

# HISTORY/RACKHAM 619: Knowledge/Power/Practice in Science, Technology & Medicine

Winter, 2005  
Monday, 1:00–3:30  
3315 Mason Hall

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This graduate readings seminar is designed to provide an overview of some of the major themes and issues that occupy the field of Science and Technology Studies. Drawing primarily on scholarship in history, anthropology, and sociology, we will mix theoretical material with more empirically oriented studies. The course will focus particularly on the relation between social, political, and cultural contexts and the development of ideas and practices within science, technology, and medicine.

## ***Requirements: Assignments and Expectations***

### *Reading*

Required readings can be found in the course pack [CP] (available from Excel on South University) and in the following books (available from Shaman Drum [SD] or at Reserves):

Sonya M. Amadae, *Rationalizing Capitalist Democracy: The Cold War Origins of Rational Choice Liberalism* (Chicago: University of Chicago Press, 2003)

Harry M. Collins and Trevor Pinch, *The Golem: What You Should Know about Science* (Cambridge: Cambridge University Press, 1998)

Harry M. Collins and Trevor Pinch, *The Golem at Large: What You Should Know about Technology* (Cambridge: Cambridge University Press, 2002)

Peter L. Galison, *Image and Logic: A Material Culture of Microphysics* (Chicago: University of Chicago Press, 1997)

Ian Hacking, *Social Construction of What?* (Cambridge: Harvard University Press, 2000)

Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge: Harvard University Press, 1990)

Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton: Princeton University Press, 1995)

Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Stanford: Stanford University Press, 1991)

## Writing

There are three types of writing assignment:

- 1) **Weekly responses.** Every week — except for the ones in which you are leading discussions and doing the recommended reading — you must turn in a 500–600 word response to the required reading. This should be double-spaced. On no account should you exceed 600 words. Rather than merely summarize the reading, you should engage with it analytically. ***The electronic version of this response is due no later 9 a.m. on the day of the seminar, submitted to the course email list: w5-history-619-001@umich.edu***
- 2) **Discussion papers.** Two in the semester, to be determined on the first day of class. See below under “discussion” for further details.
- 3) **Final project.** Your final project will be a paper 2500–3500 words in length. The choice of topic is up to you, but all topics must engage with some part of the theories or methods covered in the course. Format is also up to you, and we encourage you to choose whichever format will be most useful to you in developing your professional skills. Options include: bibliographic review essay; grant, fellowship, or dissertation proposal; preliminary research paper.

This assignment has three parts.

- (a) 300–500 word *proposal*, clearly describing your topic and how it relates to course materials and concepts, is ***due in class on February 21<sup>st</sup> (bring 2 paper copies)***.
- (b) An introduction and bibliography are due on March 21<sup>st</sup>. They will be returned within a week, with comments and suggestions for revisions. Please submit by email (MS Word attachment) and in hard copy.
- (c) The *final version*, edited, revised, and proofread, is due on Monday, April 25<sup>th</sup>.

## Discussion

**This is a discussion seminar. Its success depends on the commitment and involvement of all participants. Therefore, you are expected to arrive in class thoroughly prepared and to participate actively in all discussions.**

Twice during the term, you will help lead class discussion. This will involve:

- Selecting and reading one of the books from the “recommended reading” list for that week.
- Finding 2 scholarly reviews of the book.
- Writing a 500–600 word “think piece” that discusses both the recommended and the assigned reading
- Meeting with the other student(s) who may be presenting on readings and collectively preparing a one–page handout as an aid to class discussion. This handout should list what you consider to be the three or four most interesting analytical points for the week’s reading, including both the main assignment and the recommended reading you did. The handout should also offer two questions designed to provoke interesting, wide–ranging general class discussion; the questions should focus on how concepts, theories, or historiographical frames from the readings might be applied to other topics or issues.
- In addition to the handout, please distribute hard copies of your think piece **and** the two book reviews to all class members
- At the beginning of that class session, presenters will jointly spend **no more than 15 minutes** explaining how the recommended reading related to the common reading, and elaborating your discussion questions. All presenters should participate in the presentation.

