

genitures and astrological case studies in order to piece together the case-based astrology that informed Ptolemy's masterwork.

One of Grafton's great achievements in *Cardano's Cosmos* is the way in which he draws together Cardano's interests in history, literature, medicine, astrology, and other branches of knowledge, such as magic, and uses this combination of intellectual preoccupations to shed light on the work for which he is best known, *On His Own Life* (Lyons, 1557; Basel, 1562). As is the case with much of Cardano's work, his autobiographical writings fit into well-established traditions, but he took those traditions in innovative directions. Astrology became the chief tool Cardano used to interpret the events of his life, capable of providing him with intimate insights into the minutiae of daily activities, from diet to dreams, as well as giving him a much broader perspective on the vicissitudes of world events and politics. Grafton argues that Cardano's relationship with the discipline of astrology intensified his struggle to give order to his life and heightened his awareness of the passing of time.

Readers of Grafton's work have come to expect that they will be enlightened and entertained if they join him on an excursion into the depths of the early modern cultural and intellectual jungle. His ability to humanize individuals who lived a very long time ago by acknowledging what made them both like us, and not like us, is unmatched in contemporary scholarship. It is surprisingly easy, upon finishing this book, to imagine Cardano in the twenty-first century, using a Palm Pilot and buying scores of self-help books. At the same time, we gain a deeper appreciation for the Renaissance astrologer as a product of his time, inextricably bound to the specific contexts of early modern print culture, political life, and the crisis in the discipline of astrology.

DEBORAH E. HARKNESS

Peter Russell. *Prince Henry "the Navigator": A Life.* xvi + 448 pp., illus., figs., apps., bibl., index. New Haven: Yale University Press, 2000. \$35.

Prince Henry of Portugal (1394–1460) was the third son of King João I and his Plantagenet bride Philippa of Lancaster. Though never crowned, the Infante D. Henrique was arguably the most powerful magnate in the crescent kingdom of Portugal for some forty years in the middle of the fifteenth century. His significance to historians of science lies in his (much-disputed)

role promoting the early years of Portuguese commercial and exploratory voyaging to the proximate Atlantic islands (Madeira, the Azores, the Cape Verdes, and the Canaries) and down the Atlantic coast of Africa. By the end of the century, extending this enterprise, Bartolomeu Dias and Vasco da Gama would round the Cape of Good Hope, and other Portuguese navigators, en route, would spy Brazil. An age of sea-crossing exchange, expansion, and exploitation followed, with profound implications.

A healthy tradition in the history of science has seen these early Portuguese voyages as nothing less than the dawn of scientific modernity. In this analysis, the gusty trade winds blew Europe's lateen sails beyond stultifying authority, spookish legend, classical bunkum, and scriptural dogmatism—at sea, empiricism breathed a bracing, fresh air. Beyond Cape Bojador lay truth, and even method. If such claims are no longer exactly seen, recent work by Anthony Grafton, David Goodman, Alison Sandman, and others continues to examine the tantalizing relationship between the early years of Portuguese and Spanish overseas exploration and the history of science.

Sir Peter Russell, a distinguished senior historian of Iberia, has not done a great deal to link his generally informative and readable new biography to these questions. The book's closing lines make a gesture (suggesting that Henrican discoveries amounted to "a major scientific contribution to European man's knowledge of the wider world about him," [p. 364; see also p. 111]), but Russell offers no sense of what he means by "scientific," and his discussion of Portuguese navigational techniques relies on J. H. Parry's *The Age of Reconnaissance* (Berkeley, 1963), now more than forty years old.

Which is not to say this is an unwelcome book. It is detailed and learned, and though it peters out at the end, it still succeeds in correcting a hagiographic scholarly tradition that would make of Henry a Renaissance prince and patron of knowledge. Russell's Henry, if enigmatic, is a thoroughly "medieval" character: a royal monopolist, a chivalric and shameless debtor, a knight of stern piety with a papistic, casuistical bent where the niceties of slaveholding and crusading against the infidel were concerned. As an innovator in the business of colonial warfare, human bondage, and the tapping of distant resources belonging to others, Henry appears to have deployed an enterprising eye for good counselors and an insatiable hunger for wealth. It is not a flattering portrait, and if Russell's donnish surety brings it off with some aplomb, one

does not sense a particularly sympathetic narrator. Henry remains stiff, a martinet of the Middle Ages. Nevertheless, since Henry's reputation has long rested on his status as the original mythoclast of modernity, it is somehow fitting that he receive himself so mythoclastic a memorial as *Prince Henry "the Navigator."* The scare quotes speak volumes.

