

the Federal Government. In addition, discussion groups will be organized to discuss certain topics and discussion group reports will be presented.

The Program Committee responsible for the meeting includes:

**Gary Fitzpatrick**  
Geography and Map Division,  
Library of Congress

**Christopher Baruth**  
American Geographical Society  
Collection

**Patrick McGlamery**  
University of Connecticut

**Johnnie Sutherland**  
University of Georgia

**Alberta Auringer Wood**  
Memorial University of  
Newfoundland

The conference dates (October 18 - 19) were coordinated with the dates for the Annual NACIS meeting (October 20 -23). It is open to all interested individuals from the cartographic information field.

To register for the conference, contact:

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*There will be a modest but undetermined  
registration fee*

## reviews

### BOOK REVIEW

*Mapping it Out: Expository  
Cartography for the Humanities  
and Social Sciences*

Mark Monmonier. Chicago:  
University of Chicago Press, 1993.  
301 pp, maps, diagrams, appendi-  
ces, notes, index. \$37.00 cloth.  
(ISBN 0-226-53416-2) \$15.95 paper  
(ISBN 0-226-53417-0).

*Reviewed by Pat Gilmartin  
Department of Geography  
University of South Carolina*

This latest contribution to the cartographic literature by Mark Monmonier is intended to provide scholars in the humanities and social sciences with basic guidance in map authorship and, thereby, to encourage them to use maps in their publications. The author is careful to explain that he did not write this book to serve as a conventional cartographic text: "[a] textbook would have been more rigorously comprehensive and more like a manual..." Rather, the volume focuses on the expository aspects of maps to accompany scholarly discourse.

The book's eight chapters proceed from the fundamental (map scale and projections) to the quite complex (mapping flows, correlations, and multiple variables). Chapter One is an essay on the importance of maps in scholarly communication. Many research topics in the humanities and social sciences contain a spatial component; yet all too often the significance of locations and spatial patterns is forfeited because it cannot be conveyed through verbal descriptions. In the second chapter Monmonier provides an

explanation of map scale and projections, concentrating the latter primarily on equal area projections for world maps and azimuthal projections for maps of less-than-global regions. The chapter concludes with five general rules designed to help map authors select appropriate projections for their maps.

Chapter Three presents an introduction to cartographic symbolization, organized around Jacques Bertin's six visual variables: shape, size, hue, orientation, value, and texture. Monmonier explains the functional relationship between each of the visual variables and specific types of spatial data and then demonstrates how these concepts can be applied to basic cartographic objectives such as portraying locations, routes, densities, and causal relationships among features.

In Chapter Four, entitled "Map Goals, Map Titles, and Creative Labeling," the author shows how the textual elements of maps can, themselves, be used as cartographic symbols to enhance communication through their visual characteristics and placement. The importance of the map title and other verbal links between the map and the text which it accompanies are also discussed. Sources of reference maps, compilation procedures, and copyrights are the themes of Chapter Five. The author's approach to cartographic sources is broad, offering primarily a sense of "what to consider, where to look, and what to look out for." His discussion of copyrights and permissions is more detailed, even to the point of providing a sample form for requesting permission to reproduce a map. This section of the book should be very valuable because it addresses an important issue which baffles most people and, in my experience, is difficult to obtain authoritative information on.

The final three chapters relate to specific thematic mapping procedures. Chapter Six examines the mapping of quantitative data using proportional symbols and the choropleth technique, two methods which have wide application in the social sciences. Monmonier provides basic explanations of the two systems, including scaling and classification, legend design, and graphic design issues. He also addresses in some detail the ethical implications of mapping "count" data versus intensity data. Ultimately he recommends that map authors consider providing complementary pairs of maps showing both counts and intensities. The chapter also contains very timely cautionary notes regarding uninformed use of mapping software to produce choropleth and proportional symbol maps.

In Chapter Seven strategies of representing dynamic geographic processes are explored. Flows of people and things, various spatio-temporal series, and changes along a line such as a frontier or military front are all discussed and illustrated. Chapter Eight deals with the design and use of relational maps, those which are intended to analyze or highlight geographic patterns, trends, and correlations. Monmonier includes in his discussion techniques such as cartographic overlays to illustrate spatial correlations between two variables and mapping residuals from linear regression models. The chapter concludes with several useful suggestions for integrating text and graphics so that the reader can derive the greatest possible benefit from both.

Three brief appendices complete the volume. In Appendix A the author provides a comparison of electronic and pen-and-ink equipment and methods of compilation, symbolization, and labeling, and refers the readers to other sources for more detailed instruc-

tion. The second appendix addresses the topic of an author working with a cartographic illustrator, examining various levels of working relationships and the need for clear communication between author and illustrator. Appendix C is a list of twenty-two selected readings in cartography, among which are traditional cartographic texts as well as volumes on (carto)graphic design.

*Mapping it Out* is organized logically and written in a lucid, straightforward style. Its tone is somewhat informal in places; Monmonier occasionally uses the first-person pronoun, "I," and shares anecdotes from his own experiences with the reader. Don't misunderstand, however. Just because the prose is sometimes casual and the book is aimed at non-cartographers does not mean that it is elementary. The author assumes that his reader is a "scholar-author" (or perhaps a "precision journalist") and quite serious about producing maps to enhance his or her text. This is not a cartographic cookbook containing how-to steps for whipping up a quick map. One cannot just skim its contents for simple cartographic solutions; the book must be read thoughtfully, like the thoughtful work that it is.

