

Flattening the Earth, Two Thousand Years of Map Projections.

John P. Snyder. Chicago: The University of Chicago Press, 1997. Pp. xviii + 365, 160 maps, 11 illustrations, 6 tables. Softcover, \$19.95. (ISBN: 0-226-76747-7).

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If John Snyder's book, *Flattening the Earth, Two Thousand Years of Map Projections*, were a rock 'n roll record, if I were on Bandstand, and if Dick Clark were asking me to rate it, I would have to say: "It doesn't have much of a beat. It's not very good to dance to. I'd give it a thirty-five." This is not the book most of us would select if we wanted to curl up by a fire on a cold winter's night for a good read. But, if I were researching any aspect of map projections for a presentation, for a cartographic project, or for personal edification, this would be the first source I would consult. Snyder does not write simply as an observer, and an aficionado, of the history and science of map projection, but as a participant in the process. He has several projections to his credit, including a modified stereographic conformal and a satellite-tracking.

The book's four chapters are arranged chronologically, either by conceptual period (Age of Mathematical Enlightenment) or by century. Each chapter is further divided into two parts. The first part describes all map projections used during the period, and the second details the map projections introduced during that time. Each chapter ends in a table listing in chronological order the name of the projection, figures, if any, the inventor's name(s), the date, and significant design elements (i.e., conformal, standard parallels) for each map.

Readers who desire additional information will welcome the extensive bibliography. In short, Mr. Snyder makes it very easy for even the beginning researcher to find the details for any type of map projection created between Claudius Ptolemy's writing of *Geography*, circa A.D. 150, and Mitchell J. Feigenbaum's Hammond optimal conformal of 1991.

This work contains a large selection of illustrations, most of which are maps, but a few are portraits of some of the later inventors. Comparing the first illustration, a T-O map by Isidore of Seville, 1472, with the last, a gnomonic projection of the world on an icosahedron by Irving Fisher, 1943, presents a contrast in world concept that is interesting to contemplate. Isidore's world map is symbolic. Unlike the twentieth century inventors, he was not trying to depict the planet's surface with the greatest accuracy and least amount of distortion. He was delineating his world as he understood it to be. If it were possible to show Isidore a copy of Fisher's map would he know what he was looking at? Would he be able to recognize Africa, Europe and Asia, continents he outlined on his own map? Isidore had a decided advantage over modern creators of map projections, twenty years before the voyage of Columbus, he was depicting a flat earth.

From the development of calculus in the late seventeenth century, to logarithms, slide rulers, mechanical calculators, and personal computers, advancements in the field of mathematics, as Mr. Snyder points out, have strongly influenced the number and variety of projections that were being created. Prior to the beginning of the twentieth century, there were 85 different projections. Since 1900, 180 projections have been created. Mr. Snyder provides the formulas for many of the projections he describes, detailing the steps the inventors went through to produce the final calculations. The

speed of calculation, resulting from the introduction of the personal computer in modern times, eliminates the need for having a practical application. Maps bounded by rhombi, ellipses and regular polygons are created for the sheer pleasure of it.

The only change I would suggest to this volume would be the addition of a glossary. Otherwise, the high quality of writing, the depth of information and the low price on the paperback edition make this a book worth owning for anyone with an interest in cartography or the mathematics of flattening the earth.

Maps and Politics. Jeremy Black. Chicago: The University of Chicago Press, 1997. 188 pp., Index, Maps, References. \$35.00 hardbound (ISBN0-226-05493-4)

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Does our profession or my library need yet another essay about maps and the compromises that cartographers make practicing our craft? Well, yes, we do. Jeremy Black has thoroughly reviewed the minefields of our profession and added evidence to support his thesis that "subjectivity is central to the production and understanding of maps." (p. 168) Maps must be considered in terms of their social and political context. Maps and politics, as Black sets out to prove, are inevitably intertwined.

