

census data and other basic information relating to the local government, history, and boundaries of the state. Here one can also find a list of state *things* (eg: animals, beverages, birds, dogs, fish, etc., etc.), the state seal, a map of the counties, and a statewide alphabetical index. Each state is arranged alphabetically by county, and each county, alphabetically by place. Entries contain the class (city, township, etc.), geographical coordinates, zip code, population (1980 and 1990), population density, area (land and water), and elevation. Many entries include the date of settlement, founding, or incorporation, and the origin of the place's name. The county entries also include the name of the county seat and the telephone area code. A complete alphabetical index covering all 45,000 places is located in volume 4, as are several appendices which list American Indian Reservations, U.S. military installations, and major geographic features. The work is thoroughly explained in the introductory pages and its sources of information are revealed in its bibliographies.

This compilation is the result of a considerable amount of thought and labor and brings together a large quantity of information in an arrangement that will be both loved and hated depending on the users current task. Unless one knows the county in which the sought after place is located, it is necessary to consult the index first. This, I suspect will pertain in most instances of usage. Once in the county, one can, however, gain a view of the area which is not possible in an alphabetically arranged work. One way around this arrangement problem would be to issue the work on a CD-ROM, offering a variety of search and retrieval strategies. In summary, this publication has value as a reference work and is recommended for any research library. □

BOOK REVIEW

Basic Cartography for Students and Technicians, Vol I, 2nd ed.

Edited by R.W. Anson and F.J. Ormeling. London: Elsevier Applied Science Publishers for the International Cartographic Association, 1993. 212 + xiii pp., maps, diagrams, graphs, photographs. Cloth (ISBN 0-08-042343-4) paper (ISBN 0-08042344-2).

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While there is an urgent need for a series of introductory books on the basics of modern cartography, preferably with copious quality illustrations of map design and production, this book does not meet that need. Although it is not an uninteresting or irrelevant book, it reminded this reader of the curate's egg which was only "good in parts." Which parts are good and which bad is likely to vary according to the individual, but the overall flavor of this book is one of missed opportunity.

First published in 1984, this is the second edition of Volume I. It has been subjected to a "complete revision, re-edit and update" (Preface). Its five chapters cover "The History of Cartography" (by C. Koeman); "Mathematical Cartography" (by D.H. Maling); the "Theory of Cartographic Expression and Design" (by B. Rouleau); "Map Drawing and Lettering Techniques" (by K. Kanazawa); and "Cartographic Pre-Press, Press and Post-Press Production" (by C. Palm and S. van der Steen). The second Volume extends these topics with coverage of generalization and thematic map design, while the third Volume ("in preparation") will cover map design, GIS, and desktop cartography.

This division of labor raises the question of the relevance of the material in Volume I, which is largely focused on non-digital, not to say old-fashioned, map production. Of course, there is no reason not to write a book that details the proper operation of a pantograph or how to sharpen a pen nib (as this book does), but I think most people would question whether this was quite "mainstream cartography" as claimed by R. E. Dahlberg in the introduction. Indeed, Dahlberg seems to recognize the retro approach of this book when he states that Volumes I and II "provide an authoritative and comprehensive view of the subject as seen during the early stages of the transition from a conventional analogue, or graphics-based, discipline to a database technology" (page 1). In fact, one might say that this volume offers a "view of the subject as seen during" the very early stages as it mentions digital techniques only in passing. It may be that the revised Volumes II and III (not seen by this reviewer) will provide a more modern flavor. Or, it could be said that the international scope of the series encourages a least common denominator approach to avoid excluding those without the very latest technology. This is understandable, but it does not necessarily produce an even or useful book.

Chapter one, "The History of Cartography" is a madcap dash by C. Koeman over six millennia of cartographic history in less than 13 pages (over 450 years per page!). Nevertheless, it manages to provide some generally lively remarks coupled with the book's highest quality illustrations (although the illustrations often seem to have a somewhat tentative relationship to the text). In among the usual suspects (Eskimo maps, Marshall Island stick charts, the Babylon clay tablet, Greek-Roman-Arab-Dutch cartography),

there is a higher than average concentration on China and Japan (2.5 pages), which is to be welcomed, but one wonders what a short exposition like this could be used for apart from whetting people's appetites (and, unfortunately, no further references are provided).

