

reviews

**The Man Who Flattened the Earth: Maupertuis and the Sciences in the Enlightenment**

By Mary Terrall  
Chicago: University of Chicago Press, 2003. 408 p., 3 halftone illustrations, 23 line drawings, bibliography, index. ISBN 0-226-79360-5, hard-cover. \$39.00

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Pierre-Louis Moreau de Maupertuis (1698-1759) is not a household name. He is not as familiar to most as are Newton, Voltaire, Cassini, or Celsius, other seventeenth and eighteenth century names in science and literature. Maupertuis made no great discoveries and many of his theories were contested at great length and frequently acrimoniously.

Maupertuis was a polymath who studied and wrote on mathematics, geodesy, astronomy, biology, and metaphysics. He was elected to both the French Academy of Science and the Académie française (literary society), a rare honor for a scientist. He was asked by Frederick the Great to head the reformed Berlin Academy of Science and Belles Lettres. A high point of his career was his expedition to Lapland to prove that the earth was flattened at the poles rather than elongated.

*The Man Who Flattened the Earth: Maupertuis and the Sciences in the Enlightenment* is an intellectual biography of the man and what it meant to be a man of science in the Enlightenment, a time when the way to such a career was not clearly defined. The emphasis of the book is on the subtitle; only

two chapters deal with the “flattening of the earth”—one on the expedition to Lapland and one on the polemics that followed.

The book consists of eleven chapters in roughly chronological order that trace Maupertuis’s life and thinking from his birth in St. Malo to his death in 1759 in Switzerland. Each chapter deals with one or more of Maupertuis’s often controversial papers or books. The expedition to Lapland is described in detail, but the following chapter, “Polemical Aftermath of the Expedition,” is the more entertaining. Here the author details the acrimonious writings of Cassini and others who denounced Maupertuis’s work as faulty at best, and definitely shoddy because a certain procedure was not followed, and the rejoinders by Maupertuis and Celsius that pointed out that the new instruments they used did not require the procedure. It makes some modern debates among scientists seem cordial.

Another of Maupertuis’s controversial works, *Vénus physique*, is discussed in “Toward a Science of Living Things.” This chapter describes Maupertuis’s forays into biology and natural history. Maupertuis had, throughout his life, performed numerous experiments on animals from tiny water creatures to dogs. He was interested in reproduction and the formation of the embryo—in the eighteenth century it was not known how the sperm and egg connected. *Vénus physique* was written as a popular book and directed toward a specific unnamed woman explaining how animals and humans reproduced. As usual, his theories were controversial as was the nature of the book. Because it was written to a woman, erotic in itself, and in somewhat the style of contemporary pornography, it created quite a stir.

*Vénus physique* was only one of Maupertuis’s “popular” works.

Especially since he wanted to be elected to the select Académie française, Maupertuis wrote a number of works designed to explain various aspects of science to the educated public and to promote himself as a man of letters; one of these was *Elements of Geography*.

The Prussian king, Frederick the Great, when still crown prince, desired to reconstitute the inactive Berlin Academy of Sciences and Belles-Lettres. His intent was to establish an academy that would rival those of England and France. As early as 1738 Voltaire approached Maupertuis to be the head of the new academy. The Berlin Academy was re-established in 1744 and Maupertuis assumed the position of President in 1745. For this he had to resign from the French Academy and relocate to Berlin where he remained until two years before his death. Many of his writings at this period were not only to advance his own reputation, but also that of the academy and the king.

Along the way, we are given insights into science and society of the time—the discussions in cafes and salons, the interactions with king and court, and the rivalries and alliances between scientists at the time. Discussions in cafes and salons were important forums for scientists and writers then. These were not casual chats over coffee as we might have now, but quite often formal presentations. Well-known salons were presided over by wealthy, educated women who invited prominent scientists and authors to participate. Maupertuis was known in this milieu for his social skills, witty stories, and anecdotes.

