Ruggiero Boscovich, Viaggio astronomico e geografico nello Stato della Chiesa (1750–1752). Introduzione Luigi Pepe. Traduzione e note Stefano Franchini. Pisa: Edizioni della Normale, 2011

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Boscovich, Ruggiero Giuseppe (Bošković, Rudjer Josip; Pepe, Luigi; Franchini, Stefano)

Astronomic and geographic journey through the Papal State (1750–1752). Introduction by Luigi Pepe. Translation and notes by Stefano Franchini. (Viaggio astronomico e geografico nello Stato della Chiesa (1750–1752).) (Italian)

Mathematica, Centro di Ricerca Matematica Ennio De Giorgi (CRM) 2. Pisa: Edizioni della Normale. xxv, 144 p. EUR 20.00 (2011). ISBN 978-88-7642-422-9/pbk

A familiar constituent of the heroic folklore of the history of science-cum-philosophy concerns the 18th-century determinations of the length of the meridian and hence of the shape of the Earth, supposed to decide whether Descartes or Newton was right. The present book, presenting the actual motivations and argument of a participant, is an pleasant refutation of this too cheap and anecdotic way to put the history of science into cultural context, showing the conflict to involve, on one hand the diverging predictions of Huygens and Newton, on the other the actual measurements which were made - first the one that suggested the Earth to be elongated at the poles, then those of Lapland and Peru which seemed to make it even more flattened than allowed by Newton (who already predicted a stronger flattening than Huygens).

Boscovich's text starts by a description of the opinions about the shape of the Earth since Greek Antiquity, going in detail with the period beginning with the Picart-Cassini measurement of the meridian (c. 1700). He is among the first to propose that the contradictory measurements were due to the influence of massive mountains and mountain ridges on the direction of the plumb line.

The second part of the text describes the voyages Boscovich undertook together with his fellow Jesuit Christopher Maire through the Papal States in order, on one hand, to measure the meridian between Rome and Rimini, on the other, to correct the existing maps of the area (a task for which Maire was the main responsible). The account gives a vivid impression of the many kinds of difficulties they encountered - due to the need for having new precision instruments made; to the many troubles obstructing the establishment of permanent measuring points in the terrain; to horrible weather; and to suspicious peasants and clergy (etc.). As is said, not very different from the challenges encountered by the French expedition to Peru. In both parts, Boscovich shows himself to be not only an eminent scientist but also an eminent popularizer.

Boscovich originally published the report in four books together with *Ch. Maire* in Latin [De litteraria expeditione per pontificiam ditionem ad dimetiendos duos meridiani gradus et corrigendam mappam geographicam, Rome: Palearini. xxi, 516 p. (1755; Zbl 06115397)]. A French translation was made in 1770, provided with explanatory notes [(Voyage astronomique et géographique, dans l'Etat de l'Eglise, entrepris par l'ordre et sous les auspices du pape Benoît XIV, pour mesurer deux dégrés du méridien, et corriger la Carte de l'Etat ecclésiastique. Paris: Tillard. xvi, 526 p. (1770; Zbl 06115396)]. The present book is a translation of book I of the French translation, provided with another set of 285 notes, mostly identifying persons and localities. Unfortunately, both sets of

notes appear as end notes, which may make the book more aesthetically pleasing but definitely causes it to be cumbersome in use. The introduction contains a biography of Boscovich, and gives a number of picturesque details from the voyage which Boscovich told about in private letters but not in the book.
A number of the French notes refer to technical details to be told in book 4. Readers who are interested in them (and those who read French but not Italian) can find a decent on-line reproduction of the whole French translation on the address `http://www.e-rara.ch/zut/content/titleinfo/330768 (DOI: 10.3931/e-rara-1211)`.

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