

## Science in America

Preliminary Exam Reading List, 2008

Supervised by Gregg Mitman

### Classics, Overviews, and Syntheses

Robert Bruce, *The Launching of Modern American Science, 1846-1876* (New York: Knopf, 1987).

George H. Daniels, *American Science in the Age of Jackson* (New York: Columbia University Press, 1968).

———, *Science in American Society* (New York: Knopf, 1971).

Sally Gregory Kohlstedt and Margaret Rossiter (eds.), *Historical Writing on American Science* (Baltimore: Johns Hopkins University Press, 1985).

Ronald L. Numbers and Charles Rosenberg (eds.), *The Scientific Enterprise in America: Readings from Isis* (Chicago: University of Chicago Press, 1996).

Nathan Reingold, *Science, American Style*. (New Brunswick: Rutgers University Press, 1991).

Charles Rosenberg, *No Other Gods: On Science and American Social Thought* (Baltimore: Johns Hopkins University Press, 1976).

### Science in the Colonies

Joyce Chaplin, *Subject Matter: Technology, the Body, and Science on the Anglo-American Frontier, 1500-1676* (Cambridge: Harvard University Press, 2001).  
[crosslisted with History of Technology]

John C. Greene, *American Science in the Age of Jefferson* (Ames: Iowa State University Press, 1984).

Katalin Harkányi, *The Natural Sciences and American Scientists in the Revolutionary Era* (New York: Greenwood Press, 1990).

Brooke Hindle, *The Pursuit of Science in Revolutionary America, 1735-1789*. (Chapel Hill: University of North Carolina Press, 1956).

Judith A. McGaw, *Early American Technology: Making and Doing Things from the Colonial Era to 1850* (Chapel Hill: University of North Carolina Press for the Institute of Early American History and Culture, 1994). [crosslisted with History of Technology]

Elizabeth Wagner Reed, *American Women in Science Before the Civil War* (Minneapolis: University of Minnesota Press, 1992).

Raymond Stearns, *Science in the British Colonies of America*. (Urbana, University of Illinois Press, 1970).

Dirk Jan Struik, *Yankee Science in the Making: Science and Engineering in New England*

*from Colonial Times to the Civil War* (New York: Dover Publications, 1991).

### **Nature's Nation**

Ann Shelby Blum, *Picturing Nature: American Nineteenth-Century Zoological Illustration* (Princeton: Princeton University Press, 1993).

William Goetzmann, *Exploration and Empire: The Explorer and the Scientist in the Winning of the American West* (New York: Knopf, 1966).

Elizabeth Keeney, *The Botanizers: Amateur Scientists in Nineteenth-Century America* (Chapel Hill: University of North Carolina Press, 1985).

Robert E. Kohler, *All Creatures: Naturalists, Collectors, and Biodiversity, 1850-1950* (Princeton: Princeton University Press, 2006).

Barbara Novak, *Nature and Culture: American Landscape and Painting, 1825-1875* (New York: Oxford University Press, 1996). [crosslisted with Environmental History]

Orosz, Joel. *Curators and Culture: The Museum Movement in America, 1740-1870* (Tuscaloosa: University of Alabama Press, 1990).

Charlotte M. Porter, *The Eagle's Nest: Natural History and American Idea, 1812-1842* (Tuscaloosa: University of Alabama Press, 1986).

Hugh Richard Slotten, *Patronage, Practice, and the Culture of American Science: Alexander Dallas Bache and the U.S. Coast Survey* (New York: Cambridge University Press, 1994).

Wallace Stegner, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the American West*

Laura Walls, *Seeing New Worlds: Henry David Thoreau and Nineteenth-Century Natural Science* (Madison: University of Wisconsin Press, 1995).

Margaret Welch, *The Book of Nature: Natural History in the United States 1825-1875* (Boston: Northeastern University Press, 1998).

Donald Worster, *A River Running West: The Life of John Wesley Powell* (New York: Oxford University Press, 2001).

### **The Professionalization of American Science**

Mark Barrow, *A Passion for Birds : American Ornithology after Audubon* (Princeton: Princeton University Press, 1998).

A. Hunter Dupree, *Science in the Federal Government: A History of Policies and Activities to 1940* (Cambridge: Harvard University Press, 1957, 1986).

James R. Fleming, *Meteorology in America, 1800-1870* (Baltimore: Johns Hopkins University Press, 1990).

