

ples often flock to well-defined urban gay ghettos in major cities (e.g., New York and Los Angeles), lesbian couples are less spatially concentrated and often favor smaller towns. Authors Gates and Ost suspect lesbians are attracted to mid-sized cities that have a reputation for being politically active and are seen as a good place to raise a family (e.g., Madison, WI).

As seen in Figure 1, the right hand side of the atlas layout presents additional demographic data including how that state compares to others, the age structure of the state's same-sex couples, race/ethnic percentages of those couples, and how many have children. Lastly, it shows how the top five metro areas in each state rank nationally (e.g., Atlanta ranks 15th in the nation). While one wonders if these few graphics needed an entire 8.5" x 11" page—resulting in low data density more typically seen with run-of-the-mill powerpoint—they nonetheless add interesting information not shown on the maps.

Throughout the atlas the data are standardized and presented using the same 4-class scheme: *very high*, *high*, *moderate*, and *low concentration*. This was a wise decision because it takes little time to memorize the scheme and it allows readers to compare any map to any other. The one frustration I had, however, was that the meaning of those classes (in the real world) is vague, and it wasn't clear how meaningful the break points between those classes are. The data are standardized in a logical and thoughtful way by using an index which is a ratio of the proportion of same-sex couples living in a region to the number of households in that region.

While the atlas is well executed, there are a number of important limitations that should be mentioned. First, these data are far from perfect. This is no fault of the atlas or the authors, but it is an unavoidable fact that many same-sex couples will not self-report even with the anonymity of the Census. Fortunately, Gates and Ost are keenly aware of this and include a small chapter on undercounting and ways to deal with it. Second, this is not an atlas of all gays and lesbians, it only maps the location of same-sex couples who co-habit. While the number of couples is a reasonable data proxy for the queer population as a whole, it will no doubt have a different geographic pattern, and these maps (I suspect) under-represent urban concentrations of single gay men in particular. There is, however, no other nation-wide dataset available today and the stories these data tell are still fascinating. Overall this is a well done and original atlas.

The Commerce of Cartography: Making and Marketing Maps in Eighteenth-Century France and England

Mary Sponberg Pedley

Chicago: University of Chicago Press, 2005.

345 pp., 41 b&w illustrations, 8 color plates, 7 appendices, notes, bibliography, index. \$40.00, Hardbound ISBN 0-226-6531-2

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"Of singular importance in understanding the meaning of maps and their influence is the work of placing maps in their political, cultural, intellectual, and social context." (p. 10)

Mary Pedley's *Commerce of Cartography* is an important addition to the literature of the map trade. Her stated purpose is "to study the commercial factors affecting the production and consumption of printed maps in the eighteenth-century France and England," but in doing so she provides a context for the maps of the period that should be required reading for all who want to read hidden meanings maps. That is not to say that maps are without such meanings and bias, but rather, that to truly understand what a map says, it is necessary to understand the processes that went into its making. This work is not a study of maps of the period, but of map *making* and map *selling*. The book is organized in three parts and five chapters plus introduction and conclusions, which together follow the process of mapmaking from survey to consumer. Thus, the first section is "Making Maps," including survey, compilation, and production costs. Part Two is "Selling Maps," which includes funding through subscriptions and partnerships, plagiarism (which was a way of cutting costs), and protection of intellectual property. This section presents a case study of the dissemination of maps of Narragansett Bay. The final section, "Evaluating Maps", describes what cartographers and consumers considered good maps, and the *mémoires* produced by cartographers to describe the accuracy and value of a map.

The process of cartography (and the book) begins with survey and compilation; "Getting to Market," discusses the costs of surveys and the costs and methods of compilation. These were the greatest expenses in the map making process, and this fact is important in later chapters that detail the cost of atlases and the reasons for plagiarism.

Working cartographers will find Chapter Two, "The Cost of Map Production" especially interesting in that it details the nitty-gritty of the steps in making a map three hundred years ago and the costs of each step. The sections on engraving, for example, focus not on

the mechanics of using a burin, but on how much the copper cost, how long it took to engrave the map, and such wonderful tidbits as how long it took the engraved map to dry (six weeks!).

