

STS.001 : TECHNOLOGY IN AMERICAN HISTORY

Spring 2006

Prof. Merritt Roe Smith

LIST OF ACCEPTABLE BOOKS FOR REVIEW

Aitken, Hugh G. J., *Taylorism at Watertown Arsenal*. Princeton, NY: Princeton University Press, 1985. A case study of the rise of scientific management. Re-issued in 1984 under the title *Scientific Management in Action*.

Biggs, Lindy. *The Rational Factory: Architecture, Technology, and Work in America's Age of Mass Production*. Baltimore, MD: Johns Hopkins University Press, 1996. About the structures that housed mass production operations like the Ford Motor Co.

Bruce, Robert V., *Alexander Graham Bell and the Conquest of Solitude*. New York, NY: Cornell University Press, 1990. A biography.

Buderi, Robert. *The Invention that Changed the World*. New York, NY: Simon & Schuster, 1996. The development of radar.

Campbell-Kelly, Martin, and William Aspray. *Computer*. New York, NY: Basic Books, 1996. The advent and spread of computer culture since the 1970s.

Cochran, Thomas C. *Frontiers of Change*. New York, NY: Oxford University Press, 1983. A business historian's perspective on the early industrial revolution in America.

Cooper, Gail. *Air-Conditioning in America: Engineers and the Controlled Environment, 1900-1960*. Baltimore, MD: Johns Hopkins University Press, 2002.

Cowan, Ruth S. *More Work for Mother*. New York, NY: Basic Books, 1985. Gender and technology.

Cronon, William. *Nature's Metropolis: Chicago and the Great West*. New York, NY: Norton, 1991. How Chicago became the "metropolis" of the American West.

Dew, Charles. *Bond of Iron: Master and Slave at Buffalo Forge*. New York, NY: Norton, 1995. Slave ironworkers in the Great Valley of Virginia prior to the Civil War.

Downey, Gregory J. *Telegraph Messenger Boys: Labor, Technology, and Geography, 1850-1950*. New York, NY: Routledge, 2002. A geographical study of telegraphic information networks and the laborers who work within them.

Downs, Linda B. *Diego Rivera: The Detroit Industry Murals*. New York, NY: Norton, 1999. How a controversial artist interpreted the advent of mass production in Detroit.

Dublin, Thomas. *Women at Work*. 2nd Edition. New York, NY: Columbia University Press, 1981. Women textile workers in Lowell prior to the Civil War.

Dunlavy, Colleen A. *Politics and Industrialization*. Princeton, NJ: Princeton University Press, 1994. A comparative study of American and German railroads in the 19th century.

Edwards, Paul N. [*The Closed World: Computers and the Politics of Discourse in Cold War America*](#). Cambridge, MA: MIT Press, 1996.

Fitzgerald, Deborah K. *Every Factory a Farm*. New Haven, CT: Yale University Press, 2003. The rise of industrial agriculture and the decline of the family farm.

Fouche, Rayvon. *Black Inventors in an Age of Segregation*. Baltimore, MD: Johns Hopkins University Press, 2003.

Gordon, Robert B., and Patrick M. Malone. *The Texture of Industry*. New York, NY: Oxford University Press, 1994. An important treatment of the material culture and archeology of 19th century industry.

Hart, David M. *Forged Consensus: Science, Technology, and Economic Policy in the United States, 1921-1953*. Princeton, N.J: Princeton University Press, 1998.

Headrick, Daniel. *The Tools of Empire*. New York, NY: Oxford University Press, 1981. About European expansion into Africa during the 19th century and the types of technologies used to forge colonial empires.

Hounshell, David A. *From the American System to Mass Production*. Baltimore, MD: Johns Hopkins University Press, 1984. A study of the origins of interchangeable manufacturing and mechanization of industry, culminating with the mass production of the Model T Ford.

Hughes, Thomas P. *American Genesis*. New York, NY: Random House Value Publishers, 1989. A general survey of technology in America from the 1870s to the 1970s. Emphasizes the growth of large systems.

Hughes, Thomas P. *Rescuing Prometheus*. New York, NY: Vintage, 1998. A history of large engineering projects in the U. S. since World War II – including Boston's Big Dig.

Hunter, Louis C. *Steamboats on Western Rivers*. New York, NY: Dover Publications, 1994. The definitive work on steamboating on the Ohio and Mississippi Rivers. Be forewarned, however, it is a big book!

