the mapped landscape" (180). "Professionals like NACIS members have little knowledge of the means by which their ethical aspirations and moral sensibilities can be understood, let alone deployed in the experiential world" (182). "It is ... easier for the artist, cartographer, journalist, or statistician to ignore the ethical propositions of an assignment than to question them" (186).

Tom Koch's book serves as "a call to awareness ... that ... our choices matter" (187). The issues raised in *Ethics in Everyday Places: Mapping Moral Stress, Distress, and Injury* are important matters, and, as its author points out several times, it is often much easier to live with the ethical distress of ignoring the issue than to handle the practical consequences of acting on moral imperatives.

The value of its ethical message aside, I do have some practical criticisms. This book contains a large number of poorly constructed maps. In many cases, their poor symbolization and other problems are part and parcel of, or bound up with, the ethical problem under discussion. However, in some instances, such as Koch's redrawn newspaper map of the Iraq War (46), it is hard to sort out the author's mistakes from what might have been problems in the original map. Occasionally, his text simply does not reflect what is

on the map—for example, where he writes of triangles and circles on a vector version (12) of John Snow's famous map of cholera (13), which clearly shows diamonds and hexagons. It is hoped that some of the typos and errors in mapping practice can be corrected in a subsequent edition—it would make matters clearer. Overall, despite my quibbles, I really liked this book, and wish that all cartographers would take the time to read it and to ponder the author's suggestions. I think, too, that this book should serve as an excellent teaching tool for upper-level undergraduate and graduate-level cartography and GIS students.

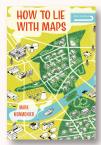
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HOW TO LIE WITH MAPS, THIRD EDITION



By Mark Monmonier

The University of Chicago Press, 2018

241 pages, 97 b/w figures, 17 color plates, \$22.50, softcover.

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The production and consumption of spatial data is at an all-time high, as satellite imagery and crowd-sourced information proliferate past the point of ubiquity. Given these circumstances, this third, revised, edition of Mark Monmonier's *How to Lie with Maps* has arrived at a fortuitous time indeed. The University of Chicago Press has produced a handsome, updated volume, with some welcome additions, revisions, and reorganizations. In this edition, Monmonier's focus remains on the same themes previously explored in *How to Lie with Maps*, centering his

attention squarely on the cartographic paradox: how is it that maps can be objective and yet must—because they all require a certain degree of selection, reduction, and simplification—at the same time, lie? The author aims to help his readers develop a critical and informed eye for maps, a perspective that allows them to differentiate the good from the bad (whether intentionally or inadvertently misleading), and, in this way, to create a culture of healthy skepticism towards all forms of media.

Reviews of the first two editions of *How to Lie with Maps* have highlighted the book's popularity and success, as it broke free from its academic origins to reach a wide audience of both academics and laypersons. In the twenty-two years since the publication of the second edition, however, much has changed in cartography and in the global political and social climate. With that in mind, it is important to explore whether Monmonier's take on maps remains relevant, and if his approach to cartographic (in)fidelity remains appropriate. I find that the answer, on both counts,

is largely positive. I hope to show this by exploring the text—with particular attention to changes in the new edition—and examining it in the light of some of the concerns raised in reviews of the earlier versions.

The overall construction and organization of the third edition will be familiar to readers of the earlier editions. Monmonier has added a new, very brief preface, in which he notes some of the major changes in cartography over the last two decades—mainly in the realm of things digital—and outlines the necessity for an updated edition and some of the major changes therein. The body of the text bookended with a brief introduction and even briefer epilogue—is composed of four chapters on basic elements of cartography, and nine chapters exploring particular scenarios in which maps can mislead their readers. As in earlier editions, the first block of chapters serves to catch readers up on the major characteristics and central methods of maps and cartography, laying the groundwork for subsequent chapters. The author's approachable, vernacular writing style—overflowing with contractions and in a dialect dripping with Americana—may come as a surprise to readers expecting a prose that matches the academic rigor of the information it contains. Little has changed in the new edition's chapters on basic map elements (Chapter 2), the "white lies" of generalization that are necessary for the function of maps (Chapter 3), and the most common mistakes that one may encounter in maps produced by professional and amateur cartographers alike (Chapter 4). The most substantial novelty in this section of the text is the movement of the discussion of the use (and misuse) of color in cartography to Chapter 5 from its earlier position near the end of the book. The chapter begins with an overly long digression on the human perception of color that, while interesting and informative, has little immediate relevance to cartographic design or to the dissemination of information in mapping. Monmonier's major points about color could stand on their own without this information. Nonetheless, apart from this and a few other tangential detours, Monmonier's new edition continues to provide a thoughtful, detailed, and, most importantly, accessible introduction to cartographic theory in the brief span of 66 pages. This text continues to shine, as it always has, in the group of thematic chapters that follow the cartographic introduction. Returning readers will recognize case studies concerning the creation of maps for advertising (Chapter 6), urban development (Chapter 7), political propaganda (Chapter 8), national defense (Chapter 9), national identity (Chapter 10), and spatial statistics (Chapter 11). The

