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Schotte, Margaret E. Sailing School: Navigating Science and Skill, 1550–1800

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See table of contents

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cet ouvrage dû à l'utilisation du papier glacé d'une couverture à l'autre et à sa taille. Le choix des auteurs et des deux maisons d'édition imposent en effet une certaine expérience et un usage de ce codex, de la même façon que la grandeur des livres de chœur en *in-folio* impose un type d'utilisation et d'expérience de la lecture. L'ouvrage lui-même inclut une liste des illustrations et une liste de manuscrits et de *sigla*, ainsi que des appendices : une série de planches en couleurs, une bibliographie, un index général, un index des œuvres musicales par compositeurs et un index des manuscrits. Ces outils se démarquent par l'excellence de leurs références et s'avéreront donc particulièrement utiles. Il est par ailleurs révélateur que ces pièces n'incluent pas un index des sources imprimées. En effet, en dépit de la richesse des articles sur les sources imprimées, ce sont les études de sources manuscrites qui s'imposent et mobilisent la plus grande part de l'attention des auteurs. C'est peut-être le seul bémol à mettre à cet ouvrage qui accomplit une synthèse qui était tout à fait nécessaire. Il s'agit en effet d'un travail réellement interdisciplinaire, à la croisée des chemins entre l'histoire du livre et du livre de musique, entre l'histoire culturelle et celle des relations entre les divers acteurs du milieu musical du début de la Renaissance.

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Schotte, Margaret E.
Sailing School: Navigating Science and Skill, 1550–1800.
Baltimore: Johns Hopkins University Press, 2019. Pp. xi, 297 + 79 ill. ISBN 978-1-4214-2953-3 (hardcover) US$59.95.

Margaret E. Schotte provides a significant study of education, practical and theoretical, in navigation, science, and skill from 1550 to 1800 in western Europe, principally in Spain, the Netherlands, France, and England (Britain). Navigation, as she says, was a practical art and a theoretical science and was integral to imperial expansion and international trade and invention (3–5). Schotte explores how navigators learnt their skills and how seamen became navigators. In a history of information, she examines education and technology in terms of development, codification, and transmission. In other words, Schotte views training in navigation as a way to analyze how "a traditional craft" became

"an applied science," particularly owing to the printing press (4). As someone who often works in transnational, comparative, and global contexts, I admire this aspect of Schotte's work. She notes that the lectures, oral examinations, and textbooks provided the model for education in the Netherlands, France, and England.

Quite sensibly, Schotte examines an array of textual materials by and for navigators, such as logbooks, almanacs, charts, administrative documents, textbooks, and manuscript workbooks. She also attempts to recover practices from the ship's deck and the classroom. This method leads Schotte to conclude that navigators were technicians skilled in analysis and mathematics who should be part of studies of the Scientific Revolution or natural philosophy (5–6). Mariners, at home in theory, numbers, and innovation, adapted technologies and gave critical responses (6). Administrators sought men familiar with the sea and to whom they could introduce new theories based on "celestial navigation" (6). The French considered Newfoundland and New France as good places to learn navigation. By the end of the seventeenth century, navigation became more mathematical (6–7). Schotte's case studies show some experts siding with theory and mathematics, and others with practice in which fishermen use non-mathematical methods (7). The role of experts, as Schotte notes, involved relations between technology and politics, science and environment (8). She explores the culture and ideas of men who worked with their hands—for instance, how they combined old and new strategies—and argues for a consideration of practice, print, and technical education through the study of navigators (8). Texts, like Joost van Breen's, could help to transform sailors into navigators, a profession with social mobility based on skills such as observation, interpretation of waves and charts, intuition, memory, and mathematics (9).