### STS colloquium

Everyone is welcome and encouraged to attend the STS faculty–graduate student colloquium, which meets around 6 times during the semester, on Monday afternoons from 4 to 5:30. A schedule will be distributed on the first day of class. If you are taking History/Rackham 619 to fulfill the core course requirement for the STS certificate, you are expected to attend the STS colloquium and participate in discussion.

## ***Schedule of Seminar Topics and Readings***

### **1/10: Week 1. Course Mechanics**

No required reading

### **1/17: Week 2. MLK Day (No Class)**

Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (Cambridge: Cambridge University Press, 1998) [CP]

Sergio Sismondo, *An Introduction to Science and Technology Studies* (Oxford: Blackwell, 2004), chs. 1–3, 5, 8 [CP]

Wiebe Bijker, “How and Why Technology Matters,” in Robert Goodin & Charles Tilly, eds., *Oxford Handbook of Contextual Political Analysis* (OUP, forthcoming). [CP]

Roger Cooter, “‘Framing’ the End of the Social History of Medicine,” in Frank Huisman and John Harley Warner, eds., *Locating Medical History: The Stories and Their Meanings* (Baltimore: Johns Hopkins University Press, 2004), pp. 309–337 [CP]

#### **No presenters**

#### Recommended:

Thomas P. Hughes, “The Evolution of Large Technical Systems,” in Mario Biagioli, ed., *The Science Studies Reader* (Routledge 1999), pp. 202–223 [CP]

Emily Martin, “Toward an Anthropology of Immunology: The Body as Nation State,” in Biagioli, ed., *The Science Studies Reader* (Routledge 1999), pp. 359–371 [CP]

### **1/24: Week 3. Social Construction**

Ian Hacking, *Social Construction of What?* (Cambridge: Harvard University Press, 2000), chs. 1–7 [SD]

Harry M. Collins and Trevor Pinch, *The Golem: What You Should Know about Science* (Cambridge: Cambridge University Press, 1998), chs. 4–6 [SD]

Harry M. Collins and Trevor Pinch, *The Golem at Large: What You Should Know about Technology* (Cambridge: Cambridge University Press, 2002), chs. 2, 5 [SD]

Sismondo, *An Introduction to Science and Technology Studies*, chs. 6, 15 [CP]

**Presenters:**

Recommended:

Wiebe Bijker, *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*

Karin Knorr Cetina, *Epistemic Cultures: How the Sciences Make Knowledge*

H. M. Collins, *Changing Order: Replication and Induction in Scientific Practice*

Ian Hacking, *Rewriting the Soul: Multiple Personality and the Sciences of Memory*

Donald Mackenzie, *Inventing Accuracy*

Thomas P. Hughes, *Networks of Power*

Susan J. Douglas, *Inventing American Broadcasting, 1899–1922*

**1/31: Week 4. Visualization and the Making of Objectivity**

**Note! Class will meet with Peter Galison, in conjunction with the STS colloquium. Instead of our usual meeting place, we will convene at 1 pm in 1644 SSWB. Galison and other STS program faculty will join us there at 2 pm.**

Peter L. Galison, *Image and Logic: A Material Culture of Microphysics* (Chicago: University of Chicago Press, 1997), chs 1, 3, 4, 8, 9 [SD]

Lorraine Daston and Peter Galison, "The Image of Objectivity," *Representations* 40 (1992): 81–128 [CP]

**Presenters:**

Recommended:

Peter Galison, *How Experiments End*

Barbara Stafford, *Body Criticism: Imaging the Unseen in Enlightenment Art and Medicine*

Peter Dear, *Discipline & Experience*

Andrew Pickering, *The Mangle of Practice*  
 Julie Robin Solomon, *Objectivity in the Making: Francis Bacon and the Politics of Inquiry*  
 Philip Kitcher, *The Advancement of Science: Science Without Legend, Objectivity Without Illusions*  
 Helen E. Longino, *Science as Social Knowledge: Values and Objectivity in Scientific Inquiry*

## 2/7: Week 5. The Science and Technology of Trusting Knowledge

Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton: Princeton University Press, 1995), chs. 1, 5–7 [SD]  
 Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1994), chs. 1, 6 [CP]  
 Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago: University of Chicago Press, 1998), ch. 3 [CP]  
 Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985), ch. 2 [CP]  
 Sismondo, *An Introduction to Science and Technology Studies*, chs. 10–11, 14 [CP]

