

less a finished product and more a process in constant becoming. The “growth” of the known world and the reshaping of the world map began far before Columbian times, when changes in the form, content, orientation, labels, and legends expressed the struggle between cosmology and reality, and meaning and measurement, and resulted in the “breaking” of the map frame.

The author teaches us a detailed lesson of the literary sources that contributed to the creation of the three different mapping approaches. Her references include short biographical sketches and mention authors such as Pliny, Ptolemy, Pomponius Mela, Macrobius, Solinus, Martianus Capella, Marco Polo, and Ibn Battuta. All this erudition showcases the thorough training in medieval history that Edson has already proven in two previous books, *Mapping Time and Space: How Medieval Mapmakers Viewed Their World* (published in 1997 by the British Library in London) and *Medieval Views of the Cosmos* (co-authored with Emilie Savage-Smith and published by the Bodleian Library at Oxford in 2004). Edson goes beyond the mere reference to the sources and is able to point out cultural, political, and economic contexts of mapmaking during the period. Religious conventions such as the Councils of Constance and Florence, for example, were not only places to discuss Catholic doctrine, but were also real “markets” for the interchange of manuscripts and information and the communication and diffusion of cartographic ideas.

The World Map is not, however, without fault. Despite limits of time, pages and funding, one rather wishes the author could have included colored maps and added more cartographic examples in order to show the relations between the three traditions. As well, the sequence of the chapters does not necessarily follow a convincing logic and only loosely connects the different parts of the book. In some passages Edson’s style appears too “technical,” while some of the detailed academic discussions (albeit carefully referenced in more than 600 endnotes) require insider knowledge.

A striking negative point of the book is the editing of the maps. The small size and inferior quality of some of the map reproductions makes their appreciation almost impossible. The “solution” adopted for the scale issue was to spread almost half of the 38 figures across two pages. As a result of this editorial infelicity, these maps are literally cut in the middle. The beautiful calendar wheel from the Catalan Atlas (1375), depicted on pages 76–77, is the most egregious example of these “cartographic atrocities” that simply spoil part of the reading. Some of the maps could easily have been rotated by 90° for a better outcome.

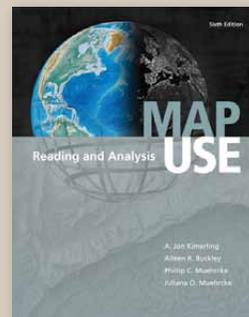
After the description and analysis of the book, there are still some remaining questions that refer to the contents and the significance of the book for us. Why should the readers of *Cartographic Perspectives* care about maps that were created more than half a millennium

ago? Why should geographers, cartographers, and other mapmakers know about Andrea Bianco, Fra Mauro, Abraham Cresques or Ranulf Higden? There is no doubt that the Ptolemaic tradition blended with the rationalist principles of Enlightenment geometry is one of the pillars of present-day cartography. This “cold” cartography of objective space has extirpated much of the humanistic tradition and agency. There is little space given today for human values and subjective worldviews as shown in the tradition of the Portolan charts and the medieval *mappaemundi*. While the modern map is basically a search for the “where” and the “plain representation of physical space,” medieval world maps had tried to answer the “what,” “when,” and even “why” and served as a “veritable encyclopedia of human knowledge and belief about the world.” (p. 227) Portolan-style sea-charts, in contrast to both these traditions, were based mainly on the mariners’ notions of time, space and distance, on dead-reckoning and direct observation. Could/should these two traditions be reintroduced to cartography? Should they be neglected? Could there be a cartography that does not separate cosmology and reality? We easily mock medieval T-O maps that put Jerusalem in the center of the world, but is the Prime Meridian not an equally conventional reference?

There is a recent recovery of these two mapping approaches in arts and humanities (see the recent special issue of *Cartographic Perspectives* [53] on mappings and the arts). However, this more subversive attitude towards cartography does not mean that we have to abandon the principles of scientific cartography. Making objective maps does not mean that we could not have a different worldview—something which could be refreshing in a cartographic world of technologies and precision that is driven by market “laws.” In this sense, Evelyn Edson’s book could be a complementary reading for further reflections, and an invitation to mull over our own cartographic practice.

MAP USE: READING AND ANALYSIS

By A. Jon Kimerling, Aileen R. Buckley, Philip C. Muehrcke and Juliana O. Muehrcke. 6th edition, Redlands, California, Esri Press Academic, 2009. 528 pages, approx. 500 four-color maps, photos, tables and charts. \$99.95, hardcover.



