THE STUDY OF MODERN MATHEMATICS IN THE *MILITARY COURSE OF MATHEMATICS* (1753-1756) OF PEDRO PADILLA

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Abstract. In 18th-century Spain military institutions played an essential role in the teaching of higher mathematics [3], [5]. Toward the end of 1750, an Academy of Mathematics was established at the Royal Guards Barracks in Madrid and was ruled by Pedro Padilla (1724-1807?) until it was dissolved in 1760. In 1753 Padilla began publishing his *Curso Militar de Mathematicas* [*Military Course of Mathematics*] for the specific use by this Academy. The preface of his first volume shows that Padilla's primary aim was to show that understanding the basic principles of each branch of mathematics could be useful to not only infantry and cavalry regiments, but could serve engineers, artillery and navy personnel. Besides, the publication of Padilla's course was also an early initiative done so during a time when the tradition of dictating was still very strong. Of the twenty mathematical treatises that Padilla originally intended to develop, only the first five would be published in the end (in four volumes). The fourth volume (1756) is the most innovative, since it contains the earliest educational works on analytic geometry and calculus published in Spain, namely: *On Higher Geometry, or Geometry of Curves* (Treatise IV) and *On Differential and Integral Calculus, or the Method of Fluxions* (Treatise V) [1], [4]. The writing and reading of educational books and, in particular, of mathematical courses, play an active part in the construction and circulation of scientific knowledge, a relevant aspect in countries traditionally regarded as "peripheral" [2]. The more so since the authors had to make choices regarding which sources to use for the development of their works. Hence, the aim of my contribution is to explore the mathematical influences that can be identified in the fourth volume of Padilla's course, and to analyse how Padilla adapted and appropriated these sources. The analysis of the treatises IV and V of Padilla's mathematical course contributes evidences of the study of modern mathematics in 18th-century Spain.

References

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