The more work Russell does to show how far the Henry of myth has departed from the historical Henry, the more fascinating do the Henrican legends become: How did someone who never sailed any farther than Tangiers end up with the sobriquet "the Navigator"? Whence the tales of his "School of Sagres," an academy of cartography and celestial navigation that never existed but has haunted Henrican scholarship (and Portuguese nationalism) in the twentieth century? Russell has written about these matters elsewhere, as have others, but he has put them aside here, even as they become more urgent with each studious page. It is the peril of mythoclasts everywhere: the better they succeed in showing how wrong we were, the more captivating do our erstwhile illusions become.

D. GRAHAM BURNETT

Kirsten A. Seaver. *Maps, Myths, and Men: The Story of the Vinland Map.* xxi + 480 pp., illus., bibl., index. Stanford: Stanford University Press, 2004. \$24.95 (paper).

In 1964 Yale University Library acquired a small black-and-white world map which may or may not represent the earliest cartographic depiction of the Americas made in Europe: in the upper left corner of the faded parchment, slightly to the west of an easily recognizable (too easily recognizable?) Greenland, appears an island identified as "Vinlanda." The temptation to identify this as an allusion to the "Vinland" of Norse lore, a region associated with Newfoundland and the mouth of the St. Lawrence River, has been understandably strong. If the map can be dated to the mid fifteenth century, as its defenders claim, it would therefore appear to be unique graphic testimony to pre-Colombian European knowledge of the northern "New World." Since archaeological evidence puts it now more or less beyond dispute that roving Scandinavians did indeed spend time in North America, the thin sheet of the Vinland Map no longer needs bear the heavy burden of usurping Columbus's priority. But the burdens on Beinecke MS 350A remain considerable.

In this book, Kirsten Seaver, a gifted independent writer and diligent historian, offers a multi-

pronged attack on the authenticity of this beguiling artifact, which must be ranked with the Shroud of Turin in the pantheon of sensational pseudo-historical flotsam that professional historians mostly stopped caring about long ago—leaving the field to retired chemical engineers, monomaniacal sleuths spinning bizarre cloak and dagger conspiracies, and monolingual webmasters on break from multi-player fantasy games. In this taxonomy, unfortunately, Seaver's exhaustive, informative, but finally maddening study—its merits notwithstanding—must be located in or near category two.

First, the scope and virtues of the exercise. In a pair of introductory chapters, Seaver, who has an enviable command of several difficult and necessary languages, offers the English reader an immensely useful summary of Norse enterprise around North America before 1500 (she has written on this topic before, and puts that work to good use here). In the subsequent six well-footnoted essays, she attends to the Vinland map itself, addressing in turn: its (distressingly vague) provenance; the physical features of the two manuscripts with which it came to light (and which arguably shed light on its origins); the (somewhat suspect) story of its public "unveiling," which was carefully controlled by a set of scholars largely committed to its authenticity; the forensic investigations conducted over the last forty years to assess the age of its paper (apparently old) and ink (apparently pretty recent); its distinctive cartographic forms and their precedents (when these can be found); and its textual component, consisting of a range of toponyms and several longer legends which raise interpretive problems.

Historians of technology may admire several strikingly detailed pages on the history of the modern pigment industry in the US and Norway during the interwar period. Since an important bit of evidence for the map's recent composition is bound up with technical features of the modern milling of anatase (a form of titanium dioxide used in the preparation of inks), Seaver goes so far as to reconstruct a remarkable timeline for the mining, preparation, and commercial availability of industrial anatase pigments in Europe and elsewhere. Historians of scholarship, connoisseurship, and cartography will appreciate Seaver's careful archival work in the correspondence of the curators, book-dealers, philanthropists, publishers, and historians whose tangled rigging of expertise, enthusiasm, generosity, optimism, and (yes, probably) hucksterism hoisted the map to prominence after 1965. If we needed to be reminded that there is a politics of knowl-