Knowing that it cost 2s 6d to color a map in the middle eighteenth century is meaningless out of context, but if you know that it cost the same amount to buy a bushel of apples and that a year's lodging was 30 the figures are more meaningful. Not only are relative costs and comparisons between France and England described in the text, but a series of seven appendices provide information for map production costs in France, England, and North America, plus map and print prices along with wages and expenses in France and England.

Although this is fascinating reading for current working cartographers, it is vital to those who would evaluate maps of the eighteenth century. This information has not previously been readily available to scholars and certainly not in one volume.

As in the twenty-first century, funding for cartographic projects was a problem in the eighteenth. Commonly, money was raised for atlases and other large projects by selling subscriptions. Decisions had to be made about how many maps to include and for what amount. For maps or atlases that were not sold by subscription, distribution became a problem and, at times, getting paid at all was an even larger problem for the draftsmen and others who worked on the maps. These considerations are detailed in Chapter Three, "Getting and Spending."

Chapter Four, "Plagiarism and Protection" notes that copying maps could reduce costs for a map seller in that it eliminated the biggest expense, that of surveying. The differences between 'privilege' in France and 'copyright' in England are explained. Lawsuits, and the ways in which a cartographer could prove his case against a copyist, make fascinating reading. That counterfeit maps could also be dangerous is noted here. In one lawsuit it was claimed that engravers had used portions of a 1710 map and of a 1740 map from the Delisle firm and sold the resultant copy in 1745 with the claim that it was "based on the most recent observations." The suit, brought by Philippe Buache, asserted that such maps were "nothing but a deceit of the public." (p. 111)

Chapter Five, "Multiplying Maps," is a case study detailing surveying and printed charts of Narragansett Bay, Rhode Island. All of the previously discussed processes: surveying, printing, publishing, and plagiarism, are detailed for this group of maps.

Chapter Six, "Giving Pleasure to the Public: Telling Good Maps from Bad" in the section on evaluating maps gives a wonderful perspective on the interactions between different cartographers and between map sellers and the public. Like the chapter on plagia-

rism, this chapter includes squabbles and sniping over the quality, aesthetics, and accuracy of various maps.

The affordability of maps in France and England are discussed, because, to the public, price was often the deciding factor in a purchase. It was also a reason for plagiarism — copied maps, which, again, did not require original surveys, were much cheaper. During the eighteenth century, atlases were often 'customized', that is, the map buyer would select the maps he/she wished to have and the seller would have the maps bound.

Within this chapter, Ms Pedley describes *mémoires* published by French cartographers to accompany their maps. The *mémoires*, of which many modern writers are unaware, describe the cartographer's sources, his reasons for choosing a particular projection, and other details the cartographer felt would show that a map was accurate and worthy of purchase. In the eighteenth century, as in the twenty-first, there was a difference in what a Geographer/Cartographer considered a "good" map and what the customer considered good.

The section on '>blank spaces' is of especial interest to cartographic historians who often are not trained in map making. Blank spaces, which are frequently simplistically interpreted by historians as deliberate silences, were not necessarily nefarious, but a matter of aesthetic design choices. Cartographers of the period acknowledged that omissions could be caused by negligence and bias, but also noted that there were various other reasons for empty areas and lack of information.

This chapter also includes contemporary thinking on symbols, color, and language. Consumers were not always aware of the meaning of conventional signs on maps. Although legends are found on many late seventeenth century maps, symbols were not standardized. Symbols for parks, windmills, trees, cities, and the like were a comparatively recent addition to maps, so aids had to be devised for the reader. One such aid was a '>practice' or teaching map, the forerunner of modern teaching maps that show typical features and lettering that might be encountered.

Ms. Pedley also dispels the myth that color was the provenance of ladies of straitened means. While certainly some women were employed in map coloring, much was done by men who were apprentices to engravers or professional artists. This can also be seen in the United States, where the cost books of Mathew Carey list male map colorists.

The Commerce of Cartography displays meticulous research that utilizes largely primary sources, including letters, *mémoires*, cost books, and maps; the list of secondary sources is exhaustive. Sources in both French and English are utilized, and Ms Pedley, who obviously is fluent in French, has translated passages

from the *mémoires* that would otherwise be unavailable to English speakers.

