write with the end in mind. It boils down simply to knowing where you're going—what is the work's purpose—when you begin to write with any hope of publishing your work.

Monmonier speaks selectively on vintage maps and antiquities as he is, himself, a modest collector of maps. And he delves into a number of cartographic works from the past, adding his own opinion on the variety and type of collectors. I found the topic of collecting particularly appealing as well, in that I have my own meager selection of maps based on their content and relevance to my own research and interests.

All in all, Monmonier's *Memoir* has touches of humor and plenty of respect for his cartographic colleagues and their

work. Readers can appreciate his viewpoint all the more because his publications were written to appeal to the general map-loving public. While his *Memoir* may be of greater interest to the academic crowd, there is still plenty for those of us who are simply map *aficionados*. More importantly, in all his efforts, he educates not only academia, but also the general public, in how maps are and can be used to convey ideas, to sway opinion, and even to fool the beholder. So if you still take a map at face value, look again, and read Mark Monmonier's *Adventures in Academic Cartography: A Memoir*, to follow his exploits in the world of maps. And when you're done with his *Memoir*, you will certainly want to take the journey through *How to Lie with Maps*. You'll never look at a map the same way again.

DESIGNING BETTER MAPS: A GUIDE FOR GIS USERS, 2ND EDITION



By Cynthia Brewer.

Esri Press, 2015.

231 pages, with maps and other figures throughout. \$59.99, softcover.

ISBN: 978-1-58948-440-5

Review by: Amanda Tickner

The author of *Designing Better Maps: A Guide for GIS Users* is Cynthia Brewer, who co-created the popular web resource ColorBrewer, a valuable tool that has been well-regarded for over a decade. She is a Professor and Head of the Department of Geography at The Pennsylvania State University. Clearly, someone well qualified to write a book on the subject of digital cartographic design.

The book addresses the importance of better map design in GIS. Courses in GIS often focus entirely on the analysis tools available and how to use them, rather than on the design of a map output. This book fills that potential gap.

The object of this book is to allow readers to gain an understanding of map design and graphic skills for effective mapmaking. It does so by taking a very fast and brief tour of many topics. Each chapter is introduced with a summary, and includes a bulleted list of major topics. This is a second edition, updates include a new discussion of

feature types and scale as well as improved illustrations (not changed in content but presented in a higher-resolution format).

The preface to the second edition is more interesting than most (usually these are not memorable, in my experience): it features a reflection on how digital mapping has changed over time from the author's perspective. Brief but insightful, it would make a nice longer essay.

Chapter One, "Planning Maps," reviews topics related to design essentials such as map purpose and hierarchy, white space, and layout, as well as the important topic of map projections. There is also discussion of how to solicit and respect critique from reviewers of your draft maps, which is a useful though non-technical aspect of mapmaking.

Chapter Two, "Base Map Basics," discusses map background options (such as elevation maps, imagery, vector features such as hydrology, and property boundaries), their appropriate scale, and techniques for production. There is more methodological information in this chapter with descriptions of methods within GIS used to create hill-shades, etc., though these are not specific instructions nor are they particular to one software package.

Chapter 3, "Explaining Maps," covers the area of map elements including scale bars, grids, north arrows, legends, text placement, spacing, and hierarchies. There is a discussion of wording and specificity in regards to calculations and contents within maps. It was interesting to me that the implication was that these notes should be included in maps themselves rather than in the figure descriptions as is usually the case.

Chapter 4, "Publishing and Sharing Maps," provides information on designing for publication such as print resolution specifications, selecting raster or vector export methods, the importance of citing sources used in maps, and a brief review of copyright and public use licenses. Context of use is emphasized: e.g., differences in approach for different media.

Chapter 5, "Type Basics," describes all things font related, such as font families and styles, size of type and spacing, and effects on type, including shadows and halos. Fonts used in figures and examples are specific to the Windows operating systems. Again, context of use between print and screen publications and selecting appropriate fonts for each is considered.

Chapter 6, "Labeling Maps," covers topics such as the graphical quality of labels, how their abstract properties such as weight and spacing can convey information about hierarchy, and label placement. This chapter might be the most ArcGIS-specific, as characteristics of the software related to annotation and data frames are discussed.

Chapter 7, "Color Basics," considers the perceptual qualities of color, and the technical aspects of its creation. The usage of both CMYK for print and RGB for screen applications are described. This chapter covers color theory, as well as discussing hue, lightness/value, and saturation. These concepts are applicable to most graphic design contexts and this chapter would be useful in non-cartographic contexts (for example, it would be relevant to a data visualization class) though it is heavy on technical detail.

Chapter 8, "Color on Maps," turns the color discussion to specific topics, such as color schemes, creating custom color ramps, and color blindness. The discussion of bivariate color schemes—color patterning that allows for the depiction of two variables—was especially useful.

Chapter 9, "Customizing Symbols," combines much of what was discussed in previous chapters into one topic and provides a nice synthesis of information.

The Appendix contains color schemes and information from the Color Brewer website.

