

“alive?” In this creative, thought-provoking book, Chaisson shows how difficult even the most basic scientific questions can turn out to be.

—CHARLES SEIFE

**WHEN INFORMATION
CAME OF AGE:
*Technologies of Knowledge in the
Age of Reason and Revolution,
1700–1850.***

By Daniel J. Headrick. Oxford Univ. Press. 246 pp. \$29.95

When I taught a course 10 years ago on the history of information, the 18th and early 19th centuries had no strong themes of their own. Before them came the ferment of the printing revolution and elite literacy; after them, the rise of mass com-

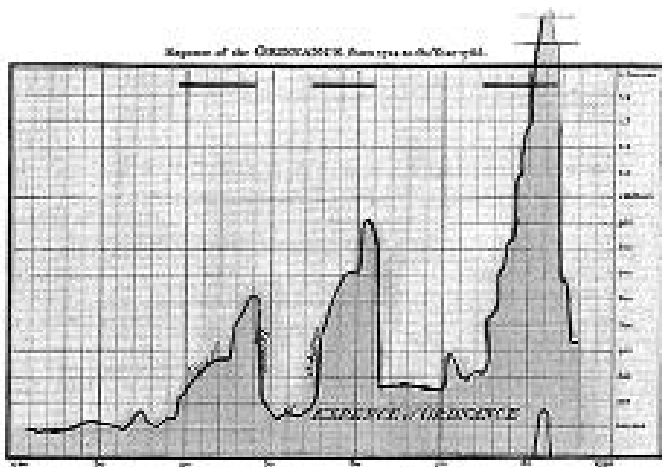
munication, with its Faustian bargain of cheap publications on doomed acidic paper. There were, to be sure, superb studies of 18th-century book publishing, of mapmaking, of early probability theory and statistics. But these trees were far better known than the forest.

and the revolutionary era helped bring cartography to new heights. Some illustrations from the period are still reprinted in graphics texts as classics for emulation with the latest computerized methods. There was also a new wealth of textual information, led by Diderot’s *Encyclopédie* and Samuel Johnson’s dictionary. And the nascent U.S. Post Office and the French optical telegraph laid the foundations for today’s communication networks.

As Headrick recognizes, some readers will quibble about omissions, such as the Foudrinier papermaking machine that

is what Headrick does here: he deems the years 1700–1850 a period of exceptional innovation, featuring a “cultural revolution in information systems” that prepared the way for developments ranging from the punch card to the World Wide Web.

When Information Came of Age provides a respectful overview not of hardware breakthroughs but of the conceptual leaps made by scientists, scholars, artisans, businesspeople, government officials, and publishers. It begins with monuments of system that were essential to later science—Linnaeus’s binomial classification scheme, still the international standard for living matter from *E. coli* to *Homo sapiens*; Lavoisier’s chemical nomenclature; and metric weights and measures. It reviews the theory and practice of quantification, the still-vibrant faith in the power of population statistics and other numbers to guide policy decisions. Headrick quotes the first director of Napoleon’s statistical bureau, who acknowledged the limitations of his work: “The most exact determination of the number of vegetables that France produces will not bring forth one additional cabbage in her gardens.”



William Playfair’s 1786 study of 18th-century British ordnance expenditures. The thick horizontal lines indicate periods of war.

The chapter on graphic representation suggests that war may be healthy for mapmaking and other arts of information display: colonial conflicts

helped flood the world with print. Still, he has produced an original, lucid synthesis, one that serves to remind us that today's controversies often have long pedigrees. Many of our debates on Internet privacy and encryption, for instance, have their origins

in the postal service and legislative controversies of the French Revolution. The recounting of the history of power and information has only begun, and this book is an outstanding contribution.

—EDWARD TENNER

CONTRIBUTORS

Amy Bloom, the author of the novel *Love Invents Us* (1997) and the short-story collections *Come to Me* (1993) and *A Blind Man Can See How Much I Love You* (2000), is writing a nonfiction book about gender and sex. **Robert M. Hathaway** is director of the Wilson Center's Asia Program. **A. J. Hewat** is associate editor of the *Litchfield County Times* in New Milford, Conn. **Mark Kingwell**, a professor of philosophy at the University of Toronto, is the author most recently of *In Pursuit of Happiness: Better Living from Plato to Prozac* (2000). **Michael Malone's** novels include *Dingley Falls* (1980), *Handling Sin* (1986), *Time's Witness* (1989), *Foolscape* (1991), and the forthcoming *First Lady*. **C. M. Mayo** is the author of the short-story collection *Sky Over El Nido* (1995), which won the Flannery O'Connor Award, and the founding editor of the bilingual literary journal *Tameme*. **Michael Novak**, the author of some two dozen books and the 1994 winner of the Templeton Prize, holds the George Frederick Jewett Chair in Philosophy, Religion, and Public Policy at the American Enterprise Institute. **Amy Schwartz** writes about cultural issues for the *Washington Post*. **Charles Seife**, the author of *Zero: The Biography of a Dangerous Idea* (1999), writes for *Science* magazine. **Edward Tenner**, a former Wilson Center Fellow and author of *Why Things Bite Back: Technology and the Revenge of Unintended Consequences* (1996), is a visiting researcher at Princeton University. **Martin Walker**, a former Wilson Center Public Policy Fellow and the author most recently of *America Reborn: A Twentieth-Century Narrative in Twenty-Six Lives* (2000), studied history at Oxford University.

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