

How
to
Lie
with
Maps

THIRD EDITION

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Introduction

CHAPTER 1

Not only is it easy to lie with maps, it's essential. To portray meaningful relationships for a complex, three-dimensional world on a flat sheet of paper or a screen, a map must distort reality. As a scale model, the map must use symbols that almost always are proportionally much bigger or thicker than the features they represent. To avoid hiding critical information in a fog of detail, the map must offer a selective, incomplete view of reality. There's no escape from the cartographic paradox: to present a useful and truthful picture, an accurate map must tell white lies.

Because most map users willingly tolerate white lies on maps, it's not difficult for maps to also tell more serious lies. Map users have traditionally been a trusting lot: they understand the need to distort geometry and suppress features, and they believe the cartographer really does know where to draw the line, figuratively as well as literally. As with many things beyond their full understanding, they generally entrust mapmaking to a priesthood of technically competent designers and geographers working for government agencies and commercial firms. Yet cartographers are not licensed, and many mapmakers competent in commercial art or in the use of graphics software have never studied cartography. Even map users who know that such software is widely available and who see maps in an increasing range of media seldom question these authorities, and they often fail to appreciate the map's power as a tool of deliberate falsification or subtle propaganda.

Because anyone with the right software and an internet connection can now make and publish maps, mapmakers can also easily

lie to themselves and others—and be unaware of it. Before the electronic age, folk cartography consisted largely of hand-drawn maps giving directions. The direction giver had full control over pencil and paper and usually had no difficulty transferring routes, landmarks, and other relevant recollections from mind to map, but the result was clearly amateurish. Technology allows people without cartographic savvy to create modern-day folk maps with the crisp type, uniform symbols, and verisimilitude of maps from the cartographic priesthood. Yet software developers have also made it easy for the lay cartographer to select an inappropriate projection or a misleading set of symbols. Because of advances in graphics software and online mapping, inadvertent yet serious cartographic lies can appear respectable and accurate.

The potential for cartographic mischief extends well beyond the deliberate manipulations used by some cartographer-propagandists and the electronic blunders made by the cartographically ignorant. If any single caveat can alert map users to their unhealthy but widespread naïveté, it is that *a single map is but one of an indefinitely large number of maps that might be produced for the same situation or from the same data*. The italics reflect an academic lifetime of browbeating undergraduates with this obvious but readily ignored warning. How easy it is to forget—and how revealing to recall—that map authors can experiment freely with features, measurements, area of coverage, and symbols and can pick the map that best presents their case or supports their unconscious bias. Map users must be aware that cartographic license is enormously broad.

The purpose of this book is to promote a healthy skepticism about maps, not to foster either cynicism or deliberate dishonesty. In showing how to lie with maps, I want to make readers aware that maps, like speeches and paintings, are authored collections of information and are also subject to distortions arising from ignorance, greed, ideological blindness, or malice.

Examining the misuses of maps—both paper and digital—also provides an interesting introduction to the nature of maps and

their range of appropriate uses. The four chapters that follow this one address general cartographic principles that apply to all different types of maps. Chapter 2 considers the map's main elements—scale, projection, and symbolization—as potential sources of distortion. Chapter 3 further explores the effects of scale by examining the various white lies cartographers justify as necessary generalization, and chapter 4 looks at common blunders resulting from the mapmaker's ignorance or oversight. Chapter 5 looks at how a careless or Machiavellian choice of colors can confuse or mislead the map viewer.

The rest of the chapters treat specific types of maps and how they can be manipulated. Chapter 6 treats the seductive use of symbols in advertising maps, and chapter 7 explores exaggeration and suppression in maps prepared for development plans and environmental-impact statements. Chapters 8 and 9 examine distorted maps used by governments as political propaganda and as “disinformation” for military opponents. Government mapping is also a central concern in chapter 10, which investigates the effects of national culture and bureaucratic inertia—and, increasingly, commercial interests—on detailed topographic maps. Chapter 11 addresses distortion and self-deception in maps made from census and survey data and other quantitative information. Chapter 12 examines the specific challenges posed by image maps that are based on satellite technology and other measurements, chapter 13 acknowledges the emergence of prohibitive mapping as a pervasive and potentially threatening cartographic genre, and chapter 14 addresses the diverse types of dynamic maps and the distinctive advantages and constraints of online maps. Chapter 15 concludes by noting how maps can have dual and sometimes conflicting roles and by recommending a skeptical assessment of a map author's motives.

In an era of increasing skepticism about the nature of knowledge, a book about what it means to lie with maps is more useful than ever. For all the interest in verbal lies, nefarious as well as white, and in how words can be manipulated, education in the

use of maps and other visuals is spotty and limited, and many otherwise-educated people are graphically and cartographically illiterate. Maps, like numbers, are often arcane images accorded undue respect and credibility. This book's principal goal is to dispel this cartographic mystique and promote a more informed use of maps based on an understanding and appreciation of their flexibility as a medium of communication.

As technology continues to lower the barriers dividing map users from mapmakers, this book's insights can be especially useful for those who might more effectively use maps in their work or as citizens fighting environmental deterioration or social ills. The informed skeptic becomes a perceptive map author, better able to describe locational characters and explain geographic relationships and better equipped to recognize and counter the self-serving arguments of biased or dishonest mapmakers.