### Presenters:

#### Recommended:

Donald Mackenzie, *Mechanizing Proof: Computing, Risk, and Trust*  
 Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube*  
 Bruno Latour and Steve Woolgar, *Laboratory Life: The Social Construction of Scientific Facts*  
 Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society*  
 Andrew Pickering, *Constructing Quarks*

## 2/14: Week 6. Cyborgs

- Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989), chs. 1, 3, 7 [CP]
- Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp.149–182 [CP]
- Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp.183–203 [CP]
- Baukje Prins, "The Ethics of Hybrid Subjects: Feminist Constructivism According to Donna Haraway," *Science, Technology, & Human Values* 20 (1995): 352–367 [CP]
- Paul Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (MIT Press, 1996), chs 1, 10 [CP]
- Peter Galison, "The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision," *Critical Inquiry* 21 (1994): 228–266 [CP]
- Sismondo, *An Introduction to Science and Technology Studies*, ch. 13 [CP]

### **Presenters:**

#### Recommended:

- Donna Haraway,  
*Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_Oncomouse: Feminism and Technoscience*
- Sandra Harding, *Whose Science? Whose Knowledge? Thinking From Women's Lives*
- Ludmilla Jordanova, *Sexual Visions: Images of Gender in Science and Medicine Between the Eighteenth and Twentieth Centuries*
- Anne Fausto-Sterling, *Sexing the Body: Gender Politics and the Construction of Sexuality*
- John Law, ed., *A Sociology of Monsters: Essays on Power, Technology and Domination*
- Gary Lee Downey, Joseph Dumit, eds. *Cyborgs & Citadels: Anthropological Interventions in Emerging Sciences and Technologies*
- Robbie Davis-Floyd, Joseph Dumit, Jennifer Croissant, Sylvia Sensiper, eds. *Cyborg Babies: From Techno-Sex to Techno-Tots*

## **2/21: Week 7. Classifying/Categorizing Human Beings**

- Katherine Park and Lorraine J. Daston, "Unnatural Conceptions: The Study of Monsters in Sixteenth and Seventeenth-Century France and England," *Past and Present* 92 (1981): 20–54 [CP]
- John Carson, *The Measure of Merit* (Princeton: Princeton University Press, forthcoming), ch. 7 [CP]
- Allan Sekula, "The Body and the Archive," *October* 39 (1986): 3–64 [CP]
- Porter, *Trust in Numbers*, ch. 2 [SD]
- Goffrey C. Bowker and Susan Leigh Star, *Sorting Things Out: Classification and Its Consequences* (Cambridge: MIT Press, 2000), ch. 6 [CP]
- Keith Breckenridge, "Verwoerd's Bureau of Proof: Total Information in the Making of Apartheid," (Unpublished ms) [CP]
- Simon A. Cole, *Suspect Identities: A History of Fingerprinting and Criminal Identification* (Cambridge: Harvard University Press, 2001), chs. 1, epilogue [CP]
- Robert Crawford, "The Boundaries of the Self and the Unhealthy Other: Reflections on Health, Culture and AIDS," *Social Science and Medicine* 38 (1994): 1347–1365 [CP]

### **Presenters:**

#### Recommended:

- Jennifer Terry, *An American Obsession: Science, Medicine, and Homosexuality in Modern America*
- Georges Canguilhem, *The Normal and the Pathological*
- Kurt Danziger, *Constructing the Subject: Historical Origins of Psychological Research*
- Elizabeth Lunbeck, *The Psychiatric Persuasion: Knowledge, Gender, and Power in Modern America*
- Lorraine J. Daston and Katherine Park, *Wonders and the Orders of Nature, 1150–1750*
- Michel Foucault, *The Order of Things*
- Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*
- Daniel Pick, *Faces of Degeneration: A European Disorder, c.1848–c.1918*
- Thomas Lacqueur, *Making Sex: Body and Gender from the Greek to Freud*
- Sander Gilman, *Difference and Pathology: Stereotypes of Sexuality, Race, and Madness*