Illustrations for the volume include a number of facsimile maps from disciplines such as history, sociology, and linguistics, along with those created by the author specifically for this publication. As much as possible, the graphics appear on the same (or facing) pages with their referring text, a practice which the author recommends to his readers and manages to implement in his own book.

Monmonier advocates a few rather unconventional cartographic practices to his readers. For example, he states that graphic scales should not be used on maps spanning a thousand miles or

more because the stated scale can vary so widely across the map. It is not clear whether he objects simply to this particular form of scale for small scale maps, since it may invite (possibly erroneous) distance estimates more than, say, a representative fraction would, or whether he would recommend providing no scale at all.

Another unorthodox endorsement and practice in his own book is the use of a "visibility base map" for choropleth maps of the United States. This is a base map in which the areas of large states such as Texas and California are reduced, while areas of smaller states such as Delaware and Rhode Island are enlarged so that the areal shading assigned to small units is more legible. The shapes of the polygons representing the states are simplified and caricatured by "exaggerating one or more prominent features" in their outlines (p. 178). While I understand the problem that the author is trying to solve with this base map, I, personally, do not agree with its use. Most Americans are so uneducated about the geography of their own country (not to mention the world); why deliberately present them with an image of it containing significant areal distortion and very simplified, caricatured shapes?

Finally we come to the bottom line of this review with two questions: Will this volume achieve its stated purpose for its intended audience? And how might it serve cartographers, an unintended audience, perhaps, but the most likely readers of this review? My answer to the first question is "yes," for those humanists and social scientists are willing to read a literate exposition on cartographic principles and techniques. As for the second question, cartographers, too, will find much of value in *Mapping it Out* but probably will not use it as a primary text. In tailoring its

content to the needs of writer-scholars in the social sciences, Monmonier necessarily omitted certain topics that would be a standard part of a general purpose cartographic text. □

## BOOK REVIEW

### *Map Use and Analysis (Second Edition)*

John Campbell, Dubuque, Iowa: William C. Brown Publishers, 1993. xi, 429pp., 21.5 x 25.3 cm appendixes, glossary, index. US \$38.00. Paper ISBN 0-697-13579-9.

*Reviewed by Ute Dymon*  
Department of Geography  
Kent State University

*Map Use and Analysis* was prepared as an introductory textbook for map reading on the college or university level. This thorough and adeptly illustrated text reflects the author's many years of teaching experience in the field of cartography which he passes on to the reader in an exceedingly lucid manner. The very cover of this edition conveys a more dynamic, even exciting, image of cartography than the previous edition.

The 429-page text is divided into twenty-two chapters, seven appendixes and a twenty-two page extensive glossary of selected terms. In addition, there is an eleven page index. Each chapter ends with a summary and includes a bibliography with suggested readings. Over three hundred black-and-white figures are included. These maps, graphs, and illustrations were thoughtfully chosen and serve as excellent examples to clearly emphasize relevant points. The content is arranged in a coherent, well-ordered manner, and is not only

easy to follow, but provides the reader with a flow of conceptual material that facilitates mastery of the subject of cartography.

The first six chapters cover issues essential to map understanding, including why maps are useful and how maps are produced. The shape and size of the earth is outlined in Chapter Two. Chapter Three covers basic map projections and their appropriate use. Map scales and generalization are the subjects of Chapter Four. Chapter Five discusses measurement techniques. Route selection techniques and navigation on land, water and in the air are the focus of Chapter Six.

Three chapters (Seven, Eight, and Nine) provide fundamental instructions in surface and terrain representation including reading and understanding of contour maps. Chapter Ten presents a variety of locational and land ownership systems. Chapters Eleven and Twelve survey the characteristics of mapped distributions. Chapter Thirteen covers the general topic of thematic maps and how to interpret qualitative and quantitative information. Cartograms and map misuse are included in Chapter Fourteen. As Lindenberg points out in his review of this text (Lindenberg 1992), the placement of these two topics almost leads to guilt by association.

The last several chapters give an accounting of map types and graphs, mapping operations, and map producers. One entire chapter (Sixteen) is devoted to graphs, a topic often neglected in cartography textbooks. The chapters on remote sensing techniques, computer assisted cartography, and geographic information systems bring this book up-to-date with new cartographic technologies.

The final chapters of the book (Twenty-one and Twenty-two) are a compendium of the major

mapping agencies in the United States and Canada. A discussion is also included of some of the problems one can encounter using foreign maps. A valuable contribution in this edition is a new section on Canadian Government maps and their sources, including addresses for securing magnetic tape or diskettes about Canadian toponyms.

Anybody familiar with the first edition of *Map Use and Map Analysis* will enjoy this second edition even more. Some of the minor errors present in the first edition (see Loy 1992) have been corrected. Campbell has rearranged the Table of Contents to provide greater cohesiveness to the topics in the book.

One of the major strengths of this book is the integration of text and illustrations. The illustrations artfully supplement the text, an important advantage for students. The illustrations are of high quality and readable in spite of the fact that in many cases colored maps were reproduced in black and white.

After using the book in an introductory map use and analysis class, I found some students initially overwhelmed by the many technical terms and math formulas which are part of the text, especially in the theoretical presentations in chapters eleven and twelve. Classroom discussions were vital to put students at ease and to help them clarify the subject matter, however, the majority of students found the text very informative.

*Map Use and Analysis* is not only a textbook for classroom but it is a very practical resource for individuals who have an interest in mapping or cartography. For instance, you can find addresses of government agencies to write and order maps, and one of the appendixes provides sources for mapping programs and microcomputer databases. This is informa-