Although we no longer see our universe in the *Libro de Cosmographía*, we can find it in the world in which its author lived."

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