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Map Use: Reading and Analysis is the sixth edition of the well-known and well-received book *Map Use: Reading, Analysis, Interpretation* by Muehrcke

and Muehrcke, who were later joined by co-author A. Jon Kimerling. The recent change of publisher to Esri Press included the addition of Aileen R. Buckley as a new co-author.

This current edition of *Map Use* is divided into Map Reading (Part 1), Map Analysis (Part 2), and three appendices (on digital cartographic data, selected navigation and GPS abbreviations and acronyms, and mathematical tables of values such as mapping units and geographic coordinates of major American cities), plus an extensive glossary and an index.

Part 1: Map Reading forms the main part of the book. It comprises ten chapters covering fundamental principles on how the environment is represented in the form of abstract, generalized maps. Topics like map scale, coordinate systems and projections, land partitioning systems, relief representation, qualitative and quantitative thematic maps, geographic data, image maps, and map accuracy and uncertainty are discussed.

Part 2: Map Analysis focuses on more technical hands-on aspects of map use, for instance: distance and direction finding, area and volume measurements, navigation, and use of the global positioning system (GPS). The eight chapters that comprise Part 2 include three chapters on surface and spatial analysis as well as on spatial association analysis. The latter two include map analysis techniques by use of analytic tools offered in geographic information systems (GIS). Major spatial statistics operations are explained (pattern analysis, Moran's I autocorrelation index, nearest neighbor statistics, and others). This topic, typically not found in comparable map use reference books, is a very useful addition—particularly for GIS users who wish to gain a better understanding of maps and their use and analysis. This newly added content is a good example of how this edition of *Map Use* accounts for the change in mapping from the exclusive use of paper maps to computerized mapping, often by means of GIS. Despite the technological advances, map users still need to understand the underlying principles of maps to be able to use them effectively. This book provides GIS users with these fundamental principles and will help improve their ability to think and communicate visually by means of maps. In addition to GIS-relevant aspects, the book addresses modern technology like GPS and interactive and online maps, thus offering new possibilities in a teaching environment for hands-on exercises on how maps work. At the same time, theories like cartographic communication theory, which were discussed in detail in earlier editions, are omitted. The authors acknowledge the importance of the topic of map interpretation, and state that this topic was singled out for attention in future publishing initiatives. One can only hope communication theory will be added again in a future edition of the book, to offer a more complete and up-to-date introduction to map use and understanding.

The book was designed for use in an undergraduate level introductory course. Therefore, upon request, it is complemented by an instructors' resource CD, featuring lab exercises with answer keys and basic, yet useful, PowerPoint presentations for each chapter of the book. In addition to this, the web pages for this book on the publisher's website offer a student resource page that includes the same exercises and presentations as well as links to some of Esri's free GIS introductory exercises.

The four-color maps and graphics throughout the book are mostly of good quality, although some of the scans (for example, Figures 5.4 and 5.5 on page 86) are of surprisingly low resolution and thereby detract the otherwise attractive look and feel of the book. Another, more irritating, printing related issue is the very strong chemical smell of the book, which, even after weeks on my desk, has not yet disappeared.

My only major criticism is the often-missing "international" component. Although the book includes some international aspects (e.g., land partitioning systems in the U.S. and Canada, and brief explanations of some European grid coordinate systems), it has a very strong focus on mapping-related aspects in and of the United States, which continues throughout all of Parts 1 and 2 and the appendices. It would have been beneficial to include more information on international mapping (such as international cartographic data sources) and map use (perhaps cultural influence in map design and interpretation). Furthermore, a separate section on current international topographic mapping standards, paper and digital, would clearly have benefited the book. The lack of international content is even more surprising considering the worldwide acceptance of previous editions of *Map Use* and of the publisher's (Esri Press) international distribution capabilities. To be truly successful internationally, this important factor should be addressed in future editions.

The regional focus also became evident when I tried to obtain an evaluation copy of this book. Surprisingly, it proved to be impossible for me, as an instructor at a Canadian university, to receive a free copy from the publisher.

Despite this criticism, I recommend the book as a very useful resource for fundamental principles of map use and analysis. Because it can be used both for general reference and as an undergraduate textbook, I have chosen it as a textbook for my introductory map reading course at the University of Regina, Saskatchewan.

A seventh edition of Map Use: Reading and Analysis is expected in Fall 2011.