Isenberg, Andrew C. *The Destruction of the Bison*. Cambridge, UK: Cambridge University Press, 2001.

Israel, Paul. *Edison*. New York, NY: John Wiley & Sons, 1998. A prize-winning biography.

Israel, Paul. *From Machine Shop to Industrial Laboratory*. Baltimore, MD: Johns Hopkins University Press, 1992. How research and development in the early telegraph industry became increasingly scientific.

Jackson, Kenneth T. *Crabgrass Frontier: The Suburbanization of America*. New York, NY: Oxford University Press, 1985.

Kanigel, Robert. *The One Best Way*. London, UK: Little Brown Company, 1997. Biography of Frederick W. Taylor.

Kasson, John F. *Civilizing the Machine*. New York, NY: Hill & Wang Publishers, 1976. Technology and culture in 19th-century America.

Kline, Ronald R. *Consumers in the Country: Technology and Social Change in Rural America*. Baltimore, Md. : Johns Hopkins University Press, 2000. An important analysis of the complicated rural response to technological change.

Lecuyer, Christophe. [*Making Silicon Valley*](#). Cambridge, MA: MIT Press, 2006. The latest work on Silicon Valley and its origins.

Laurie, Bruce. *Artisans into Workers*. New York, NY: Hill & Wang Publishers, 1989. A labor historian's perspective on the changes wrought by the industrial revolution.

Layton, Edwin T. *The Revolt of the Engineers*. Cleveland, OH: Press of Case Western Reserve University, 1971. Engineers as reformers in early 20th-century America.

Leslie, Stuart W. *Boss Kettering*. New York, NY: Columbia University Press, 1983. Biography of the famous inventor of the electric starter, among other things.

Leslie, Stuart W. *The Cold War and American Science*. New York, NY: Columbia University Press, 1993.

Licht, Walter. *Working for the Railroad*. Princeton, NJ: Princeton University Press, 1983. A labor-oriented history.

Lucie, Karen. *Charles Sheeler and the Cult of the Machine*. Cambridge, MA: Harvard University Press, 1991. How an early 20th-century artist responded to the machine age.

Marx, Leo. *The Machine in the Garden*. New York, NY: Oxford University Press, 1999. A pathbreaking book about literary responses to technological change in 19th-century America. First published in 1964, but read the 2000 edition which includes a new afterword by the author.

Malone, Patrick M. *The Skulking Way of War*. Lanham, MD: Madison Books, 1991. How New England Indians adopted firearms and the implications it had for warfare in colonial America.

Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920-1940*. Berkeley, CA: University of California Press, 1985.

McKenzie, Donald. [*Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance*](#). Cambridge, MA: MIT Press, 1990. The development of missile guidance systems at Draper Labs. An important study, and an interesting perspective for anyone considering working in the defense industry.

McElheny, Victor K. *Insisting on the Impossible*. Cambridge, MA: Perseus Publishing, 1998. Biography of Edwin Land, inventor of instant photography and founder of Polaroid.

McElheny, Victor K. *Watson and DNA: Making a Scientific Revolution*. Cambridge, MA. : Perseus Publishing, 2003. About the origins of molecular biology and its technological applications.

McShane, Clay. *Down the Asphalt Path*. New York, NY: Columbia University Press, 1995. Autos in urban America.

Meyer, Stephen. *The Five Dollar Day*. Albany, NY: State University of New York Press, 1981. About Henry Ford and his controversial labor policies.

Miller, Douglas T. *The Birth of Modern America, 1820-1850*. New York, NY: Macmillan Publishing Company, 1970. A general history of the period that contextualizes early American industrialization.

Mindell, David A. *War, Technology, and Experience Aboard U.S.S. Monitor*. Baltimore, Md.: Johns Hopkins University Press, 2000. Designing, operating, and popular understanding of the famous Civil War ironclad. A different look at an oft-discussed subject.

Mindell, David A. *Between Human and Machine: Feedback, Control, and Computing before Cybernetics*. Baltimore, MD: Johns Hopkins University Press, 2002. A path-breaking history of control systems and their connection with computers.

Misa, Thomas. *Nation of Steel: The Making of Modern America, 1865-1925*. Baltimore, MD: Johns Hopkins University Press, 1995. A very readable history of the rise of the steel industry in late 19th-century America.