**2/28: Winter Break**

No Class

### 3/7: Week 8. Actors, Networks, Scripts

- Bruno Latour, "Give Me a Laboratory and I will Raise the World," in Karin Knorr-Cetina and Michael Mulkay (eds), *Science Observed* (London: Sage 1983), 141-170 [CP]
- Bruno Latour, *Science in Action: How to Follow Scientists and Engineer through Society* (Cambridge: Harvard University Press, 1990) [SD]  
**Pages TBA.**
- Michel Callon, "Society in the Making: The Study of Technology as a Tool for Sociological Analysis," in Wiebe Bijker, Thomas P. Hughes, and Trevor Pinch, *The Social Construction of Technological Systems* (MIT, 1987) [CP]
- Jim Johnson, "Mixing Humans and Nonhumans together: The Sociology of a Door-Closer," *Social Problems*, 35 (1988): 298-310 [CP]
- Madeleine Akrich, "The De-description of Technical Objects," in Wiebe Bijker and John Law, eds., *Shaping Technology/Building Society* (MIT Press, 1992), pp. 205-225
- H. M. Collins and Steven Yearley, "Epistemological Chicken," in Andrew Pickering, ed., *Science as Practice and Culture* (University of Chicago Press, 1992), pp. 301-342 [CP]
- Michel Callon and Bruno Latour, "Don't Throw the Baby out with the Bath School! A Reply to Collins and Yearley," in Andrew Pickering, ed., *Science as Practice and Culture* (University of Chicago Press, 1992), pp. 343-389 [CP]
- Sismondo, *An Introduction to Science and Technology Studies*, chs. 7, 9 [CP]

#### Presenters:

#### Recommended:

- Bruno Latour, *We Have Never Been Modern*
- Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies*
- Michel Callon, John Law, Arie Rip, *Mapping the Dynamics of Science and Technology: Sociology of Science in the Real World*
- John Law, John Hassard, *Actor Network Theory and After*
- John Law, *Aircraft Stories: Decentering the Object in Technoscience*

### 3/14: Week 9. Politics, Law, Governance

- James C. Scott, *Seeing Like a State How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), chs 1, 7 [CP]
- Yaron Ezrahi, *The Descent of Icarus: Science and the Transformation of Contemporary Democracy* (Cambridge: Harvard University Press, 1990), ch. 9 [CP]
- Yaron Ezrahi, "Technology and the Civil Epistemology of Democracy," *Inquiry* 35 (1993): 363–76 [CP]
- Sheila Jasanoff, "Ordering Knowledge, Ordering Society," in *States of Knowledge: The Co-Production of Science and Social Order* (London: Routledge, 2004), pp. 13–45 [CP]

- Sheila Jasanoff, "In a Constitutional Moment: Science and Social Order at the Millennium," in B. Joerges and H. Nowotny, eds., *Social Studies of Science and Technology: Looking Back, Ahead (Sociology of the Sciences Yearbook, 23)* (Dordrecht: Kluwer, 2003), pp. 155–80 [CP]
- Sheila Jasanoff, "Acceptable Evidence in a Pluralistic Society," in Deborah G. Mayo and Rachelle D. Hollander, eds., *Acceptable Evidence: Science and Values in Risk Management* (New York: Oxford University Press, 1991), pp. 29–47 [CP]
- Sheila Jasanoff, "Science and Norms in International Environmental Regimes," in F. O. Hampson and J. Reppy, eds., *Earthly Goods: Environmental Change and Social Justice* (Ithaca, NY: Cornell University Press, 1996), pp. 173–197 [CP]
- Clark A. Miller, "Resisting Empire: Globalism, Relocalization, and the Politics of Knowledge," in Sheila Jasanoff and Marybeth Long Martello, eds., *Earthly Politics: Local and Global in Environmental Governance* (Cambridge: MIT Press, 2004), pp. 81–102 [CP]
- Porter, *Trust in Numbers*, chs. 4, 8 [SD]
- Langdon Winner, "Citizen Virtues in a Technological Order," *Inquiry* 35 (1993): 341–61 [CP]

**Presenters:**

Recommended:

