

History of Science 720: Introduction to Historiography and Methods  
Fall 1999  
Tuesdays, 2:25-5 pm  
6109 Social Science

Instructor: Lynn Nyhart  
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This course serves to introduce you to current problems and approaches in the historiography of science, technology, and medicine, as well as offering some history of these fields. The course is structured around reading and discussion, with writing requirements designed to deepen the thoughtfulness of the discussions. Rather than doing the sometimes traditional “book a week,” we will be reading articles that cut across topic areas but are aligned thematically. One object of the course is thus to get you to read beyond the stories and even the particular arguments of the articles to see how the various authors are participating in and contributing to larger methodological trends within the communities of history of science, technology, and medicine.

### **Course Requirements:**

**A. Reading Requirements:** Each week, we will read three or four essays in common; you are all responsible for reading and thinking about these. In addition, each week there is a list of “individual readings.” In weeks when there are articles on this list, I expect you to read at least one, and more if you have time and inclination. (See specific weeks for any deviations.) Early on in the course, there are a number of “classic” books on the list as well. I expect you to read **at least one** of these books—which one is your choice. (See writing requirements below.)

### **B. Oral Requirements**

1. Class attendance and participation. In a seminar that meets once a week, there is little luxury for missing classes. I need to hear a good reason why you must miss a seminar session. Your mere presence, however, does not suffice: you need to come to the discussion prepared to add your thoughtful comments. This means giving yourself enough time to think about the readings as well as pass your eyes over them, and to think about how the readings play off one another. What do they have in common? Do they conflict? What different angles on similar issues, or similar angles on quite different issues, do they offer? (40% of grade.)

2. Responsibility for presenting the major issues and starting off discussion for ONE week. For the week when you are leading the discussion, it would be good to familiarize yourself with as many of the “individual” readings as possible. (Together with “think-piece” [see C3 below] 20% of grade.)

### **C. Writing Requirements:**

1. **Due September 7** (first class): a one- to two-page typed/word-processed essay on what you find exciting or inspiring about history of science, technology, and/or medicine. This is not intended to duplicate the “statement of purpose” you submitted in your application, which for

many of you explained why you wanted to go to graduate school or what your professional aspirations were; rather, it is supposed to tell me what about this field grabs you in your gut or heart or makes your mind reel with intensity. Is there some idea that just really blows you away? Some historical writing you know that you want to emulate? Something about teaching that you are passionate about? Tell me why it matters to you that you are in this field. (Required but ungraded.)

2. A **critical summary** (500-600 words—the length of a typical *Isis* review) of one “outside” book you have chosen to read. This should summarize the main arguments and sources of evidence of the book and very briefly discuss what you see as especially praiseworthy or problematic. Since the books you are choosing from are all classics (i.e., books that have been around long enough to acquire a reputation as “classic”), it would be artificial in the extreme to review it as if it were a fresh, new book, but I don’t expect you to do a big literature search to see what others have said or what its impact on the field has been. Rather, the point is to provide a summary of the argument and issues for your fellow graduate students, so that they can benefit from your reading. **Due at the class meeting where the book is listed.** Please provide **11** copies: one for me and one for each member of the class. (10% of grade)

2. A **think-piece** (3-4 pages double-spaced) to introduce the issues you wish to raise for the class you are leading. This should entail a critical review of the common readings, drawing out commonalities and differences of purpose and approach. It does not need to treat the readings even-handedly: if one reading seems to you to be worthy of far more intensive discussion, while the others seem simply to spin off from the central issue, feel free to concentrate mainly on the issue(s) you find most crucial. Your think-piece must be available by Monday noon of the week you are presenting so others have a chance to look at it (2 copies in reading room, 1 copy in my box). (Think-piece plus leading class= 20%)

3. A short **historiographic essay** (1500-2000 words, the length of a longish book review or short-ish essay review in a journal like *Metascience*) deriving from readings for the course. Picking an article, book, or cluster of writings that you find especially thought-provoking, exciting or problematic, analyze the strengths and weaknesses of the approach taken by the author(s), the questions raised for you by the work(s), and the directions it opens up for further analysis. This is an opportunity to spend more time discussing the book you summarized earlier if you wish, perhaps connecting it to other readings. If you choose to, you may also include writings not assigned for this course (from another course, from previous work you have done, or from independent reading), but this is by no means required. (30% of grade.)