Gerald Jonas, *The Circuit Riders: Rockefeller Money and the Rise of Modern Science*

- (New York: Norton, 1989).
- Daniel Kevles, *The Physicists: The History of a Scientific Community in Modern America* (New York: Knopf, 1977).
- Robert E. Kohler, *Partners in Science: Foundations and the Natural Sciences, 1900-1945* (Chicago: University of Chicago Press, 1991).
- Sally Gregory Kohlstedt, *The Formation of the American Scientific Community: The American Association for the Advancement of Science, 1848-1860* (Urbana: University of Illinois Press, 1976).
- Sally Gregory Kohlstedt, Micheal M. Sokal, and Bruce Lewenstein, *The Establishment of Science in America: 150 years of the American Association for the Advancement of Science* (New Brunswick: Rutgers University Press, 1999).
- John Lankford, *American Astronomy: Community, Careers, and Power, 1859-1940* (Chicago: University of Chicago Press, 1997).
- Albert Moyer, *A Scientist's Voice in American Culture: Simon Newcomb and the Rhetoric of Scientific Method* (Berkeley: University of California Press, 1992).
- Margaret Rossiter, *Women Scientists in America: Struggles and Strategies to 1940* (Baltimore: Johns Hopkins University Press, 1995).
- , *Women Scientists in America: Before Affirmative Action, 1940-1972* (Baltimore: Johns Hopkins University Press, 1995).
- Laurence R. Veysey, *The Emergence of the American University* (Chicago: University of Chicago Press, 1965).

### **American Biology**

- Toby Appel, *Shaping Biology: The National Science Foundation and American Biological Research, 1945-1975* (Baltimore: Johns Hopkins University Press, 2000).
- Keith Benson, Jane Maienschein, and Ronald Rainger. *The Expansion of American Biology* (New Brunswick & London: Rutgers University Press, 1991).
- Lily E. Kay, *The Molecular Vision of Life: Caltech, the Rockefeller Foundation, and the Rise of the New Biology* (New York: Oxford University Press, 1993).
- Robert E. Kohler, *Lords of the Fly: Drosophila Genetics and the Experimental Life* (Chicago: University of Chicago Press, 1994).
- , *Landscapes and Labscapes: Exploring the Lab-Field Border in Biology* (Chicago: University of Chicago Press, 2002).
- Jane Maienschein, *Transforming Traditions in American Biology, 1880-1915* (Baltimore: Johns Hopkins University Press, 1991).
- Kenneth Manning, *Black Apollo of Science: The Life of Ernest Everett Just* (New York: Oxford University Press, 1983).

Philip J. Pauly, *Biologists and the Promise of American Life: From Meriweather Lewis to Kinsey* (Princeton: Princeton University Press, 2000).

———, *Controlling Life: Jacques Loeb and the Engineering Ideal in Biology* (New York: Oxford University Press, 1987).

Ronald Rainger, *An Agenda for Antiquity: Henry Fairfield Osborn and Vertebrate Paleontology at the American Museum of Natural History, 1890-1935* (Tuscaloosa: University of Alabama Press, 1991).

Ronald Rainger, Keith Benson, and Jane Maienschein. *The American Development of Biology* (Philadelphia: University of Pennsylvania Press, 1988).

Nicolas Rasmussen, *Picture Control: The Electron Microscope and the Transformation of Biology in America, 1940-1960* (Stanford: Stanford University Press, 1997).

### **Ecology and Environment**

Stephen Bocking, *Ecologists and Environmental Politics: A History of Contemporary Ecology*. New Haven: Yale University Press, 1997.

———, *Nature's Experts: Science, Politics, and the Environment*. New Brunswick, NJ: Rutgers University Press, 2004.

Kevin Dann, *Across the Great Border Fault: the Naturalist Myth in America* (New Brunswick: Rutgers University Press, 2000).

Thomas R. Dunlap, *DDT: Scientists, Citizens, and Public Policy* (Princeton: Princeton University Press, 1981).

———, *Saving America's Wildlife: Ecology and the American Mind, 1850-1990* (Princeton: Princeton University Press, 1997).

Susan Flader, *Thinking Like a Mountain: Aldo Leopold and the Evolution of an Ecological Attitude toward Deer, Wolves, and Forests* (Columbia: University of Missouri Press, 1974).

Joel Hagen, *An Entangled Bank: The Origins of Ecosystem Ecology*. New Brunswick, NJ: Rutgers University Press, 1992.

Sharon Kingsland, *The Evolution of American Ecology, 1890-2000*. Baltimore: Johns Hopkins University Press, 2005.

———, *Modeling Nature: Episodes in the History of Population Ecology*. Chicago: University of Chicago Press, 1985.