second edition's underwhelming six-page chapter entitled "Multimedia, Experiential Maps, and Graphic Scripts" has been replaced by a much more substantial group of three chapters on aerial photography and remote sensing (Chapter 12, "Image Maps: Picture That"), cartography and borders (Chapter 13, "Prohibitive Cartography: Maps That Say 'No!'"), and so-called "fast maps" (Chapter 14, "Fast Maps: Animated, Interactive, or Mobile"). In each of these, Monmonier employs both real and imagined scenarios to explore the particular theme at hand, although some of his storylines appear dated. These chapters could have been more effective with updated or more relevant case studies, datasets, or figures. For example, Chapter 6 ("Maps That Advertise") is overly focused on imagined scenarios in which the author's abstraction and humor clash with the historical examples put forth in other sections of the book, and which are so drenched in narrative storytelling that they reduce the overall effectiveness of the discussion. This holdover chapter would have benefited from some contemporary, unimagined examples of mapbased advertising to provide readers with the chance to inject their own experience onto the topic.

Chapter 8 ("Maps for Political Propaganda") deserves particular attention as a very effective self-contained unit. Not only is it, in my experience, the single chapter of the book most widely assigned for classroom reading, but it is also a discussion of outstanding relevance in today's political climate. In "Maps for Political Propaganda," Monmonier explores the reemergence of the Mercator projection for the representation of an oversized, threatening Soviet Union and Communist China (108-9), but he falls short in modernizing his example through the exploration of contemporary examples of this practice—for example, the slew of maps portraying Russia as an enormous, threatening landmass looming over Crimea that appeared during and after its 2014 annexation. Likewise, Monmonier's discussion of the Gall-Peters projection (110-112) does not mention recent examples of its recurring presence in the news, including its 2017 adoption by Boston Public Schools. Finally, while the campaign of propaganda produced by the Nazi party (112-118) remains a particularly useful and effective case study, the author misses the opportunity to offer examples of the same techniques being employed by the rising tide of nationalists in Europe and the United States. Contemporary examples would have reinforced the continuing relevance of this chapter, rather than leaving it up to the reader to make the link between specimens from the now-distant Cold War and the current political scene.

Similar criticisms toward out-of-date examples could be levied against other thematic chapters. For example, Chapter 10, entitled "Large-Scale Mapping, Culture, and National Interest," retains an absolutely critical discussion on racialized toponyms that reinforce denigrating stereotypes of minorities and indigenous groups—an examination that forces readers to confront these themes in the light of their own experiences. The rising normalization of hate speech, and of acts of hate, in contemporary American politics and culture give this chapter immediate relevance for readers. However, Monmonier limits his exploration to toponyms coined in America's infancy—effectively ignoring any number of contemporary examples, many linked to acts of institutionalized racism and intolerance.

The same can be said for issues of public health in Chapter 11 ("Data Maps: A Thicket of Thorny Choices") where, in reference to John Snow's endlessly familiar Broad Street map of the 1854 cholera outbreak in London, the author writes that "pandemics are rare, and seldom is the association between disease and an environmental cause so overwhelming that the link is easily identified and unchallenged" (172). By situating this theme in a decidedly historical frame, Monmonier passes up the chance to place this historical spatial analysis in dialog with recent events—such as the lead poisoning and Legionella outbreak associated with the Flint, Michigan water crisis (Hanna-Attisha et al. 2016)—and thus avoids highlighting the continued relevance of John Snow's seminal contribution to cartographic and epidemiological history.

It is in these missed opportunities for renovation and modernization that the third edition of *How to Lie with Maps* stumbles. Relatively little has changed in either the instructional or thematic chapters brought along from the second edition and the most substantial alterations often consist of the addition of a single paragraph or two that highlight how the advent of digital mapping of one sort or another has created changes (or continuity) in the particular topic being discussed. Moreover, these paragraphs can at times feel artificially inserted, particularly when they clash with the polished and inviting prose found elsewhere in the chapter. However, even when they are not integrated in the smoothest possible manner, or as extensively as one might like, they remain necessary additions that serve to bring the text into the present.