### About the Readings:

Two books are available for purchase at the University Book Store on Library Mall:

R. C. Olby, et al., *Companion to the History of Modern Science* (paper, \$60)

Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (paper, \$16.95)

Although Olby is very expensive and we are not reading all that many articles from it, it is an essential reference source that will be useful to you throughout your graduate career and beyond; I believe it is very much worth owning. There is also a copy in our departmental reading room,

as well as a copy in Memorial Reference Stacks (non-circulating).

The other **common** readings are available in a course reader in the History of Science Dept. office (Part I available right away, the rest as soon as I can.) These are marked with \* on the syllabus. A single copy of **individual** readings will be available in the History of Science Conference Room: articles from the journals *Isis*, *Osiris*, and *Technology and Culture* (after 1990) will not be photocopied, as the journals are on the shelves of the reading room. If you want to make a photocopy, you may take the journal volume or master photocopy downstairs long enough to photocopy it at the Social Science Copy Center, but you must return it right away. (These journals are also in Memorial Library.) Of course, you may also want simply to take notes on the articles the old-fashioned way, which works, too. Part of the idea here is to invite you to get into the habit of reading in the Conference Room—it is my experience that when people read together, they often take breaks to discuss readings, so that the intellectual conversation is already underway before the actual seminar begins—something that makes for a higher level of discussion.

If you don't already have them, it is also worth investing in a high-quality dictionary and the most recent edition of the *Chicago Manual of Style*, which is the book- and article-writing manual of record for the history of science. (You may well be able to get both at used bookstores in the area; be careful, however, not to get earlier copies of the Chicago Manual, as their recommendations have changed in the last edition.) I also find a good thesaurus extremely useful.

## **Topics Week by Week**

### **9/7: Introduction**

What inspires or excites you about the history of STM? What do we mean when we talk about the history (histories?) of science, technology, and medicine?

“Introduction,” in *Companion to the History of Modern Science*, ed. R. C. Olby et al., pp. xiii-xxvi. (hereafter, *Companion*)

**Part I: Histories of the Histories of Science, Technology, and Medicine**

What do the histories of HST&M have in common? How are they different?

**9/14: Historiographic Traditions: Long Views**

Intellectual traditions in the histories of science, medicine, and technology.

**Everyone:**

\*“Reviews of Journals and Serials,” [General Periodicals, Medicine & Technology], *Isis*, 1990, 81: 281-296

J.R.R. Christie, “The Development of the Historiography of Science,” *Companion*, 5-22.

\*David C. Lindberg, “Conceptions of The Scientific Revolution from Bacon to Butterfield: A Preliminary Sketch,” pp. 1-26 in *Reappraisals of the Scientific Revolution*, ed. D. C. Lindberg and Robert Westman (Cambridge: Cambridge U. Pr. 1990)

\*John C. Burnham, “How the Concept of Profession Evolved in the Work of Historians of Medicine,” *Bull. Hist. Med.* 1996, 70: 1-24

**Individual Reading:**

Faye M. Getz, “The Black Death and the Silver Lining: Meaning, Continuity, and Revolutionary Change in Histories of Medieval Plague,” *Journal of the History of Biology* 24(2), 1995, 265-289

### 9/21: "Founding Fathers": Discipline-Building in America

What do the early disciplinary histories of the history of science, technology, and medicine in America before World War II have in common? How do they differ?