Mowery, David C., and Nathan Rosenberg. *Paths of Innovation: Technological Change in 20th-Century America*. New York, NY: Cambridge University Press, 1998. Asking “what are the lessons for policy makers,” two economists look at industrial research and how innovation spreads in the electrical, chemical, and semiconductor industries.

Nye, David F. *Electrifying America*. Cambridge, MA: MIT Press, 1990. A social history of electrification.

Nye, David F. *America as Second Creation*. Cambridge, MA: MIT Press, 2003. A cultural history of technology that examines narratives of technological change and their ideological significance.

Neufeld, Michael J. *The Rocket and the Reich: Pennemunde and the Coming of the Ballistic Missile Era*. New York, NY: Free Press, c1995. The German beginnings during World War II.

Ogle, Maureen. *All the Modern Conveniences: American Household Plumbing, 1840-1890*. Baltimore, MD: Johns Hopkins University Press, 1996.

Post, Robert C. *High Performance*. Baltimore, MD: Johns Hopkins University Press, 1994. About top fuel drag racing and its technologies.

Rhodes, Richard. *The Making of the Atomic Bomb*. New York, NY: Simon & Schuster, 1986. The standard history of the subject.

Roe, Joseph W. *English and American Tool Builders*. Bradley, IL: Lindsay Publications, 1987. The history of machine tools. Originally published in 1916.

Russell, Edmund. *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring*. New York, NY: Cambridge University Press, 2001. An innovative work about DDT that combines environmental history and military history in an analysis of the chemical industry.

Sale, Kirkpatrick. *The Fire of His Genius: Robert Fulton and the American Dream*. New York, NY: Free Press, 2001. Biography of Robert Fulton, artist and inventor.

Scharff, Virginia . *Taking the Wheel: Women and the Coming of the Motor Age*. Albuquerque NM: University of New Mexico Press, 1991.

Sherry, Michael. *The Rise of American Air Power: The Creation of Armageddon*. New Haven, CT: Yale University Press, 1987. Social and military history of the American fascination with air bombing leading up to World War II.

Schivelbusch, Wolfgang. *The Railway Journey: Trains and Travel in the 19th Century*. New York : Urizen Books, 1979

Seely, Bruce. *Building the American Highway System*. Philadelphia, PA: Temple University Press, 1987.

Carol Sheriff, *The Artificial River: The Erie Canal and the Paradox of Progress, 1817-1862*. New York, NY: Hill & Wang Publishers, 1996.

Smith, Mark M. *Mastered by the Clock: Time, Slavery, and Freedom in the American South*. Chapel Hill, NC: University of North Carolina Press, 1997. How slave masters attempted to impose time-consciousness among their slaves.

Smith, Merritt Roe. *Harpers Ferry Armory and the New Technology*. Ithaca, N.Y.: Cornell University Press, 1977. The origins of the ‘American system’ of manufacturing and the responses to it.

Susan Smulyan, *Selling Radio*. Washington, DC: Smithsonian Institution Press, 1994.

Steinberg, Theodore. *Nature Incorporated: Industrialization and the Waters of New England*. Amherst, MA: University of Massachusetts Press, 1994. An environmental history of New England’s textile industry and its ecological and legal implications.

Thompson, Emily. [*The Soundscapes of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900-1933*](#). Cambridge, MA: MIT Press, 2004.

Vander Meulen, Jacob. *Building the B-29*. Washington, DC: Smithsonian Institution Press, 1995. About the World War II Boeing B-29 bomber, an advanced aircraft best known for dropping the atomic bombs on Japan.

Waldrop, M. Mitchell . *The Dream Machine: J. C. R. Licklider and the Revolution that Made Computing Personal*. New York, NY: Viking, 2001. How an academic entrepreneur shaped the direction of DARPA’s involvement with advanced computing.

Wallace, Anthony F. C. *Rockdale: The Growth of an American Village in the Early Industrial Revolution*. New York, NY: Knopf, 1978. Historical ethnography of a textile manufacturing community in southeastern Pennsylvania prior to the Civil War.

White, John H. Jr., *The John Bull*. Washington, D.C.: Smithsonian Institution Press, 1981. White, a leading student of railroad technology, writes about an early British-built but American modified steam locomotive that is on exhibit at the Smithsonian Institution. Whoever reviews this book should pay a visit to the “John Bull” at the Smithsonian’s National Museum of American History.

White, Richard . *The Organic Machine: The Remaking of the Columbia River*. New York, NY: Hill and Wang, 1996. An environmental history.