

efited economically from the war, as did the "gun belt" communities that hosted military bases and firms which depended heavily on profitable military-supply contracts. Can the debates within American policy be reinterpreted in light of Nijman's geopolitical assessment of superpower competition during the war?

Overall this book is a useful contribution to the literature on the geography of international relations. The text is well written, well organized, and thought provoking. Nijman effectively uses empirical evidence to reexamine conventional wisdom, often with surprising implications. Political geographers and others interested in international conflict from a geographical perspective will find the book informative.—FRED M. SHELLEY

ENVIRONMENTAL MODELING WITH GIS. Edited by MICHAEL F. GOODCHILD, BRADLEY O. PARKS, and LOUIS T. STEYAERT. xiv and 512 pp.; maps, diags., refs., index. New York: Oxford University Press, 1993. \$65.00. ISBN 0-19-508007-6.

"Environmental Modeling with GIS" is a large, timely, important collection of essays on geographical information systems that are both informative and delightful to read. They cover a wide range of topics, from the environmental and the GIS perspectives, with the overall strength of interdisciplinary approaches. The purpose of this book is to "facilitate the integration of GIS and environmental simulation models in the areas of scientific research, quantitative resource assessment, and risk analysis." Specific goals include improving the interdisciplinary understanding of GIS technology and selected types of simulation modes in natural science, enhancing interdisciplinary concepts, identifying requirements and opportunities for integration of interdisciplinary concepts, and generating the enthusiasm to meet these challenges.

This lengthy text has six broad sections, each of which is subdivided into specialized contributions by a number of well-known authors. There are forty-seven articles, as well as commentary preceding each section and an epilogue. The collection originated at a conference held in 1991 to integrate GIS and environmental modeling. Among the organizers and supporters of the conference was the National Center for Geographic Information and Analysis.

The first section offers six perspectives on GIS that serve as background for the rest of the collection. The second contains three essays dealing with modeling. The third specifically addresses environmental simulation on the basis of modeling styles; subdivisions are atmospheric, hydrological, land-surface-subsurface-process, biological-ecological-systems, and integrated modelings. The fourth deals with risk and hazard modeling and its role in policy formulation. The fifth focuses on spatial data. The sixth offers eight essays on spatial statistics that provide the general reader with a wide range

of opportunities for understanding the differences between spatial and traditional statistics.

The modest price of this fine volume is direct evidence that both editors and publisher have met the goals of helping to generate enthusiasm for communicating the topic, despite the technical subject matter. A few typographical errors caught my eye, as did some inconsistencies of logic in the outline, which testifies perhaps to the difficulty of integrating material from so many different authors in a single volume. At twice the price this book would be a "must" for anyone with even a passing interest in GIS and environmental modeling. In a volume of this scope there is bound to be something for everyone. Buy it, read it, use it.—SANDRA LACH ARLINGHAUS

FLATTENING THE EARTH: Two Thousand Years of Map Projections. By JOHN P. SNYDER. xviii and 366 pp.; maps, diagrs., ills., bibliog., index. Chicago: University of Chicago Press, 1993. \$45.00. ISBN 0-226-7646-9.

John P. Snyder is perhaps the leading contemporary American expert on the science of map projections. An earlier book by him, "Map Projections: A Working Manual" (1987), deals with various mathematical aspects of projections and is now considered a classic. "Flattening the Earth" is a volume in the History of Cartography series published by the University of Chicago Press. The book is a definitive history of map projections and is an excellent companion to the mathematical manual. "Flattening the Earth" has four sections of almost equal length. The level of detail in each section reflects the number of new projections and the rediscovery and modifications of existing projections throughout history, which appears to be an increasing exponential function with time.

The basic approach is chronological: Snyder provides details of projection use, history, geometric properties, and items of special interest, such as short biographies of cartographers. The discussion is impressive, ordered, comprehensive, intelligent, and authoritative. He begins the first section, Emergence of Map Projections: Classical through Renaissance, in A.D. 150 with Ptolemy's "Geography." Snyder places Ptolemy's work in context with classical and medieval legacy of T-O maps, *mappae mundi*, and the rediscovery of Ptolemy in about 1400. In this section Snyder also covers projections of the Renaissance and the Age of Discovery, including the Mercator and sinusoidal projections.

The second section, Map Projections in an Age of Mathematical Enlightenment, 1670-1799, demonstrates the link between developments in mathematics and refinements in map projections. The chapter is also a testimonial to the influence of J. H. Lambert, whose application of calculus greatly influenced cartography after 1722. For almost two millennia map projections had been largely of graphical construction; from the Enlightenment on most