Linda Lear, *Rachel Carson: Witness for Nature* (New York: Henry Holt, 1997).

Curt Meine, *Aldo Leopold: His Life and Work* (Madison: University of Wisconsin Press, 1988).

Gregg Mitman, *The State of Nature: Ecology, Community, and American Social Thought, 1900-1950*. Chicago: University of Chicago Press, 1992.

Edmund Russell, *War and Nature: Fighting Humans and Insects with Chemicals from*

- World War I to Silent Spring* (Cambridge: Cambridge University Press, 2001).  
[crosslisted with Environmental History]
- Michael Smith, *Pacific Visions: California Scientists and the Environment, 1850-1915*  
(New Haven: Yale University Press, 1987).
- Mark David Spence, *Dispossessing the Wilderness: Indian Removal and the Making of  
the National Parks* (New York: Oxford University Press, 1999).
- Ronald C. Tobey, *Saving the Prairies: The Life Cycle of the Founding School of  
American Plant Ecology, 1895-1955* (Berkeley: University of California Press,  
1981).
- Donald Worster, *Nature's Economy: A History of Ecological Ideas* (New York:  
Cambridge University Press, 1994). [crosslisted with Environmental History]

### **Race and Eugenics**

- Robert C. Bannister, *Social Darwinism and Myth in Anglo-American Social Thought*  
(Temple University Press, 1979).
- Elazar Barkan, *The Retreat of Scientific Racism: Changing Concepts of Race in Britain  
and the United States between the World Wars* (New York: Cambridge University  
Press, 1992).
- Carl Degler, *In Search of Human Nature: The Decline and Revival of Darwinism in  
American Social Thought* 1991.
- Mark Haller, *Eugenics: Hereditarian Attitudes in American Thought* (1963).
- Richard Hofstadter, *Social Darwinism in American Thought* (New York: G. Braziller,  
1959).
- James H. Jones, *Bad Blood: The Tuskegee Syphilis Experiment* (Free Press, 1981).
- Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*  
(Knopf, 1985).
- Edward Larson, *Sex, Race, and Science: Eugenics in the Deep South* (Baltimore: Johns  
Hopkins University Press, 1995).
- Diana Paul, *Controlling Human Heredity, 1895 to the Present* (Atlantic Highlands, N.J.:  
Humanities Press, 1995).
- Donald Pickens, *Eugenics and the Progressives* (1968).
- Mark Pittenger, *American Socialists and Evolutionary Thought, 1870-1920* (Madison:  
University of Wisconsin Press, 1993).
- William Stanton, *The Leopard's Spots: Scientific Attitudes toward Race in America,  
1815-1859* (Chicago: University of Chicago Press, 1960).

### **Social Sciences**

- Robert C. Bannister, *Sociology and Scientism: The American Quest for Objectivity and Purpose, 1918-1940* (Chapel Hill: University of North Carolina Press, 1994).
- Daniel Bjork, *B.F. Skinner: A Life* (Basic Books, 1993).
- Kerry W. Buckley, *Mechanical Man: John Broadus Watson and the Beginnings of Behaviorism* (New York: Guilford Books, 1989).
- Hamilton Cravens, *The Triumph of Evolution: American Scientists and the Heredity-Environment Controversy, 1900-1941* (Philadelphia: University of Pennsylvania Press, 1978).
- Mary O. Furner, *Advocacy and Objectivity: A Crisis in the Professionalization of American Social Science 1865-1905*. (1975).
- Johnathan Gathorne-Hardy, *Sex the Measure of All Things: A Life of Alfred C. Kinsey* (Indiana University Press, 2000).
- Lawrence Goldman, "Exceptionalism and Internationalism: The Origins of American Social Science Reconsidered," *Journal of Historical Sociology* 11(1998): 1-36.
- William Graebner, *The Engineering of Consent: Democracy and Authority in Twentieth-Century America*. (Madison: University of Wisconsin Press, 1987).
- Ellen Herman, *The Romance of American Psychology: Political Culture in the Age of Experts* (Berkeley: University of California Press, 1995).
- Curtis M. Hinsley, Jr., *Savages and Scientists: The Smithsonian Institution and the Development of American Anthropology, 1846-1910* (Washington: Smithsonian Institution Press, 1981).
- Fred H. Matthews, *Quest for an American Sociology: Robert Park and the Chicago School*. (Montreal: McGill Queen's University Press, 1977).
- Peter Novick, *That Noble Dream: The 'Objectivity Question' and the American Historical Profession* (Cambridge: Cambridge University Press, 1988).
- John M. O'Donnell, *The Origins of Behaviorism: American Psychology, 1870-1920* (New York: New York University Press, 1985).
- Katherine Pandora, *Rebels within the Ranks: Psychologists' Critique of Scientific Authority and Democratic Realities in New Deal America* (Cambridge: Cambridge University Press, 1997).
- Edward A. Purcell, Jr., *The Crisis of Democratic Theory: Scientific Naturalism and the Problem of Value* (Lexington: University Press of Kentucky, 1973).
- Dorothy Ross, *G. Stanley Hall: The Psychologist as Prophet* (Chicago: University of Chicago Press, 1972).
- , *The Origins of American Social Science* (Cambridge: Cambridge University Press, 1991).
- Cynthia Eagle Russett, *The Concept of Equilibrium in American Social Thought*. (New Haven: Yale University Press, 1966).
- George Stocking, *Race, Culture, and Evolution: Essays in the History of Anthropology*