In contrast to my opinion that parts of the original chapters still need a new coat of paint, Monmonier does provide, as mentioned above, a much-needed update in the

form of the three new chapters on image maps, mapping of that which is off-limits, and "fast maps" (Chapters 12 through 14). Unfortunately, Chapter 13 is less of a thematic exploration of prohibitive cartography than a list of types of maps that in some way exhibit control and enforce relationships of power. Nevertheless, Chapters 12 and 14 allow How to Lie with Maps to remain both a classroom staple and major popular introduction to the way every map inevitably presents only one of many possible propositions about the places it depicts. "Image Maps" (Chapter 12) integrates a welcome exploration of raster data and satellite remote sensing, now-common sources of cartographic data that were not discussed in the earlier editions. In contrast with the abstract, and arguably superfluous, exposition of the science behind color that is found in Chapter 5, Monmonier's elucidation of non-visible light is grounded in the context of its utility and reads as a more appropriate exploration of this subject (181). In addition, the major example of the misuse of this sort of data—the perhaps-expected case of the misinterpretation of "WMD sites" in the lead-up to the Iraq war—feels like an appropriate choice for the topic, and certainly fits with the case studies found elsewhere in the text.

In the same vein, Monmonier's Chapter 14, on "Fast Maps: Animated, Interactive, or Mobile," is an absolutely critical addition to the volume. In it, the curtain is slightly pulled back on topics of online mapping, crowd-sourced data, and the contemporary digital environment within which cartography now finds itself. A critical analysis of the Web Mercator projection is advanced—one consistent with the other, broader, discussions of the Mercator projection in Chapters 2 and 8, and highlighting the continued relevance of the themes of projection and distortion in contemporary cartography.

Many of the lingering concerns with the third edition of *How to Lie with Maps* had already been raised in reviews of the first and second editions. Earlier reviewers have opined that some of Monmonier's examples are clumsily executed (Carlucci 1997) or that, even by the second edition, some figures were in need of updating (Trifonoff 1996). The first point has been explored sufficiently in this review, but the latter requires some unpacking. Throughout *How to Lie with Maps*, figures that were highlighted as illegible in earlier reviews—for example, the monochrome Figure 10.7—remain so. In addition, Monmonier has done himself little service in duplicating some figures throughout the text in both color and grayscale, and his points could have stood without figural repetition (Figure 7.1/Plate 5 and Figure

8.16/Plate 8). The appendix on latitude and longitude is less than two pages long, and should have been integrated within the main body of the text—a suggestion that was first proposed by Trifonoff (1996). Finally, statistics that were already out of date by the publication of the first edition of *How to Lie with Maps* remain unchanged in the third edition, and feel even more "incongruous with the contemporary tone of the rest of the book" (Gilmartin 1992) than they did some twenty-six years ago.

Nevertheless, much of the praise that Monmonier received for earlier editions of this book remains applicable, especially so in the contemporary geopolitical climate. *How to Lie with Maps* continues to be inviting and readable, concealing detailed introductions to critical cartographic concepts beneath a veneer of humorous and casual prose (de Blij 1992; Hughes 1996; Walker 2011). Smith's (1991) concern that Monmonier does himself a disservice by not diving into the waters of defining some sort of epistemological truth is, to my mind, overzealous, and the wide applicability of the arguments framed in *How to Lie with Maps* would have suffered from building on a foundation of that sort.

Is this book still relevant, and is Monmonier's take on the topic still appropriate? To the first, I would argue that, while the aim of this volume remains the same as it was at its initial publication, its relevance has only grown over time and the themes explored therein are now more pertinent than ever. Monmonier has succeeded once again in advancing a narrative that will find a wide and varied audience and will instill, one hopes, some level of critical map literacy in contemporary life. To the second question, while How to Lie with Maps does at some points feel dated, the cartographic approach he advances remains appropriate for today. Rather than hoping that a new edition of this text will modernize its arguments completely, perhaps we should instead look to the next generation of cartographers and geographers to write a new volume that will truly resonate with the modern condition of cartography.

Taken as a whole, the lingering issues in *How to Lie with Maps* have less to do with the content of the text and more with the high degree of polish one expects to see by a volume's third edition, especially from one that has received such acclaim and wide readership. Nevertheless, Monmonier continues to have a great deal to offer to first-time readers and return visitors alike. This new edition of *How to Lie with Maps* again succeeds in explaining not

only the various ways in which maps can be manipulated, but also the necessity for this manipulation. Most importantly, he continues to create a population of informed map readers, who have learned that they must remain skeptical of the biases and motivations of mapmakers. While striving at all times to appear transparent and objective, maps necessarily reflect ulterior motives, which can themselves be opaque. All maps lie, and Mark Monmonier continues to serve as an able guide for readers at any level to begin the process of informed cartographic interpretation and engagement.

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