- Yaron Ezrahi, *The Descent of Icarus: Science and the Transformation of Contemporary Democracy* (Cambridge: Harvard University Press, 1990)
- Sheila Jasanoff, *The Fifth Branch: Science Advisers as Policymakers* (Cambridge: Harvard University Press, 1990)
- Sheila Jasanoff, *Science at the Bar: Law, Science, and Technology in America*
- Bruno Latour, *Politics of Nature: How to Bring the Sciences into Democracy*
- James Boyle, *Shamans, Software & Spleens: Law and the Construction of the Information Society* (Cambridge: Harvard University Press, 1996)
- David H. Guston, *Between Politics and Science*
- Philip Kitcher, *Science, Truth, and Democracy*
- Steven Yearley, *Sociology, Environmentalism, Globalization: Reinventing the Globe*
- Kim Fortun, *Advocacy after Bhopal: Environmentalism, Disaster, New Global Orders*

Daniel S. Greenberg, *The Politics of Pure Science*  
 Daniel S. Greenberg, *Science, Money, and Politics: Political Triumph and Ethical Erosion*  
 Donald K. Price, *The Scientific Estate*  
 Troy Duster, *Backdoor to Eugenics*

### 3/21: Week 10. Final paper research and discussion

Introductions and bibliographies for final paper due today.

### 3/28: Week 11. Expertise

Sonya M. Amadae, *Rationalizing Capitalist Democracy: The Cold War Origins of Rational Choice Liberalism* (Chicago: University of Chicago Press, 2003) [SD]

Michel Callon, "Introduction: The embeddedness of economic markets in economics," pp. 1–57 in Callon, ed., *The Laws of the Market* (Blackwell, 1998).

#### Presenters:

#### Recommended:

Stephen Hilgartner, *Science on Stage*

Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity*

Brian Balogh, *Chain Reaction*

Thomas P. Hughes, *American Genesis*

David A Hounshell, *The Cold War, RAND, and the Generation of Knowledge, 1946–1962*

Chandra Mukerji, *A Fragile Power: Scientists and the State*

Shigehisa Kuriyama, *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine*

Philip Mirowski, *Machine Dreams: Economics Becomes a Cyborg Science*

Marc Berg, *Rationalizing Medical Work: Decision-Support Techniques and Medical Practices*

### 4/4: Week 12. Military Systems and Their Secrets

- Paul Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (MIT Press, 1996), chs. 2, 3, 4 [CP]
- Donald Mackenzie & Graham Spinardi, "The Shaping of Nuclear Weapon System Technology: US Fleet Ballistic Missile Guidance and Navigation: I: From Polaris to Poseidon," *Social Studies of Science*, 18 (1988): 419–463 [CP]
- Donald Mackenzie & Graham Spinardi, "The Shaping of Nuclear Weapon System Technology: US Fleet Ballistic Missile Guidance and Navigation: II: 'Going for Broke' – The Path to Trident II," *Social Studies of Science*, 18 (1988): 581–624 [CP] **Focus on pp. 603–618.**
- Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II* (MIT 1998), ch 2 [CP]
- Jessica Wang, *American Science in an Age of Anxiety: Scientists, Anticommunism, and the Cold War* (UNC, 1999), ch. 4 [CP]
- Joseph Masco, "Lie Detectors: On Secrets and Hypersecurity in Los Alamos," *Public Culture* 14 (2002): 441–467 [CP]
- M. Susan Lindee, *Suffering Made Real* (Chicago, 1994), chs. 1, 2, 7 [CP]
- Gabrielle Hecht, "Globalization meets Frankenstein? Reflections on Terrorism and Technopolitics in the Nuclear Age," *History and Technology*, 19 (2003): 1–8 [CP]

### **Presenters:**

#### Recommended:

- Lynn Eden, *World on Fire*
- Hugh Gusterson, *Nuclear Rites*
- David Noble, *Forces of Production*
- Maggie Mort, *Building the Trident Network: A Study of the Enrollment of People, Knowledge, and Machines*
- Alex Roland, Philip Shiman, *Strategic Computing: DARPA and the Quest for Machine Intelligence, 1983–1993*
- Timothy Moy, *War Machines: Transforming Technologies in the U.S. Military, 1920–1940.*
- Stuart W. Leslie, *The Cold War and American science: The Military–Industrial–Academic Complex at MIT and Stanford*
- Daniel Pick, *War Machine: The Rationalisation of Slaughter in the Modern Age*
- Ken Alder, *Engineering the Revolution*
- Merritt Roe Smith, *Harper's Ferry Armory and the New Technology*