Derek Maling's more wordy chapter (44 pages) on "mathematical" cartography covers his usual material on projections and measurement. Unlike the rest of the book which targets an introductory audience, Maling's chapter is probably the most detailed. His chapter is useful reference material for the student who needs to investigate the sheet numbering system employed by the *International Map of the World* or whether parallels are $R \sin \chi$ or $R \cos \phi$ (both of which this reviewer has in fact needed). GIS users will benefit from the short remarks on coordinate transformation, although the information on how to make grids is more relevant to surveyors than cartographers in this age of derived maps. The discussion of projections is perhaps more mathematical than that found in other textbooks (readers are invited to react to this with joy or dismay as they prefer) but is otherwise unremarkable.

A chapter on the theory of cartographic expression and design by B. Rouleau follows. This is a chapter heavily influenced by the map communication model and its busy evangelists, the visual variables of J. Bertin. Here, we learn that the purpose of maps is to "represent the correct spatial location of data on [the] plane surface" (page 66). A similar comment from Maling that map quality "refer[s] to the positional accuracy of points of detail" indicates the empiricist approach of the book. How different this perspective is to the discussion of maps' power and influence found in Denis Wood's *The Power of Maps*

or Mark Monmonier's *Drawing the Line*. Is this because there is no introductory text for the general reader on theory in cartography or because that theory has largely turned out to be irrelevant to the practice of cartography? Those of us who reject the second position must surely do more to show how the kind of assumptions about cartography made here actually do play determining roles in cartographic "practice."

The most interesting aspect of K. Kanazawa's chapter on map drawing and lettering is his discussion of relief depiction (hachures, contours, and hill-shading). These pages (p. 130 ff) contain some quite beautiful illustrations that demonstrate the power of a skilled airbrush. It would be a pity if this skill were lost, although the capabilities of good raster-based image editing programs (e.g., PHOTOSHOP or COLLAGE) may encourage graphic artists/cartographers to depict relief landscapes in a new medium. However, the rest of the chapter on scribes, pen nibs, and stick-up lettering is more happily defunct.

For those who need a frequent fix of the minutiae of pre- and post-press production, (and who doesn't?), C. Palm and S. van der Steen run the gamut from process camera photography through offset plate corrections to laminating the finished product. Despite my generally critical comments about the concentration on non-digital production in the book, this chapter is still relevant despite its photo-mechanical approach. The notions of "negative" and "positive," registration, separations (layers), and masks are all employed directly or indirectly in desktop publishing/mapping. At the same time, they have an independent beauty and thrill, as anyone who has designed and produced any kind of document can attest, because they are the

basis of publishing. This returns us to chapter one and the historical development of the printing press.

Without the following two volumes it is hard to put this volume in context. Although many of the techniques described here are dated—if not obsolete—this is not the volume's major failing; people will buy it or leave it as they need. More worrying is the vision of cartography as a collection of techniques that is presented. Many contemporary cartographers reject this description, seeking instead to understand mapping as a way of seeing that involves ideology as much as it does symbolization. This understanding will not be apparent to the "students and technicians" who read this book. Because there is nothing here which cannot be found in standard cartography texts, I recommend skipping this volume and moving straight to Volumes II and III. □

ATLAS REVIEW

Disease and Medical Care in the United States: A Medical Atlas of the Twentieth Century

Gary W. Shannon and Gerald F. Pyle. New York: Macmillan Publishing Company, 1993. 150 + vii pp., 120 maps, 9 graphs, 5 diagrams, 1 table. \$95.00. (ISBN 0-02-897371-2)

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This three-part atlas examines both medical care and health in the U.S. since the turn of the century. It is intended for the general public and students, and this is indeed the audience for which it is most appropriate.