In the first chapter, "Cartography as Power," Black acknowledges the limitations of the map medium and examines the choices which must be made that are more than technical. It is also important to recognize how space is understood by the map user and to take into account how people in the past perceived their world. After review-

ing the arguments promoted by the late Professor Brian Harley, that maps are tools of those in power, Black concludes that his search for conspiracies is counterproductive. For Black, "the notion that mapping was or is integral to hegemony requires careful analysis." (p. 22) Black's approach to presenting space focuses on the "multiple meanings of space" and how that ensures no one single cartographic strategy will suffice. In his broad definition of politics as "a metaphor for social processes that provide the context for cartography" he sets a course to examine how politics effect the content and the reception of maps (p. 28).

In "Mapping the World and Its Peoples," his second chapter, Black addresses the problems associated with Eurocentrism: projections, map content, nomenclature, and economics. Discussion of projections includes the controversy over which area will be shown at the top of the world map and in the center as well as the inevitable distortions in the size and shape of the continents. While atlases which have more coverage of Europe and North America seem to favor wealthy countries at the expense of the poorer countries, it must be remembered that publishers need to consider the marketplace and who is purchasing these maps. Black makes the point that Eurocentrism in mapmaking is partially redressed by a new emphasis on maps and atlases which focus on the cultures and history of non-Western countries by mapping them without concentrating on their links to the West as well as an increase in the mapping of indigenous peoples.

"Socio-Economic Issues and Cartography" includes the subheadings: the physical world; economic space; social issues; atlases for the environment; controlling resources; consumerism, value and values; tourism; and maps, history and sacred places. In this long third chap-

ter Black examines the specific problems of mapping topics which are subject to being politicized. For example, a degree of environmental determinism may be connoted by placing physical maps before other maps in an atlas. What might seem to be a relatively simple decision of how many rivers to show or what contour interval to use may become a political decision. Mapping economic activity often employs a limited definition of activity as maps reflect a preference for production over consumption, manufacturing over service or financial industries, heavy over light industry and work rather than ownership. Cartographers often have little control over their data sources or how the data is collected and what is excluded from a map may not be as much a political decision as a logistical one.

At the beginning of this century progress was measured in terms of the towns and roads that filled in and tamed the open country. In the last few decades human impact on the environment has become a major theme of contemporary atlases. Black reviews selected environmental atlases and concludes that environmental mapping has been politically aggressive. He feels an atlas like *The Gaia Atlas of Planet Management* (London, 1985) "works" due to the selection of arresting topics and treatments. Political and economic strategies of control and expansion are being questioned and recent maps reflect this change. An example of this more radical approach is Michael Kidron and Ronald Segal's *State of the World Atlas* (London, 1995) with its open hostility to the status quo.

In the next three chapters *Maps and Politics* moves into what are the core political topics: elections, frontiers and wars. Here the author consolidates his ideas. In the "Problems of Mapping Politics" he reviews the problems associated with mapping election results as compared to the greater problems of

mapping the political culture. In particular Black faults the use of choroplethic maps, which use demographic ratios in areas of greatly varying population density, for misleading the map reader. Maps convey objectivity and cartographers may fail to communicate the uncertainty in their data. The spread of powerful mapping software now enables those with little knowledge or interest in maps to produce maps which support their ideology. The cartography may be of a technically high standard, but the topics and symbolization employed are clearly partisan. As an example of this, Black discusses the *National Atlas of Mongolia* (Moscow, 1990), a Communist work. In this atlas the historical maps begin with the 1921-1923 revolution, ignoring the earlier history of the Mongolian people. Black acknowledges how the state uses and abuses maps, but he is hopeful that the development of 'critical-geopolitics' will rethink geopolitics away from state-centric reasoning.

In the fifth chapter, "Frontiers," he investigates the mapping of international boundary lines and the role of frontiers as the cause, course and consequence of conflict. Since maps are an expression of a state's power, they establish the limit of control, the line of first defense and the range of demand for resources. Black notes many examples of controversies involved in establishing European borders over the past centuries. Additionally, the Middle East and Africa offer examples of powers trying to demarcate their authority over poorly mapped and difficult terrain. Maps drawn by treaty, peace accords and commissions have led to even greater conflicts as tensions escalate when local identities and loyalties are ignored or valuable natural resources are involved.