#### 4/11: Week 13. Colonialism and Its Bodies

- Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Stanford: Stanford University Press, 1991) [SD]
- Warwick Anderson, " 'Where Every Prospect Pleases and Only Man is Vile': Laboratory Medicine as Colonial Discourse," *Critical Inquiry* 18 (1992): 506–529 [CP]
- Warwick Anderson, "Excremental Colonialism: Public Health and the Poetics of Pollution," *Critical Inquiry* 21 (1995): 640–669 [CP]
- Randall Packard, "Visions of Postwar Health and Development and Their Impact on Public Health Interventions in the Developing World," pp 93–118 in Packard and Cooper, eds., *International Development and the Social Sciences* (University of California Press 1997)

#### Presenters:

##### Recommended:

- Gyan Prakash, *Another Reason*
- William K. Storey, *Science and Power in Colonial Mauritius*
- Nancy Hunt, *A Colonial Lexicon*
- Warwick Anderson, *The Cultivation of Whiteness: Science, Health, and Racial Destiny in Australia*
- Jock McCulloch, *Asbestos Blues: Labour, Capital, Physicians & the State in South Africa*
- Randall M. Packard, *White Plague, Black Labor: Tuberculosis and the Political Economy of Health and Disease in South Africa*
- Myron Echenberg, *Black Death, White Medicine : Bubonic Plague and the Politics of Public Health in Colonial Senegal, 1914–1945*
- Ann Laura Stoler, *Race and the Education of Desire: Foucault's History of Sexuality and the Colonial Order of Things*
- Bernard S. Cohn, *Colonialism and Its Forms of Knowledge*
- David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*

#### 4/18: Week 14. STM and Its Publics

- Sismondo, *An Introduction to Science and Technology Studies*, ch. 16 [CP]
- Collins and Pinch, *The Golem at Large*, chs. 6–7 [SD]

- Steven Epstein, "The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials," *Science, Technology & Human Values* 20 (1995), pp. 408–437 [CP]
- Brian Wynne, "Misunderstood Misunderstandings: Social Identities and the Public Uptake of Science," in Alan Irwin and Brian Wynne (eds.), *Misunderstanding Science? The Public Reconstruction of Science and Technology* (1996), pp. 19–46 [CP]
- Anne Secord, "Science in the Pub: Artisan Botanists in Early Nineteenth-Century Lancashire," *History of Science* 32 (1994): 269–315 [CP]
- Jennifer Tucker, "Voyages of Discovery on Oceans of Air: Scientific Observation and the Image of Science in an Age of 'Ballonacy,'" *Osiris*, 2<sup>nd</sup> ser 11 (1996): 144–176 [CP]
- Colin Jones, "The Great Chain of Buying: Medical Advertisement, the Bourgeois Public Sphere, and the Origins of the French Revolution," *American Historical Review* 101 (1996): 13–40 [CP]
- Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge: Harvard University Press, 1998), ch. 7 [CP]
- Michael Sappol, *A Traffic of Dead Bodies: Anatomy and Embodied Social Identity in Nineteenth-Century America* (Princeton: Princeton University Press, 2002), chs. 5, 6 [CP]

### **Presenters:**

#### Recommended:

- Steven Epstein, *Impure Science: AIDS, Activism, and the Politics of Knowledge* (Berkeley: University of California Press, 1996)
- Brian Wynne, *Rationality and Ritual: The Windscale Inquiry and Nuclear Decisions in Britain*
- Brian Wynne and Alan Irwin, eds., *Misunderstanding Science? The Public Reconstruction of Science and Technology*
- Alan Irwin, *Citizen Science: A Study of People, Expertise, and Sustainable Development*
- Adele E. Clarke, *Disciplining Reproduction: Modernity, American Life Sciences, and the Problem of Sex*
- Richard Sclove, *Democracy and Technology*
- Larry Stewart, *The Rise of Public Science*
- Jan Golinski, *Science as Public Culture*