#### Everyone:

\*Arnold Thackray, "The Pre-History of an Academic Discipline: The Study of History of Science in the United States, 1891-1941," *Minerva*, 1980, 18: 448-73

\*Arthur P. Molella, "The First Generation: Usher, Mumford, and Giedion," in *In Context: History and the History of Technology*, ed. Stephen Cutcliffe and Robert Post (Bethlehem, PA, 1989)

\*Elizabeth Fee and Edward T. Mormon, "Doing History, Making Revolution: the Aspirations of Henry E. Sigerist and George Rosen," *Clio Medica* 23 (1993): 275-311

#### Individual Reading:

"Recollections & Reflections" by Edsall, Cohen, Hall, and Crombie (in "Sarton, Science, and History: The Sarton Centennial Issue") *Isis*, 1984, 75: 11-28

Michael Shank, "Lynn Thorndike (1882-1965)" pp. 185-204 in *Medieval Scholarship: Biographical Studies on the Formation of a Discipline, Vol. 1: History*, eds. Helen Damico and Joseph B. Zavadil. (NY: Garland Publishing, 1995)

George Sarton, "The Teaching and Study of the History of Science at the University of California" *Isis*, 1933, 20: 6-14 (on HOS at Berkeley)

George Sarton, "The History of Science versus the History of Medicine," *Isis*, 1935, 23: 313-320

Henry Sigerist, "The History of Medicine and the History of Science," *Bulletin of the Institute of the History of Medicine*, 1936, 4:1-13

Owsei Temkin, "Henry E. Sigerist and Aspects of Medical Historiography," *Bull. Hist. Med.*, 1958, 32: 485-499

Richard Shryock, "The Historian Looks at Medicine," *Bull. Inst. Hist. Med.* 1937, 5: 887-94

#### Books:

George Sarton, *Introduction to the History of Science*. 3 vols. in 5 (1927-1948) (just look at)

Albert Payson Usher, *A History of Mechanical Inventions* (1929)

Lewis Mumford, *Technics and Civilization* (1934)

Arthur O. Lovejoy, *The Great Chain of Being* (1936)

Henry E. Sigerist, *Civilization and Disease* (1943)

Sigfried Giedion, *Mechanization Takes Command: A Contribution to Anonymous History* (1948)

### 9/28: From the Cold War to the Kuhnian Universe

What did the history of science, intellectual history, and the history of technology (developed by Americans) have in common in the 1940s and 1950s? How did their aims and concerns differ?

In what ways did the history of the history of science at Wisconsin fall in line with other national trends? How was it different?

What do the writings of Merton and Kuhn have in common with one another? What other audiences was Kuhn writing for, and how might his vision of scientific change have been shaped by the concerns of those audiences?

#### Everyone:

\*Michael Aaron Dennis, "Historiography of Science: An American Perspective," pp. 1-26 in *Science in the Twentieth Century*, eds. John Krige and Dominique Pestre. (Amsterdam: Harwood Academic, 1997)

\*Bruce E. Seely, "SHOT, the History of Technology, and Engineering Education," T&C 1995, 739-772.

\*D. R. Woolf, "The Writing of Early Modern European Intellectual History, 1945-1995," in *Companion to Historiography*, ed. Michael Bentley (London: Routledge, 1997)

#### Individual Reading:

Robert K. Merton, "A Note on Science and Democracy," *Journal of Legal and Political Sociology* 1942, 1:115-126

David Hollinger, "The Defense of Democracy and Robert K. Merton's Formulation of the Scientific Ethos." *Knowledge and Society* 1983, 4: 1-15. Reprinted as pp. 80-96 in idem *Science, Jews, and Secular Culture. Studies in Mid-Twentieth-Century American Intellectual History* (Princeton: Princeton Univ. Pr., 1996)