Schotte takes into account the documents mariners collected and created on each voyage, such as logbooks, almanacs, licensing and financing papers, personal ephemera, and other documents such as student notebooks and publications focused on the sea and navigation (9). She reads these texts to illumine the relations among authors, readers, and teachers, and examines how printing changed the theory and practice of navigation (9–10). These printed books could readily record much data, such as astronomical tables, and produce images of maps and diagrams, thereby changing the practices and education of navigation (10). The more than six hundred titles in navigation from 1509 to 1800—which were concentrated mostly in Spain and then in the

Netherlands and England (as well as, to some extent, in France) and varied according to where in the world one was sailing—form the corpus for Schotte's study (10). She asserts that these manuals were made for different audiences, including gentlemen but also members of the various maritime communities (10). Printing, in nautical manuals for example, allowed for the exchange of knowledge, models, and techniques across national boundaries to the extent that in schoolrooms there were similar ideas, practices, and expectations in teaching (10–11). Schotte draws on the history of reading, specifically those practices in early modern western Europe, to explore information and ideas, manuscripts, and print in the world of the mariners (11). She analyzes cosmological definitions in Spain, merchant's arithmetic in England, and the calendar and tides in the Netherlands (11). For Schotte, textual analysis demonstrates the most significant and challenging topics to navigators and their instructors (12). Techniques such as memorization and diagrams in these books can reveal how the mariners learnt: in letters, numbers, and images (12).

Practice and print are central concerns of Schotte. Her prologue focuses on the way the Spanish crown, from the 1520s on, used classrooms, the demonstration of instruments, and examinations to train navigators, and how its textbooks had intellectual origins in the universities (12–13, 17–25). Chapter 1 concentrates on Amsterdam and the high status of mariners in this urban setting and maintains that the markets for navigational classes, instruments, and manuals developed there earlier than in other parts of Europe (13, 27–61). The second chapter examines Dieppe as a hub for trade and a centre of information, and analyzes how Guillaume Denys's two textbooks changed maritime education in France owing to their reliance on formulas, trigonometry, and logarithms as opposed to instruments and memory (13, 63–91). Chapter 3 focuses on Greenwich in the 1680s, discussing teenagers at the Royal Mathematical School (RMS), masters from the merchant marine, and gentlemen looking to become lieutenants in the Royal Navy (13, 93–113). Samuel Pepys asked Isaac Newton and Edmond Halley to offer their views on advanced trigonometry; there was a balance of theoretical and practical learning (14). The fourth chapter looks at the Netherlands in 1710, as this country was more decentralized and more given to markets. Publishers there began to include practice examinations that shaped curricula, practice, and careers. Schotte also examines how manuscripts document teaching techniques (14, 115–47). Chapter 5 discusses Lieutenant Edward Riou, who guided a vessel for the Royal Navy in 1789 after it had hit an

iceberg, and how he used his practical skills of fifteen years at seas as well as the mathematical knowledge evident in his logbooks and school workbooks (14, 149–71). The epilogue ends on the verge of the nineteenth century; the nautical manual has become a student textbook (14, 173–84). Classroom and shipboard continue to dwell in tension in search of technical education.

Each maritime nation in western Europe contributed to navigation. For instance, in its expansion across the oceans, Spain had valued the *piloto*, and Amerigo Vespucci was the first *piloto mayor* in 1508 (17). In Dieppe, Denys, who transformed French navigation, saw theory as coming before practice (63). The graduates of the RMS affected other institutions in England but were also recruited for more general mathematical knowledge in other places like Virginia and Russia (112). In the eighteenth century, the Dutch nautical manuals became more specialized and had smaller audiences; the increasing mathematical skill of sailors did not necessarily raise their social status (146–47). Riou combined good judgment and meticulous computations (171). Schotte concludes her accomplished book with a reminder of and tribute to the importance of navigators for science, communication, and practice, and their role as links in global history and local history: working men whose voices "offer a vital new chapter in the story of how science develops in the wider world" (184).

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Sgarbi, Marco.
Francesco Robortello (1516–1567): Architectural Genius of the Humanities.
New York: Routledge, 2020. Pp. x, 183 + 7 b/w ill. ISBN 978-0-3672-2487-5 (hardcover) US$155.

Marco Sgarbi's volume is the first monograph devoted to the humanist Francesco Robortello and his multifaceted intellectual production. The main body of the book is divided into six chapters, each accompanied by an articulated bibliography detailing Robortello's works referenced in the chapter as well as the primary and secondary sources (manuscript and in print). While the first chapter accounts for Robortello's life and works, each of the following