

BOOK REVIEW

Cartography: Thematic Map Design, Third Edition

Borden D. Dent. Dubuque, Iowa: Wm. C. Brown Publishers, 1993. 427 pp, 10 color plates, 270 black-and-white figures, 45 tables, 2 supplements. \$57 cloth. (ISBN 0-697-13589-6).

Reviewed by
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Borden Dent's textbook on thematic cartography is now in its third edition. I have used all three editions as texts for my introductory cartography courses. I also reviewed the manuscript for this new edition, so I am in the lucky position as a reviewer of having detailed information on changes in the text. I am impressed by the thorough edit that it received. Changes have been made throughout the text to fine-tune wording and update information as well as remedy minor errors. Because the book has been available in earlier editions since 1985, I will focus mainly on the changes in this new edition.

Overall, the book is an excellent text for teaching thematic cartography. The author uses the language of our discipline accurately and the chapter glossaries are helpful. The topics covered are well chosen and treated in appropriate detail. Basic research and alternate approaches are covered at levels appropriate for novice cartographers. The numerous references and the bibliographies supplied with each chapter highlight the scholarly literature of the discipline. The design of Dent's figures and map examples is excellent, which are essential in a text with the aim of teaching graphic excellence. With

this new edition, many figures have been remade with a cleaner style and 15 new maps have been added, replacing dated examples.

The new edition is well organized into four Parts: Thematic Mapping Essentials, Techniques of Quantitative Thematic Mapping, Designing Thematic Maps, and Map Production and Reproduction.

Part I contains five chapters that introduce thematic mapping, describe projections and their use for thematic mapping, preview general characteristics of geographic phenomenon and symbolization, and review basic quantitative measures. The first chapter has been improved by moving an introduction of map design into Part III where it is more appropriately addressed. Welcome additions are discussions of ethics in cartography, global positioning systems, the resolution against rectangular world maps, the state plane coordinate system, the 1990 U.S. census, Canadian statistical references, and the use of remotely-sensed data. The presentation of the cartographic communication model has also been simplified.

Thematic symbolization techniques are treated in detail in Part II with six chapters; choropleth maps, dot maps, proportional symbols, isarithms, value-by-area cartograms, and flow maps. These chapters were well done in earlier editions and required few changes. Unclassed choropleth maps and the design of proportional circle maps are discussed in more detail than in the prior editions. New and up-to-date map examples sprinkled through these chapters are choropleth maps on crime, proportional symbol maps of cancer rates and 1990 populations, and cartograms of traffic congestion and American Indian populations.

Part III offers a detailed discussion of map design with four

chapters that include visual hierarchy, figure-ground, map lettering, color perception, and color use. Consistent with new trends in cartography, visualization figures more prominently in the introductory material. The visual-hierarchy information is improved by completing the chapter with a reworked map example (a humorous error in the caption acknowledges a student at Geography State University). A discussion of automated map-label placement is added (with a parallel elimination of information on map lettering machines). The chapter on color, which includes ten color plates, has been augmented with Munsell-based printed color charts and extension of the review of color scheme types.

One revised chapter and one new chapter make up Part IV. The chapter on manual techniques has been retitled and improved with added sections on non-impact printing, photo-direct and digital platemakers, and proofing (information on manual non-scribing techniques has been reduced). The largest change in the book is the addition of Chapter 17, Digital Map Compilation and Desktop Mapping. Dent explains the basics of how maps are made by real businesses with real budgets on computers you can actually get your hands on. The text makes sense of elements of desktop computer mapping such as CRT function, affordable peripherals (such as digitizers and scanners), digital base map products (such as TIGER and Digital Chart of the World), and the myriad of file formats.

A switch from manual to computer-assisted mapping does not substantially change the lecture component of introductory cartography because students still need to understand basics such as projections, scale, classification, and isolining. Dent includes current software information but

appropriately sets it aside from the information on basic principles. A new appendix with reviews of five software packages has been added and separate boxed descriptions are distributed through the chapters that focus on symbolization. I would like to suggest a similar treatment of manual production techniques in these chapters (for example, the discussion of cross-screening in the chapter on choropleth mapping should be boxed).

The text is enhanced with new appendices and supplements. In addition to the new appendix of software reviews, an appendix has been added on defining constants for the 1983 State Plane Coordinate System. The appendix on census definitions and sources has undergone major revisions. The text is also sold with two supplements: *Maps and More, Your Guide to Census Bureau Geography* (a 16-page booklet published by the U.S. Bureau of the Census) and *Map Projections* (a poster from the U.S. Geological Survey). One disadvantage is that students that purchase used copies of their texts do not usually receive the supplements and, thus, it is awkward for the instructor to assign them as readings unless they require that the student obtain these items separately from the Census Bureau and the Geological Survey.

One overall negative impression is that the text is sometimes too wordy. For example, the introduction contains too many definitions that are of tangential relevance. They are not wrong, but they are not important to teaching cartography (example: "geographic cartographer" is not a necessary distinction). Likewise, the discussion of the communication model is obfuscated by distinctions between map author, map designer, and cartographer and distinctions between map reader, map viewer, map user, and map percipient. Students new to

cartography will miss key concepts as they wade through the excess subtlety. This overly defined terminology is particularly unconvincing because the author does not stick with these distinctions in the remainder of the text and reverts to standard usage.

In summary, the third edition of *Cartography: Thematic Map Design* is an excellent text for introductory cartography courses that emphasize thematic mapping. It is well written and contains detailed explanations of the nuts and bolts of thematic symbolization techniques. It is also suitable for courses on advanced map design that include color use, typography, and production techniques. Dent's text is comprehensive and accurate, and it allows students to master both the analytical and aesthetic challenges of mapping quantitative data. □

BOOK REVIEW

The Cadastral Map In The Service of The State: A History of Property Mapping

Roger J.P. Kain and Elizabeth Baigent. Chicago & London: The University of Chicago Press, 1992. 423 + xix pp., maps, appendix, notes. \$49.95 cloth. (ISBN 0-226-42261-5).

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In *The Cadastral Map in the Service of the State*, Roger Kain and Elizabeth Baigent present a survey of the diverse forms and uses of state cadastral mapping throughout three centuries of history. Acknowledging that a cadaster may be defined generally as any

property map, Kain and Baigent focus their study specifically on state and public property mapping as an activity apart from private cadastral mapping.

Initially, Roger Kain became curious about cadastral history while writing *Tithe Surveys of England and Wales* (Cambridge: Cambridge University Press, 1985) with Hugh Prince. As a result, he spend over five years conducting research with Elizabeth Baigent to write this new book. The two authors frame their inquiry in the context of Mark Bloch's work on cadasters in the 1930s. They note that although their research, like Bloch's, is concerned with rural cadastral mapping, they maintain a different purpose to their inquiry. Whereas Bloch looked to cadasters "as sources for reconstructing the past rural histories of European countries," Kain and Baigent define the context of their book to be "concerned with the relationships between cadastral mapping and contemporary society: we view cadastral maps as instruments for effecting state policies with respect to landed property and for exerting political and economic control over land." The authors do not examine urban cadasters in this book because of the difference in purpose and use from rural mapping, however, they note that they are in the process of constructing a similar history of urban cadastral mapping.

The story of the cadaster is the story of the state's representation of property when such representation is perceived to be a useful vehicle for power. Beyond this broad purpose, the uses to which cadastral maps have been put are diverse, and it is this diversity of use which the authors seek to analyze. The volume is divided into nine chapters which systematically examine the development of cadasters in different regions of the world between 1607-1907.