(Chicago: University of Chicago Press, 1982).

Leila Zenderland, *Measuring Minds: Herbert Henry Goddard and the Origins of American Intelligence Testing* (Cambridge: Cambridge University Press, 1998).

### **Science and Religion**

James Gilbert, *Redeeming Culture: American Religion in an Age of Science*. (1997)

David Hollinger, *Science, Jews, and Secular Culture: Studies in Mid-Twentieth-Century American Intellectual History* (Princeton: Princeton University Press, 1996).

Edward J. Larson, *Summer for the Gods: the Scopes Trial and America's Continuing Debate over Science and Religion* (New York: Basic Books, 1997).

James Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-1900*. (Chicago: University of Chicago Press: 1979).

Ronald L. Numbers, *Creation by Natural Law: Laplace's Nebular Hypothesis in American Thought* (Seattle: University of Washington Press, 1977).

———, *The Creationists* (New York: Knopf, 1992).

———, *Darwinism Comes to America* (Cambridge: Harvard University Press, 1998).

Roberts, Jon. *Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900* (Madison: University of Wisconsin Press, 1988).

Rosenberg, Charles. *The Cholera Years* (Chicago: University of Chicago Press: 1962, 1987 with a new afterword).

### **Agriculture, Botany, and Horticulture**

Randal S. Beeman and James A. Pritchard, *A Green and Permanent Land: Ecology and Agriculture in the Twentieth Century* (Lawrence: University Press of Kansas, 2001). [crosslisted with Environmental History]

Deborah Fitzgerald, *The Business of Breeding: Hybrid Corn in Illinois, 1890-1940* (Ithaca: Cornell University Press, 1990). [crosslisted with Environmental History]

Richard A. Overfield, *Science with Practice: Charles E. Bessey and the Maturing of American Botany* (Ames: Iowa State University Press, 1993).

Philip J. Pauly, *Fruits and Plains: The Horticultural Transformation of America* (Cambridge: Harvard University Press, 2007).

John H. Perkins, *Geopolitics and the Green Revolution: Wheat, Genes, and the Cold War* (New York: Oxford University Press, 1997).

Margaret Rossiter, *The Emergence of Agricultural Science: Justus Liebig and the Americans* (New Haven: Yale University Press, 1975).

### **Science Education and Popularization**

Steven J. Dick, *The Biological Universe: The Twentieth-Century Extra-Terrestrial Life Debate and the Limits of Science* (1996).

Peter J. Kuznick, *Beyond the Laboratory: Scientists as Political Activists in 1930s America* (Chicago: University of Chicago Press, 1987).

Marcel LaFollette, *Making Science Our Own: Public Images of Science, 1910-1955*. (Chicago: University of Chicago Press, 1990).

Gregg Mitman, *Reel Nature: America's Romance with Wildlife on Film* (Cambridge: Harvard University Press, 1999).

Scott L. Montgomery, *Minds for the Making: The Role of Science in American Education, 1750-1990* (New York: Guilford Press, 1994).

Dorothy Nelkin, *Selling Science: How the Press Covers Science and Technology* (W.H. Freeman, 1987).

John Rudolph, *Scientists in the Classroom: The Cold War Reconstruction of American Science Education* (New York: Palgrave, 2002).

Robert Rydell, *All the World's a Fair: Visions of Empire at American International Expositions, 1876-1916*. (Chicago: University of Chicago Press, 1984).

———, *World of Fairs: The Century-of-Progress Expositions*. (Chicago: University of Chicago Press, 1993).