"War as an Aspect of Political Cartography," the sixth chapter, looks at how war is a boon to both the military and the commercial

cartography business. Since the Sixteenth Century, European maritime hegemony has rested on cartographic developments as maps were needed to plan and predict operations and newspapers needed to inform the public about the wars. In 1775, British readers followed the Battle of Bunker Hill from maps published in London four days after the engagement. Black cites other examples of maps made during the American Civil War and the two World Wars. Mapping a war as opposed to preparing for war is quite different. The lines and arrows used in the past to indicate troop movements will not suffice for the modern multi-dimensional war of land, sea and air operations.

Maps and Politics is a fresh look at an old topic. Although some of the ideas may not be new to readers of Mark Monmonier's recent books or Denis Woods' *The Power of Maps* (New York, 1992), Black provides numerous examples to substantiate his opinions. There are some criticisms to be made. The narrative is choppy and takes some unexpected detours. For example, I didn't expect a paragraph on gender differences in map reading in the midst of the chapter on mapping social issues. Some chapters, such as the third one, seem disorganized and try to touch on too many topics. I also have trouble with several map figures. They are not always easy to relate to the adjacent text, although the captions are lengthy and descriptive. There is no list of illustrations and the numerous examples are not numbered. Additionally, some of the figures are not referenced in the index. For instance, the 1933 *London Underground Journey Planner* map referred to in the text on page 15 is shown in the color plate section on page 49, but no such reference to the map appears in the text. It is in the index. Another figure, on page 135, *A New Map of the British Colonies in North America, showing the seat of the Present War (1777)*, is not discussed

specifically in the text nor is there an entry in the index. The map on page 100 from Daniel Dorling's *New Social Atlas of Britain* (1995) needs to be in the 8-page color-plate section to be read effectively. I was also surprised that there was no mention of problems associated with reapportionment in the U.S.

Maps and Politics would work well as supplementary reading for a course with a unit on critiquing maps. It surveys the choices which must be made in mapping and can prepare cartographers to make difficult decisions or, at least, be prepared for difficult situations. The issues Jeremy Black addresses are an important part of professional evaluation and ethics; something each cartographer faces yet may seek to avoid. Cartographers should be comforted in knowing they are not alone in their efforts to please the client and the boss while remaining ethical. The book includes a very extensive notes / reference list which Map Librarians will appreciate. I learned that both the *Atlas of South Asian History* (Joseph Swartzberg, ed., 2nd ed. New York, 1992) and the *Historical Atlas of Africa* (J.F. Ade Ajayi and Michael Crowder, Harlow, 1985) are considered the 'best' for their fresh ideas and honest approach.

cartographic techniques

Maps.com: Solving the Base Map Problem Online

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Building the premier virtual map store with the best address on the world wide web, Maps.com (figure 1) has come about from the combi-

nation of emerging technology, futurist vision, timing, and, of course, creating your own luck. Our advantage is a giant 'map store' with the world's most extensive product list and the ability to be many things to many people. The challenge is to find, apply, or develop the technology needed to keep up with our own imagination.

Our goal with Maps.com is to create an intuitive (read simple) web site that creates a user community around maps, map products, geographical education, driving directions, and travel goods. By offering the ubiquity of the internet, our virtual store can be open 24 hours a day, seven days a week, and it's on every wired desktop in the world and available to anyone. Today we stand on the threshold of opportunity. We are transforming a ten-year-old idea that turned into a company and a new form of communication (the internet) into an expanding revenue stream and an entire department at MAGELLAN Geographix (MG).

Maps.com in its present state has existed since June of this year, yet the fundamental ideal of providing map data online is the premise on which MAGELLAN Geographix was founded.

In the late 1980s as the personal computer was becoming a standard desktop accessory for most graphic professionals, MG founder Chris Baker (University of Oregon) had the idea to create a library of digital maps and deliver them via computer through a subscription service worldwide. With help of Rick Wood (UC Santa Barbara) and Bill Spicer (University of Oregon) a business plan was developed and a meeting was arranged with the news information provider leader Knight Ridder in Washington, DC. The meeting with Knight Ridder produced a handshake and the assurance that the plan was sound, and that perhaps with an adequate prototype investment money could be available.