The writing, while scholarly, is refreshingly free of jargonistic phrases and catch words. It is unusual to find an academic book that is not only informative, but a good read; *The Commerce of Cartography* is such a book.

I am enthusiastic in recommending this book to anyone who has an interest in cartography, whether applied or historical.

Plotting the Globe: Stories of Meridians, Parallels, and the International Date Line

Avraham Ariel and Nora Ariel Berger

Westport, Connecticut and London: Distributed by Praeger Publishers, 2006.

235 pages with maps, pictures, and illustrations (all black and white) \$49.95 hardcover.

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Plotting the Globe cleverly intertwines the stories of dozens of colorful individuals who, through greed, personal gain, political advancement, adventure, and, of course, scientific pursuit helped explore and establish three imaginary circles: the Prime Meridian, International Date Line, and Equator. The individuals and their intriguing stories are woven together into a narrative that on the one hand traces the history of how these circles came into existence, and the other hand, describes how simple ideas, such as a Prime Meridian, could cause considerable international and personal turmoil.

The adage (attributed to Admiral Grace Hooper, the Grandmother of the programming language COBOL) "one measurement is worth a thousand expert opinions" succinctly summarizes the human endeavors that are related throughout this book. The reader is introduced to numerous instances where the supposed accurate measurement taken by one scientist was subsequently refuted and replaced by another measurement that was deemed more accurate by yet another scientist. The authors point out, however, that in most cases each new measurement gained 'accuracy', but the results were never accurate.

Opening the book's front matter, the reader is introduced to a passage from Lewis Carroll's *The Hunting of the Snark* that illustrates the humanistic irony that is echoed throughout the book. The Table of Contents, which follows, organizes the book's material into four

parts: The Meridians, The Prime Meridian, The International Date Line, and The Equator. Next, a Preface briefly describes the book and relates the maritime experience of the lead author. The Acknowledgements wrap up the preliminary matter and illustrates the breadth of information gathered in researching this book.

The Introduction lays out foundational material about the key imaginary lines used to define our world. The section begins with the authors emphasizing that this book is not a "textbook on the history of cartography or exploration" (p. 1), but rather a narrative on the great circles of the Equator, Prime Meridian, and International Date Line and how and by whom they were discovered and the legacies these circles have imparted, and continue to impart, on society in general. The authors further illustrate that the book will not appeal to members of the Flat Earth Society; a society that claims there is insufficient proof that the Earth is spherical and whose principles are lightheartedly denounced. The authors' writing then changes to a more serious tone as they present a concise overview of the Equator and other, smaller, circles of latitude. Longitude is discussed next, highlighting the Prime Meridian and the International Date Line. The information on these imaginary lines helps form a basic level of understanding on which the remaining chapters of the book build.

Part 1 discusses The Meridians and is divided into three chapters. The first, entitled "The Lemon or Orange Debate", examines the great debate between Jean Dominique Cassini (Cassini I) and Sir Issac Newton over whether the Earth was shaped like a prolate spheroid (Cassini's lemon) or an oblate spheroid (Newton's orange). In the opening paragraphs of this chapter, Jean Picard's experiment with pendulum motion is highlighted as the catalyst for the prolate/oblate debate. However, the primary focus of the chapter is on the history of the Cassini Dynasty and their impressive contribution to French cartographic pursuits, and pointing out how, in spite of irrefutable quantitative data, Jacques Cassini (Cassini II) continued to support his father's stance that the Earth was a prolate spheroid.

The second chapter, "What is the Shape of the Earth", tells the tale of two expeditions that would cement the conclusion to the prolate/oblate controversy. The first of the expeditions, to what today is Ecuador, led by Godin, Bouguer, and Conamine, and the other, to Lapland, under the direction of Pierre-Louis Moreau de Maupertius, are each discussed in considerable detail emphasizing the personalities involved. Another component of this chapter is an overview of the meridian survey that took place in Africa under the auspice of Abbé Nicolas Louis de Lacaille. Jules Verne's recently discovered novel *The Adventures of Three Englishmen*