Maupertuis, the man, comes across as ambitious, somewhat arrogant, and at times annoying, although contemporaries found him charming and sociable. He was relentlessly self-promoting. Today, we would say that he set

goals and knew what it took to reach them. His great desire was to build a reputation “among the social and intellectual elite, including technically adept men of science” (p. 8). His advice to a colleague was to publish small works often to keep one’s name in the public eye. This isn’t bad advice for junior faculty today.

This is a scholarly book, not designed for the casual reader. There are copious footnotes on every page, usually over 100 per chapter (one reaches 192). There are 22 pages of bibliography and a 16-page index. The author, Mary Terrall, clearly is well-versed not only in her subject, Maupertuis, but also in the time and the science of the time. She is totally at home in the period and knowledgeable of the science, scientists, and scientific disputes. The book is thoroughly researched. Maupertuis’s works were in French as were the manuscript sources (correspondence and some of Maupertuis’s unpublished manuscripts). Professor Terrall did all of the translations herself rather than rely on an outside translator so these are not filtered through another’s views. Often the original French is provided in the footnotes.

The author assumes familiarity with the period of the Enlightenment and the people and places. A reader who is not so conversant with the time, may find him/herself wishing for a cast of characters at the front of the book as in 1930s mystery novels. Professor Terrall’s familiarity with the period has led to some odd omissions; latitude and longitude are carefully explained to the reader, but some terms unfamiliar to a modern reader, e.g. *fluxions*, are not. This is not a fast read or a fast-paced story focusing on one event or theory. Seeing the title, one might assume that the book is concerned primarily with the story of the Lapland expedition, a book along the lines of Dava

Sobel’s highly popular *Longitude*. Anyone expecting that will be disappointed, but one who is looking for a thorough, scholarly treatment of science and society in the eighteenth century will be pleased.

### Cataloging Sheet Maps, the Basics

By Paige G. Andrew  
New York: The Haworth Information Press, 2003  
ISBN 0-7890-1482-3, hardcover;  
0-7890-1483-1, paperback  
\$24.95, xv, 240 pp., tables, illustrations, appendix, bibliography, index.

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If I have learned anything from my experience as an Army Reserve officer, it is this: You do not have to know everything—just where to find the answers. Now, I am not by any means an experienced cataloger. I have no formal training to speak of. However, I have been learning by doing in the company of some very fine experts for over three years now. Some of my teachers, in addition to the author, are acknowledged in this book. I also owe a great deal to bosses and coworkers who show me the ropes every day. I realize that this review is about the book and not about me, but I feel it is important to point out a bit of my background because I think it will help to emphasize how vital this book is to those learning to catalog maps. In the forward, Alice C. Hudson points out that increasingly map catalogers and curators are not map specialists, that the job of map cataloging has been placed upon many who are

unfamiliar with the intricacies of maps and map making. While this is certainly true, and a key audience for this book, my situation is quite different. Having received a geology degree and gone on to study cartography in graduate school, I have always dealt with maps. Even as a child I was fascinated by maps and became the family navigator while on vacation. As a map cataloger/curator, I do not know which is more difficult: having a good understanding of maps but no cataloging experience or vice versa. For the past three years, I have made use of the various sources on cataloging: *Anglo-American Cataloging Rules*, Second Ed., *Cartographic Materials*, MARC 21 *Concise Format for Bibliographic Data*, to name a few. These essential tools have been helpful yet often confusing. *Cataloging Sheet Maps, the Basics* brings the myriad of cataloging resources into focus and points directly to the particular manuals and rules that pertain to specific tasks in properly describing a map.

*Cataloging Sheet Maps, the Basics* consists of five sections, each with clear illustrations and, where necessary, multiple examples of various cataloging situations. The first section, “In the Beginning,” consists of a bit of background into why basic map cataloging is so important as more and more libraries are making the decision to bring their maps up to the level of the rest of their collections where cataloging is concerned. It asks, “What is a map?” And “Why bother to catalog maps?” These are two very basic questions but certainly worth asking. A cataloger who is new to maps might do better knowing what is considered a map and may just be surprised by the answer. Knowing and understanding the parts that go into a map is the key to describing them. As for the second question, I believe that anyone would agree that anything worth having in a