that mathematics, history, religion, philosophy, and social context were all significant in making sense of Greek mathematics, and convinces the reader that this history is an important link in the transformation of natural philosophy into a mathematicized enterprise.

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Cesare S. Maffioli. *La via delle acque (1550–1700): Appropriazione delle arti e trasformazione delle mathematiche.*

Hyperchen, Testi e studi per la storia della cultura del Rinascimento 4. Florence: Leo S. Olschki, 2010. xxii + 391 pp. index. bibl. €43. ISBN: 978–88–222–6008–6.

Cesare Maffioli recounts the intellectual history and professional development of mathematics as transformed by the appropriation of methods, problems, and expertise from the arts during the sixteenth and seventeeth centuries. *Arts* here encompasses a broader meaning of practical and manual activities, for the most part, engineering and mechanics. Maffioli shows how this development was tied to a fascinating array of issues relating to water, including the velocity of currents, the functioning of suction pumps, the molecular composition of water, and the origin of mountain springs.

Maffioli's thematic approach highlights the work of Girolamo Cardano, Benedetto Castelli, and Domenico Guglielmini. The first chapter covers a hodgepodge of topics on the relationship between art and science, setting up a recurring theme of tensions and resolutions between theory and practice. Maffioli shows the influence of mechanics on Galileo's mathematical writings on motion and materials. Rather than separate domains, Maffioli sees science completing art, taking it to a level of "generalità e di esattezza" ("generality and precision," 11). The author makes an analogy with the medical profession, which Cardano criticized for its divide between learned doctors and manual surgeons. Just as mathematicians appropriated from the mechanical arts to better guide its ways, Cardano called for doctors to learn the surgical arts to better supervise their work.

The discussion of encyclopedist Cardano and the arts brings to life the rich intellectual and political context of Spanish-occupied Milan. Cardano referenced practitioners of architecture and engineering, including Francesco di Giorgio, Milanese blacksmith Galeazzo de Rubeis, and Spanish hydraulic engineer Jéronimo Girava. Cardano's ideas on the motion of water, particularly in relation to determining a measurement for an "oncia d'acqua," are compared carefully with those of Leonardo da Vinci. Though Cardano had his detractors, Maffioli champions his efforts to treat the arts in a scientific way, that is, classifying them and investigating their causes and effects, explaining their diverse mechanisms with "metodo geometrico" ("a geometric method," 61).

The material on Benedictine mathematician Castelli begins with aspects of the "nuove scienze" promoted by him and his master, Galileo, based on experiments and observations drawn from technical (artistic) fields. The principles and causes of motion, the corpuscular structure of matter, condensation and rarefaction of bodies, and the continuity and incompressibility of running water were some of many important issues debated. Maffioli presents an intriguing nexus of intellectual, social, and political problems related to particular rivers, such as Galileo's writings on the Bisenzio and Castelli's criticisms of architect Giovanni Fontana's observations of the Tiber. Maffioli's in-depth treatment of the conflicting views on proposed alterations to the Reno exhaustively treats the hydrographic and scientific issues as well as the politics of the Barberini pontificate and the tensions between Bologna and Ferrara. There is even a suggestion that this issue had bearing on the concurrent procedures against Galileo by the Inquisition.

A final chapter is devoted to the Bolognese mathematician Guglielmini and "naturalità," (naturalness) another recurring theme. In contrast to traditional notions that art should dominate nature, Guglielmini proposed that art should imitate nature: for example, artificial courses or beds should serve to stabilize the river's natural slope or course. Guglielmini and his predecessors argued that machines follow the same laws that govern nature, a "naturalità" of the mechanical arts that could be extended to mathematics, supporting a concept of nature as final, uniform, and based on mathematical regularity (296). Following an experiment on atmospheric pressure and water currents, Guglielmini celebrated his proof as "la meravigliosa costanza e uniformità dell'operare della natura, che indirizza i fenomeni naturali secondo leggi determinate" ("the marvelous constancy and uniformity of the operations of nature, which directs natural phenomena according to determined laws," 315).

The author's mastery of writings on science and philosophy is impressive, and he writes with detail and precision about dense topics. Some may be disappointed at the limited references to architects involved in the renowned villas, gardens, and fountain projects of the time. But Maffioli is true to his aim, the practice and discipline of mathematics. Given the difficulty of such specialized material, we should be grateful that Maffioli has culled out these important themes and contexts, shedding light on the significance and vibrancy of the history of mathematics and the "scienza delle acque."

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Warren A. Dym. *Divining Science: Treasure Hunting and Earth Science in Early Modern Germany.*

Studies in Central European Histories 52. Leiden: Brill, 2011. xi + 216 pp. index. illus. gloss. bibl. $141. ISBN: 978–90–04–18642–2.

One of the central narratives of early modern European history has long been that of the "decline of magic," to cite a key phrase from the title of Keith Thomas's magisterial tome on witchcraft and popular culture in early modern England. Numerous scholars of the period have pointed to how, across Europe, beliefs in occult