

**Book Review: *How to Lie with Maps (2nd Edition)*. By Mark Monmonier
(University of Chicago Press, 1996)**

Tracey Hughes, University of California San Diego

Identify, locate, evaluate, apply, integrity, authenticity. Recognized as fundamental tenets of information literacy, they are as utterly relevant to maps and geographic information as they are to information contained in a book, journal, video, website, or database. Mark Monmonier's 1991 classic, released in a second edition in 1996, *How to Lie with Maps*, offers insights into this important realm of information literacy in a concise and engaging manner.

Don't let the publication date of the book put you off; its guidance on unraveling the mystique of maps is as applicable today as it was then, serving as a welcome reminder that underlying fundamentals do not change even as technologies surrounding them might change dramatically.

Creating and Distorting Reality

Monmonier paints a clear picture of the fundamental tools and techniques used by mapmakers to portray reality through maps and geographic information. The book begins with a humorous and wry overview of how and why maps paint a "selective and incomplete view of reality", focusing on the role of the map author's vast "cartographic license" regarding the selection and depiction of information. This distortion of reality, how it is created, and clues to decipher the motivations behind the distortion are truly the key points of the book.

Distortion is a necessity on a map for a number of reasons, not the least of which is the obvious "cartographic paradox" of a map attempting to mimic the real world. A transformation from the 3-D world to a 2-D map means that information is only selectively conveyed, i.e. not every detail of the real world can actually be shown on the map, and the symbols used to represent reality on the map are rarely of the same scale as the actual objects in our world.

Beginning by offering substantive detail on basic map elements of scale and projection, Monmonier then moves on to discuss the details on how a map's symbols,

color and data classification impact reality. The conclusion of the book briefly touches on newer electronic mapping technologies and cleanly ties together Monmonier's analysis of the power of maps and how an educated map reader might approach this particular medium of information.

Integration into Information Literacy / Library Instruction

A distinguished geography professor at Syracuse University since 1973, Monmonier writes as an educator and the book lends itself well to an instructional environment. He explicitly states in the introduction that he cannot remind his students enough that "a single map is but one of an indefinitely large number of maps that might have been produced for the same situation or from the same data." This statement about cartographic license applies equally well to many other information resources and could be integrated into any discussion of information literacy. Monmonier provides a quick example of cartographic license using the infamous airline route map seen today in airline magazines (think hubs and curved lines from city to city). From a marketing perspective, the airline's breadth of geographic coverage looks impressive with comprehensive service offerings. From a passenger perspective, this map might be misleading since it does not at all illustrate frequency of service or directness of a flight path. It is this type of critical map reading skill we can pass on to our patrons.

Several basic principles of human cognition and human computer interaction (HCI) come to bear in information literacy. Not unsurprisingly, these same principles are also extremely relevant with map analysis. Color, (dis)placement, size of font and symbols, orientation, and text labels are just a few that readily come to mind. All of these factors form the basics of introductory spatial literacy instruction, as they skew the map reader's perceptions of authenticity and validity of geographic information. To illustrate this concept, Monmonier discusses the particularly close relationship between symbology and cognition in the coloration of weather maps. Red typically indicates hot weather and blue cold; however, if

these colors were switched, the ‘readability’ of that weather map becomes dramatically different. The cognitive load on the reader (i.e., how much the reader has to actively think) increases significantly and the validity of the weather station might be called into question.

Another important point to take away from *How to Lie with Maps* is the notion that any given map will likely serve multiple roles, and those roles may be in conflict. A serious example of a single map for multiple purposes might be one map used to illustrate the turbulent situation in the Middle East. Say that two news media sources, a newspaper website and a television news station, use this same map in their respective stories. When broadcasted on the television, it is shown for only an instant and the colors of the map may appear distorted based on the viewer’s television set. A news anchor could selectively highlight an area on the map but neglect to mention another. The map on the web might come through in only black and white, or might be pixilated/ reduced in size so that only some of the information is legible. Maps can incite much emotion and strife by the shifting of a line on a map or the shading of a particular land area to represent a culture’s religious belief. Without a critical assessment of the map and presentation of it in such a way that the user can actually ‘read’ it, the map becomes essentially eye candy to sell a particular situation or perspective.

Monmonier’s discussion of reality distortion also applies to how we view ourselves and our institutions as places of learning. Our own perspectives of ‘reality’ may prove to have as much distortion as the frequently used Mercator map projection where Greenland has as large a land area as South America, when in actuality it is 1/8th the size (take a quick look at Google Maps to see the distortion from the Mercator projection). Certainly our perspectives lead us to choose which tools we use for instruction and how we present them, and we make these choices every time we plan an instructional session...what databases to show, is this search strategy too complex, what topics will be interesting to the class. Perhaps some of the insights of this book can help us take a fresh look at our own choices and selection of what we present to our respective audiences.

With an appendix for a quick review of basic world geography (remember the specifics of latitude and longitude?), Monmonier provides a solid introduction to cartography with substantive technical detail but not so much as to overwhelm. At 175 pages, the book is a quick read with short chapters packed with valuable information. With an ever-increasing amount of information presented in maps and there not always being a Map or GIS librarian available, we should increase our ability to critically evaluate maps and geographic information. Maps, like pictures, convey tremendous amounts of information quickly and powerfully. The more we understand the choices behind map products and geographic information, the better we are able to teach others to communicate their positions effectively and accurately. *How to Lie with Maps* uses style and humor to help the “cartographically illiterate” and is truly a worthwhile read for those teaching across all subject areas and venues.

Mark your calendars!

Librarian as Architect: Planning, Building & Renewing

