

Spying With Maps: Surveillance Technologies and the Future of Privacy.

By Mark Monmonier
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Reviewed by Barbara P. Buttenfield (Professor), Vanessa Bauman and R.J. Kern (First Year Cartography Graduate Students), Geography Department, University of Colorado-Boulder.

In the current environment stressing homeland security, it is readily forgotten that the machines monitoring for safety are also monitoring daily activities. There exists a delicate balance between protection from crime or terrorism and protection of individual privacy in everyday life. In his newest book, Mark Monmonier makes an articulate and compelling argument for the importance of understanding how, when, and where surveillance technologies operate, from data collection through interpretation; and how their emerging importance to national defense may also infringe on confidentiality. Monmonier explores the power and control of geographic surveillance in an effort to understand the implications of geographic technology. In particular, he focuses attention upon surveillance with maps and locational information, as for example in mapping consumer behavior for marketing purposes, in mapping disease epidemics, in traffic surveillance, satellite data collection, and severe weather broadcasts. As with many of his books, his discussion is interleaved with anecdotes highlighting the development of cognate technologies and the social, economic, and legal consequences that these technologies introduce.

The book contains ten chapters, and an Epilogue arguing for

locational privacy as a human right. Bibliographic citations are (unfortunately) embedded within an extensive endnotes section, making it nearly impossible to search for cognate literature. For the popular reader, though, the endnotes are isolated to preserve an otherwise highly readable writing style. The book is indexed by author and by subject. Chapters highlight diverse application domains such as urban traffic patterns, precision agriculture, weather reports, and so forth where surveillance technologies are utilized. In each chapter, he presents multiple perspectives on locational privacy issues, using real-world examples and compelling narrative. Anecdotal reference to his personal experience brings home the point that locational security affects each of us every day, albeit in an often oblique or even covert manner.

The first two chapters introduce surveillance cartography and answer popular questions about current spatial technologies. He gives an informative overview of basic GIS analysis methods, elaborating a short history on the evolution of remote sensing techniques and platforms. Simple explanations on these topics are supplemented by clear illustrations and provide a solid opening to the book. Ethical issues surrounding the implementation of locational surveillance systems are also addressed.

Subsequent chapters demonstrate how integrated spatial technologies support surveillance in a wide range of common domains. Monmonier describes examples of this technology improving land and hazard management systems, monitoring world agricultural production, managing wildfires, and creating intelligent traffic signals. He imagines a society where rental car companies use satellites to track and fine unsuspecting customers

for speeding, and then reminds us this is an attainable reality, cautioning the reader that the "... added cost of the automotive utopia is the privacy lost when computers know who we are and where we've been" (p. 107). GIS management systems for public health and threats of bioterrorism open scenarios that look seriously at the effectiveness of applying spatial technology to the development of disease prevention strategies. In each case the advantages to exploiting locational data are highlighted, but there sincere warnings are also attached.

The reader will learn about the distribution of junk mail in a section on geocoding and "dataveillance," which is characteristic of Monmonier's lighter side. He sheds light on the potential power of geographic voyeurism, where the perceived risk of panoptic surveillance deters street crimes and acts of terrorism alike. In most chapters, he argues the double-edged sword: greater public security and safety carries with it the potential loss of personal privacy, for example offering tongue-in-cheek description of how direct mail advertisers and telemarketers exploit knowledge of where we live to know what we might be willing buy. In another chapter, he notes that surveillance technology can act both as a digital leash and a scarlet letter for sex-offenders, parolees, or spouse abusers.

With this idea in mind, the Epilogue discusses locational privacy as a basic human right. Industrial lobbyists and civil libertarians continue to debate about appropriate uses of surveillance technologies. Opinions differ on what constitutes appropriate regulation where issues of privacy and confidentiality are concerned. It does not appear to be the author's intent to frighten readers when he brings negative aspects of cartographic surveillance to light.

Monmonier maintains a positive tone throughout the book, but also encourages the reader to think about this open controversy and what it could mean for the future of surveillance technology and public privacy. At the end, and throughout the book, Monmonier provokes us (p. 175): "Imagine what Orwell could have done had he foreseen GPS?"

Spying with Maps is a reference volume to be enjoyed equally at the scholarly desktop or at home in front of the fire, with a glass of good red wine. Filled with in-depth content and interesting debate, it is nonetheless an easy book to read. His citations are extensive, although hard to find. More often than not, we reached the end of a chapter without once looking at the endnotes section. This meant we missed a lot of material, since the endnotes make up over 20% of the book volume (50 pages). Figures and diagrams are lucid and spare, comprised mostly of schematics, line drawings, and maps.

We hoped for a more detailed speculative look into the future and a vision where an ethical balance could exist between privacy, safety, and security. What would it take to defend privacy on a global scale? An elaboration of potential political issues of geographic surveillance would shed more light on future consequences. A greater discussion on ethical ambiguities and ramifications would have consolidated chapter endings. Additionally, Monmonier's window of analysis considers only technologically advanced countries. He neglects to address issues of geographic surveillance in places that lack capability to photograph traffic violators with red light cameras, for example.

Monmonier teaches real-world geography lessons about the ability of maps to "know," and often, maps can "know" more

effectively than we realize. He is careful to avoid hyperbole and often softens otherwise alarmist viewpoints with humor and grace, but hints nonetheless of the potentially chilling effects of surveillance that are embedded within cartographic and remote sensing practice. One of the strongest points in the book is the implicit demonstration of the increasingly interdisciplinary nature of cartography, giving the book added value as a snapshot in the history of modern cartography (one of Monmonier's areas of academic expertise). Another strength is that the writing style maintains accessibility for a general readership without sacrificing academic interest.

Would the book prove useful for a graduate seminar? Absolutely. In fact, one of us accepted the invitation to review the book as an opportunity to carry on a virtual seminar this spring for two graduate students who could not attend weekly meetings of the departmental graduate reading group. It's fair to say that the three of us could have used a lot more face-to-face discussion, but schedules didn't match up; the book, however, kept us intrigued and collaborating (if asynchronously) for several weeks. We recommend it to mapping science and GIS professionals, to scientists working in any area cognate to public policy, to everyone whose work involves creation or use of representations of spatial information. We also recommend the book to lay readers interested in issues of public and community safety, as well as those concerned about current and future threats of an intrusive Big Brother.