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(*b*. Lyons, France, 5 September 1725; *d*. Versailles, France, 19 December 1799)

mathematics, history of mathematics.

Montucla, the son of a merchant, attended the Jesuit *collège* in Lyons, where he received a thorough education in mathematics and ancient languages. Following the death of his father in 1741 and of his grandmother, who was caring for him, in 1745, he began legal studies at Toulouse. On their completion he went to Paris, drawn by the many opportunities for further training. Soon after his arrival there he undertook the study of the history of mathematics. His work on the quadrature of the circle (1754) brought him a corresponding membership in the Berlin Academy. In the same year he announced the forthcoming publication of what was to be his masterpiece, *Histoire des mathématiques*. The exchange of ideas in the literary circle that had formed around the bookseller and publisher Charles Antoine Jombert (1712–1784), which included Diderot, d'Alembert, and Lalande, was very valuable to him. Before the appearance of *Histoire des mathématiques*, Montucla published, in collaboration with the physician Pierre Joseph Morisot-Deslandes, a collection of sources on smallpox vaccination (1756).

From 1761 Montucla held several government posts. His first appointment was as secretary of the intendance of Dauphiné in Grenoble, where in 1763 he married Marie Françoise Romand. In 1764–1765 he was made royal astronomer and secretary to Turgot on a mission to Cayenne. After his return, Montucla became inspector of royal buildings (1766–1789) and, later, royal censor (1775). From this period date his new edition of Ozanam's *Récréations mathématiques* (1778) and his translation of Jonathan Carver's account of travels in North America (1784).

As a result of the Revolution, Montucla lost his posts and most of his wealth. He was again given public office in 1795—examination of the treaties deposited in the archives of the Ministry of Foreign Affairs—but the salary was not sufficient to meet his expenses, so he also worked in an office of lhe national lottery. During these years Montucla, at the insistence of his friends, began to prepare an improved and much enlarged edition of *Histoire des mathématiques*. The first two volumes appeared in August 1799, four months before his death, just when he had been promised a pension of 2,400 francs.

Montucla's major work, the first classical history of mathematics, was a comprehensive and, relative to the state of contemporary scholarship, accurate description of the development of the subject in various countries. The account also included mechanics, astronomy, optics, and music, which were then considered subdivisions of mathematics; these branches *(mathématiques mixtes)* receive a thorough treatment in both editions, and only a third of the space is devoted to pure mathematics. The first volume of the two-volume edition of 1758 covers the beginnings, the Greeks (including the Byzantines), and the West until the start of the seventeenth century; the second volume is devoted entirely to the latter century. Montucla originally planned to take his work up to the middle of the eighteenth century in a third volume but could not do so, principally because of the abundance of material. In the second edition, extended to cover the whole of the eighteenth century, he was able to reach this goal. Much remained unfinished, however, since Montucla died during the printing of the third volume. Lalande, his friend from childhood, assisted by others, completed volumes III (pure mathematics, optics, mechanics) and IV (astronomy, mathematical geography, navigation) and published them in 1802.

Many authors before Montucla—beginning with Proclus and al-Nadim—had written on the history of mathematics. Their accounts can be found in the citations of ancient authors, in the prefaces to many mathematical works of the sixteenth through eighteenth centuries, in university addresses (for example, that of Regiomontanus at Padua in 1464), and in two earlier books that, as their titles indicate, were devoted to the history of mathematics: G. I. Vossius' *De universae mathesios natura et constitutione* (1650) and J. C. Heilbronner's *Historia matheseos universae* (1742). All these early efforts constituted only a modest beginning, containing many errors and legends, and the latter two works give only a jumble of names, dates, and titles. Montucla was familiar with all this material and saw what was required: a comprehensive history of the development of mathematical ideas, such as had been called for by Bacon and Montmor. Inspired by them Montucla undertook the immense labor, the difficulty of which he recognized and which he carried out with his own research in and mastery of the original texts.

Montucla had no successor until Moritz Cantor. The *Histoire des mathématiques* is, of course, obsolete—as, in many respects, is Cantor's *Vorlesungen*. Yet even today the expert can, with the requisite caution, go back to Montucla, especially with regard to the mathematics of the seventeenth century.

BIBLIOGRAPHY

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II. Secondary Literature. See the following, listed chronologically: Auguste Savinien Le Blond, "Sur la vie et les ouvrages de Montucla. Extrait de la notice historique lue à la Société de Versailles, le 15 janvier 1800. Avec des additions par Jérôme de Lalande," in Montucla's *Histoire des mathématiques*, IV, 662–672; G. Sarton, "Montucla (1725–1799). His Life and Works," in *Osiris*, **1** (1936), 519–567, with a portrait, the title page of each of his works, two previously unpublished letters, and further bibliographical information; and Kurt Vogel, "L'historiographie mathématique avant Montucla," in *Actes du XIe Congrès international d'histoire des sciences*. III, 179–184.

Kurt Vogel