Ronald C. Tobey, *The American Ideology of National Science: 1919-1930* (Pittsburgh: University of Pittsburgh Press: 1971).

Kim Tolley, *The Science Education of American Girls: A Historical Perspective* (New York: RoutledgeFalmer, 2003).

### **Science, Medicine, and Public Health**

Allan Brandt, *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product that Defined America* (New York: Basic Books, 2007).

———, *No Magic Bullet: A Social History of Venereal Disease in the United States since 1880* (New York: Oxford University Press, 1985).

Gerald Geison (ed.), *Physiology in the American Context, 1850-1940* (Bethesda, MD: American Physiological Society, 1987).

Victoria A. Harden, *Inventing the NIH: Federal Biomedical Research Policy, 1887-1937* (Baltimore: Johns Hopkins University Press, 1986).

Robert E. Kohler, *From Medical Chemistry to Biochemistry: The Making of a Biomedical Discipline* (New York: Cambridge University Press, 1982).

Judith Walzer Leavitt, *Brought to Bed: Childbearing in America, 1750-1950* (New York: Oxford University Press, 1986).



———, *The Healthiest City: Milwaukee and the Politics of Health Reform* (Princeton: Princeton University Press, 1982).

———, *Typhoid Mary: Captive to the Public's Health* (Boston: Beacon Press, 1996).

Judith Walzer Leavitt (ed.), *Women and Health in America: Historical Readings* (Madison: University of Wisconsin Press, 1984).

Kenneth Ludmerer, *Learning to Heal: The Development of American Medical Education* (New York: Basic Books, 1985).

Gerald Markowitz and David Rosner, *Deceit and Denial: The Deadly Politics of Industrial Pollution* (Berkeley: University of California Press, 2002).

Gregg Mitman, *Breathing Space: How Allergies Shape Our Lives and Landscapes* (New Haven: Yale University Press, 2007).

Ronald L. Numbers and Judith Walzer Leavitt (eds.), *Sickness and Health in America: Readings in the History of Medicine and Public Health*, 3<sup>rd</sup> edition (Madison: University of Wisconsin Press, 1997).

Charles Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987).

David Rosner and Gerald Markowitz, *Deadly Dust: Silicosis and the Politics of Occupational Disease in Twentieth-Century America* (Princeton: Princeton University Press, 1991).

Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1982).

Stephen P. Strickland, *Politics, Science, and Dread Disease: A Short History of United States Medical Research Policy* (Cambridge: Harvard University Press, 1972).

Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge: Harvard University Press, 1998).

Laurel Thatcher Ulrich, *A Midwife's Tale: The Life of Martha Ballard, Based on Her Diary, 1785-1812* (New York: Knopf, 1990).

John Harley Warner, *The Therapeutic Perspective: Medical Practice, Knowledge, and Identity in America, 1820-1885* (Cambridge: Harvard University Press, 1986).

**Science and the National Security State (or something relating to postwar/20<sup>th</sup>-c. science??)**

Paul Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age* (New York: Pantheon Books, 1985).

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

Steve J. Heims, *The Cybernetics Group* (Cambridge: M.I.T. Press, 1991).

James G. Hershberg, *James B. Conant: Harvard to Hiroshima and the Making of the*

- Nuclear Age* (Stanford: Stanford University Press, 1995).
- Stuart W. Leslie, *The Cold War and American Science: the Military-Industrial-Academic Complex at MIT and Stanford* (NY: Columbia University Press, 1993).
- Susan Lindee, *Suffering Made Real: American Science and the Survivors at Hiroshima* (Chicago: University of Chicago Press, 1994).
- Walter McDougall, *The Heavens and the Earth: A Political History of the Space Age* (New York: Basic Books, 1985).
- Allan A. Needell, *Science, Cold War and the American State: Lloyd V. Berkner and the Balance of Professional Ideals* (Amsterdam: Harwood Academic, 2000).
- Richard Rhodes, *The Making of the Atomic Bomb* (Simon and Schuster, 1986).
- , *Dark Sun: The Making of the Hydrogen Bomb* (Simon and Schuster, 1995).
- Smith, Robert. *The Space Telescope: A Study of NASA, Science, Technology, and Politics* (New York: Cambridge University Press, 1993).
- Jessica Wang, *American Science in an Age of Anxiety: Scientists, Anticommunism, and the Cold War* (Chapel Hill: University of North Carolina Press, 1999).
- Spencer Weart, *Nuclear Fear: A History of Images* (Cambridge: Harvard University Press, 1988).

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