

**DEVELOPMENT
OF THE
AMERICAN ATLAS:
1790 - 1980**

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JUNE 1989**

ABOUT THE AUTHOR. . .

Judith A. Tyner is a longtime member of the California Map Society. She served as Southern California Vice President for a number of years. Dr. Tyner received her doctorate from the University of California at Los Angeles with a specialty in cartography. Her dissertation addressed persuasive cartography - how maps were used to persuade people. Currently, Dr. Tyner is Chair of the Geography Department at California State University, Long Beach. She is involved in two research projects: 1) the study of early Philadelphia map makers and 2) the study of embroidered maps. She is looking forward to completing an introductory textbook on Geography in the near future.

DEVELOPMENT OF THE AMERICAN ATLAS: 1790-1980

Indigenous American atlas cartography had its beginnings in 1795 when the Philadelphia publisher Mathew Carey decided to add an atlas to his line. Since that time, U.S. atlases have undergone many changes, but there has always been a distinctly American style.

History of cartography, like a history of art, can be regarded as a record of changes in styles through time. The style of a work of art or a map is a function of its historical period. The appearance of atlases and maps is influenced by the interaction of three basic categories of factors: technological, which includes printing methods, tools and materials; cultural/social, which includes world events, laws, tariffs, and styles in the other graphic arts; and informational, which includes new descriptive and statistical data about the physical and cultural worlds. In the nearly 200 year history of American atlas cartography several style periods can be identified, and in each period there has been a primary atlas producer who exerted a major influence on atlas styles.

Arthur Robinson has described the history of cartography as a series of cliffs and plateaus or gently sloping plains. The cliffs represent periods of rapid change or revolutions; the plateaus represent periods of little or gradual change. Robinson believes that revolutions come about primarily where there are shifts in the intellectual aspects of cartography, for example mental models and concepts that motivate cartographers, and secondarily from technical factors such as printing techniques, improvements in drawing tools and the like.¹ To these I think a third element, increase in factual knowledge, should be added. The steepest cliffs occur when all of these factors are present--a shift in thinking, the introduction of a major new technology, and an increase in factual knowledge which can be represented spatially. The cultural/social factors, while important in some periods, are a lesser influence.

The nearly 200 year history of American atlas-making covers two major "cliffs" and several smaller inclines. These are reflected in changes in the form and content of atlases and allow us to divide the history into several periods.

My purpose in this paper is to examine changes in the form of general atlases produced in the United States and to provide some explanation for these changes.

Prior to the Revolution, atlases were made in Europe and most of those used in the United States were published in England or France, although some of the individual maps,

especially of the states, were drawn by local cartographers. This situation was due in part to the lack of skilled craftsmen and limited tools and equipment. Even locally produced paper in the colonial period was of poor quality. By the end of the Revolution the situation had changed and a number of elements had combined which permitted American commercial atlas publishing to develop and flourish. These elements were:

1. Independence.
2. Exploration.
3. Development of statistics as a field.
4. National censuses.
5. Rise of thematic cartography.

Independence was, of course, the major factor. The 1790's began a period of deliberate Americanization. There was strong feeling that the new nation should be independent in all fields. In addition, there was an information explosion. Regular censuses were initiated throughout the Western World--the first United States census was taken in 1790--which supplied the new field of statistics with data; scientific exploration, begun in the eighteenth century and continuing throughout the nineteenth century, provided increased knowledge of the physical world. The discoveries of James Cook, Alexander von Humboldt, Lewis and Clark, Long and other explorers produced a wealth of mappable data for cartographers in both Europe and the United States. Thematic maps of various subjects were becoming more common--the nineteenth century is the period of most rapid development of thematic maps. At the same time, population in the new country was increasing rapidly and the westward migration had begun. There was increased need for and interest in, maps and atlases.

In 1790, Philadelphia was the second largest English speaking city in the world. It was the heart of commerce and the seat of government. It was also the center of publishing for the colonies and the newly formed republic. Here could be found printers, engravers, booksellers--all of the necessary ingredients of the book trade. It was inevitable that atlas publishing should have its beginnings here.

Mathew Carey of Philadelphia, who played a leading role in the history of American publishing, literary as well as cartographic, was the first American to integrate all of the factors. In 1795 he published an atlas to accompany an American edition of *Guthrie's Geography*, a popular English textbook, and thereby instituted American atlas publishing. Over the next 30 years the Carey firm published several different atlases, many of which went through multiple editions.

The Carey establishment, unlike European atlas publishers of the period or later American publishers, was primarily a general publishing company, not solely a cartographic firm. It did not employ engravers, cartographers, and map colorists on a full-time basis, but rather employed craftsmen as needed.

From 1795 to 1820, atlases exhibited little uniformity of style. Since each map was drawn and engraved by an individual, there was considerable variation in title style, border and use of illustrative materials. Atlas maps were almost invariably signed by their engravers, and the same limited number of names is encountered repeatedly—Amos Doolittle, Benjamin Tanner, and William Barker especially. Although some engravers specialized in map work, the majority, like Doolittle and Tanner, also engraved illustrations, bank notes, and the like. Few of the American engravers are considered great artists (their portrait work was often crude), but their map work is generally clean and attractive without unnecessary swirls and flourishes. Erwin Raisz compared the appearance of maps in this early period to the architecture of the time because of the clean cut lines, simple border cartouches.² Maps in the early period were engraved on copper plates and the pages were 'tipped' into the book. Because they were engraved, the pages were printed on only one side. Color was applied by hand and was most often used along the borders of countries or states. Hand coloring, of course, raised the price of the atlas. Some individual maps bound into atlases bear the notation 'penny plain, twopence colored.' (Carey's *General Atlas of 1817* was \$12 'plain' \$15, divisions colored, and \$16.50, full colored).

There was little use of text pages in these atlases. The volumes were normally simply a collection of maps. Because text and maps were printed by two different methods, letter press and copper engraving, to include maps and text on the same page was a cumbersome and expensive process, and therefore, seldom done. A rare example was the American edition of Lavoisne published in 1820 by Carey and printed by T.H. Palmer in Philadelphia. It was priced at \$30, half bound, a considerable amount which reflected the printing costs.

In most cases the atlases did not have indices or extensive legends. Initially, the index, when included, was more of a table of contents and referred to entire countries, but as time went on, more indices were used to designate specific point locations. The geographic grid was the usual reference system, but since a single prime meridian had not yet been adopted, this presented some problems. In United States atlases the common solution was a dual meridian system. Since the maps of Europe were often made in England or copied from English maps, they, of course, had London as a prime meridian, but those of the United States had both London and Philadelphia (later Washington, D.C.). The longitude from one prime meridian was shown along the top of the map and from the other along the bottom.

