PLACING HISTORY: HOW MAPS, SPATIAL DATA AND GIS

Are Changing Historical Scholarship

by Anne Kelly Knowles and Amy Hillier eds.
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Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship edited by Anne Kelly Knowles is a highly engaging and interesting book that would appeal to both students and scholars in social science since it shows how and why GIS and spatial modeling may add value to historical enquiry. The authors clearly demonstrate how GIS can transform our understanding and appreciation of key historical events such as the Battle of Gettysburg, the Dust Bowl, and the Irish famine.

The book is organized into ten loosely linked chapters written from different perspectives, each layering the foundation on how history can be explored, analyzed, mapped and interpreted through geographic science. Chapters one, three, five and seven are more theoretical and discuss how the coupling between history and geography can occur via GIS while the remaining chapters, two, four, six , eight and ten focus on the applications of historical GIS.

Chapter 1 by Anne Kelly Knowles on "GIS and History" succinctly explains the relationship between history and spatial thinking and GIS. Particularly important are the three themes, *history of land use and spatial economies, reconstruction of past landscapes and infrastructure projects*. Anne Kelly Knowles articulates the challenges in each area, including uncertainty in representing historical information. Chapter 3 by Robert Churchill and Amy Hillier consists of two parts, the value of GIS in liberal arts education and a guide to teaching historical GIS. This chapter tries to weld the value and practice of teaching GIS in history using the multi-faceted urban history of Philadelphia. Chapter 5 by Ian Gregory introduces the readers to advanced methods including spatial interpolation, univariate and multivariate techniques. Particularly compelling is the Irish famine study using geographically weighted regression. In Chapter 7, entitled "Combining Space and Time: New Potential for Temporal GIS," Michael Goodchild sketches what a historical GIS should be and outlines the many challenges in deploying a GIS that can fully deal with dynamic and temporal data.

Historians frequently deal with hand drawn maps, unconventional data sources, and historical narratives that need to be integrated for analysis. Historians study events ranging in scale from global to local. The remaining chapters demonstrate how GIS is shaping such historical research. In Chapter 2 ("Creating a GIS for the History of China") Peter K. Boll highlights the

difficulty in creating a GIS database for documenting the history of Chinese towns and villages. The fundamental issue is representing spatial information characterized by spatial uncertainty. Towns and villages are better represented as nodes and networks instead of administrative units. Chapter 8 by Richard Talbert and Tom Elliot, examines the Peutinger map of the Roman world. Using traditional GIS analysis such as map overlay, features extraction and network analysis, the beautifully hand drawn maps are layered into a GIS database revealing the subjectivity in map generalization and distance distortions in these historical maps. This chapter is essential for researchers creating historical digital atlases of regions as well as anthropologists and archaeologists unearthing trading and settlement patterns from old maps.

Chapters 4, 6 and 10 deal with historical events and processes at regional and more local spatial scales. Chapter 4 by Geoff Confer shows how climatological data and simple GIS mapping can be effectively used to gain a better understanding of the landuse changes in the Dust Bowl region of the US during the nineteen twenties and thirties. Chapter 6 by Brian Donahue adopts a local parcel level GIS mapping of landownership patterns in Concord, Massachusetts to discuss historical land use transformation during the colonial period. This chapter emphasizes the early agro-ecological organization of mixed husbandry. My favorite chapter in this set is Chapter 10 that models the battle of Gettysburg from the perspective of a GIS and compares it with the Army Corp of Engineers re-creation using a more traditional method. I highly recommend this chapter to history buffs and military historians to grasp how topography and landform shaped the famous battle.

I like this book, but two things niggled me. First, the chapters were organized in a rather confusing manner. This loose organization leaves the reader confused about the central themes as well as methods. It could have been organized along the lines of this review or in some thematic fashion suggested in Chapter 1. Each section could have been preceded with an introduction. Second, I was a little unsure as to the intended audience of the book. From the perspective of the students in history, this book is daunting. What is missing here is a basic chapter in GIS that could have provided more fundamental GIS concepts. The two chapters on GIS methods by Goodchild and Gregory are very useful chapters but are not introductory in nature and require a greater understanding of GIS methods and spatial statistics. However, these two limitations in no way detract me in recommending this highly informative, and stimulating book on incorporating GIS into history. Kudos to the authors on promoting this promising field!