The book ends abruptly; there is no grand philosophical statement or summary of content, just a simple paragraph of encouraging directives, ending with "You will be designing better maps."

I would describe this book as easy to skim; this is a reflection of the terse coverage of topics. However, this approach does cater to busy professionals and students and is probably, on the whole, a plus. The book is peppered with pithy tips: for example, lower case letters have more variation and therefore are easier to read than uppercase alone. Individually these short design tips read almost like a list but if the whole is grasped there is a good grounding in cartographic design to be found.

There were some instances where the quick moving pace let the book down. A topic that really could use a more in-depth treatment was that of hierarchies, which was presented in the first chapter and then referenced conceptually throughout the book. A more involved discussion of this topic would have provided a better frame for the other material to coalesce around.

Maps and figures could be larger; there are many cases where maps fill only half the page leaving a large white space. A wide margin format is something that I have noticed as the "Esri Press house style" and given the fact that this impinges on space for maps, I wish they would reconsider this format.

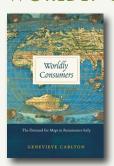
In data visualization and graphic design, cultural differences can often have an impact on perception of information. While color blindness and Section 508 (the federal regulation regarding disability) receive attention, consideration of cultural differences is apparently beyond the scope of the book—though it is briefly mentioned under the heading of audience and context. The focus here is on "analytical" approaches, though these are not always necessarily backed up by citations or references to perceptual studies, and as such on occasion best practices seem like assertions. The well-chosen figures do provide a solid argument in favor of most methods presented, however.

The title indicates that the book is "for GIS Users," so is that the case? Given that the book is published by Esri, I was curious if that was an accurate statement or if "GIS

Users" really meant "ArcGIS Users." More and more people are using a variety of web mapping applications as well as open source software such as QGIS, and so knowing if this is a text that could be useful across GIS tools is important. Overall, the book is broadly applicable to creating maps using non-Esri software and applications, though there were instances where the material was specific to ArcMap and Esri products. Some examples of specific topics that were approached from an ArcMap perspective include the methods described for creating annotations and labels, the fact that the font discussion focused on Windows fonts, and the options for exporting PDFs being framed in terms of ArcMap's capabilities.

This is potentially a good book for students, instructors assigning a text in an introductory technical class, and professionals just starting out in mapmaking in multiple contexts. Some of the material (color theory) is even strongly applicable to data visualization beyond mapmaking. No one subject is covered with extensive depth but altogether the material gives a good grounding to the subject of digital cartographic design and would make an excellent introductory text book for classes in cartography, regardless of software or design tools used.

WORLDLY CONSUMERS: THE DEMAND FOR MAPS IN RENAISSANCE ITALY



By Genevieve Carlton.

University of Chicago Press, 2015.

237 pages, 15 maps, 2 plans, 3 charts, and other illustrations. \$45.00, hardcover.

ISBN: 978-0-2262-5531-6

Reviewed by: Aimée C. Quinn, Central Washington University

Exploring maps through the lens of domestic inventories of Venetian and Florentine households, Genevieve Carlton reveals the "self-fashioning" (Greenblatt 205, 3) of Italian households during the early modern period. The context for this revelation is rather remarkable: public identity was carefully crafted and cultivated through the impact of household items. From the vantage points of the printmaker, the seller, and the buyer, the reader is guided though a fascinating quest to discover what a map is while realizing the artistic breadth of the Italian household. Carlton's tools are household inventories, the personalities of the printmakers of the time, and the maps themselves. It is rather an unusual toolkit for a quest, yet with it the reader is led on a sensational voyage. In her 227-page narrative, including sixty-five pages of notes, index, and bibliography, Carleton carefully explains that the examination of household inventories shows how the Italian consumer's appetites grew to appreciate the map as a distinct art form.

Laid out in six chapters, the book has three over-arching themes: history of printing and map-making; household consumption of goods in the early modern era; and maps as art. Chapter 1, "Capturing the World on Paper: The Visual Tradition and Mapmaking," reviews the history of printing and map-making. This chapter is more than just a cartographic history, however. This chapter sets the tone for the rest of the book by introducing the reader to the world of maps before the printing press was invented.

Chapter 2, "The Commerce of Cartography: Printing, Price, and Francesco Rosselli," introduces the reader to Carleton's work in studying 3,351 inventories which provide a "snapshot of the possessions in the Renaissance home." Her analysis makes a most compelling argument for the use of household inventories as an investigative tool to demonstrate how consumer appetite grew for cartographic resources as much as for other art forms. These inventories are more than just primary sources: she uses them to paint a portrait of the Renaissance consumer to whom "[the] study of the world was seen as something delightful, a worthy and enjoyable pursuit" (123). Suddenly, maps became de rigueur: found in private homes, public spaces, and books. It seemed if one were a member of society, you owned maps in the plural, ornately decorated with many details.

Building on the previous chapter, Chapter 3, "A Buyer's Market: Map Ownership in Venice and Florence, 1460–1630" reveals the consumer appetite for beautiful objects, including maps, as novelty items and the economics