Victor Hiltz, "History of Science at Wisconsin," *Isis* 1984, 75:63-94

T. S. Kuhn, "Professionalization Reflected in Tranquility," *Isis* 1984, 75: 29-32

Thomas S. Kuhn, "The Essential Tension: Tradition and Innovation in Scientific Research," in Kuhn, *The Essential Tension* (Chicago: University of Chicago Press, 1977)

J. L. Heilbron, "Eloge: Thomas Samuel Kuhn, 18 July 1922-17 June 1996" *Isis* 1998, 89: 505-515

#### Books:

Robert Merton, *Science, Technology, and Society in Seventeenth-Century England* (1938)

T. S. Kuhn, *The Structure of Scientific Revolutions* (1962)

## 10/5: Socialism, Social History, and Social Control

### Everyone:

Roy Porter, "The History of Science and the History of Society" in Olby et al., *Companion*, 32-46

\*Gert Brieger, "The Historiography of Medicine," in W.F. Bynum and Roy Porter, *Companion Encyclopedia of the History of Medicine* (London/NY: Routledge, 1993), pp. 24-44

\*Abraham S. Luchins, "Social Control Doctrines of Mental Illness and the Medical Profession in Nineteenth-Century America," *Journal of the History of the Behavioral Sciences* 1993, 29: 29-47

### Individual reading:

#### Articles:

Jerome Ravetz, "Bernal's Marxist Vision of History," and Richard S. Westfall, "Reflections on Ravetz's Essay," *Isis*, 1981, 72: 393-405

P. G. Werskey, "On the Reception of *Science at the Cross Roads* in England," Introduction to *Science at the Cross Roads*, 2<sup>nd</sup> edition (London: Frank Cass, 1971)

Loren R. Graham, "The Socio-political Roots of Boris Hessen: Soviet Marxism and the History of Science," *Social Studies of Science*, 1985, 15: 705-22

Robert M. Young, "Marxism and the History of Science," *Companion*, pp. 77-86

Steven Shapin, "Discipline and Bounding: The History and Sociology of Science as Seen Through the Externalism-Internalism Debate," *History of Science* 1992, 30: 333-369

Allen Brandt, "Emerging Themes in the History of Medicine," *Milbank Quarterly* 1991, 69: 199-214

#### Books:

Boris Hessen, "The Socio-Economic Roots of Newton's Principia," pp. 151-212 in *Science at the Crossroads*

Michel Foucault, *Madness and Civilization* (1965)

Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (English: 1973)

Charles Rosenberg, *The Cholera Years* (1966)

Robert M. Young, *Darwin's Metaphor* (Cambridge U. Pr., 1985)

If you want to dip your toes into Foucault but are reluctant to take the plunge of an entire book, consider looking at Paul Rabinow, ed., *The Foucault Reader*. I found a copy at Border's Books on University Avenue.

## **Part II: Theory in HSTM Since the 1970s**

### **10/12: Social Construction–the Very Idea!**

Golinsky, ch. 1.

\*Trevor Pinch and Wiebe E. Bijker, “The Social Construction of Facts and Artifacts: Of How the Sociology of Science and the Sociology of Technology Might Benefit Each Other,” pp. 17-50 in Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch, eds., *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. (Cambridge: MIT Press, 1987)

\*Ludmilla Jordanova, “The Social Construction of Medical Knowledge,” *Social History of Medicine* 1995, 8: 361-381

### **Individual Reading:**

Barry Barnes, “Sociological Theories of Scientific Knowledge,” *Companion* pp. 60-73.

Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” pp. 183-201 in idem, *Simians, Cyborgs, and Women: The Reinvention of Nature* (NY: Routledge, 1991)

#### *Books:*

Bruno Latour and Steve Woolgar, *Laboratory Life: The Social Construction of Scientific Facts* (1979; 2<sup>nd</sup> ed. Princeton U. Press, 1986)

Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton Univ. Press, 1987)

Michael Mulkay, *Science and the Sociology of Knowledge* (London: Allen and Unwin, 1979)

Barry Barnes, *About Science* (Oxford: Basil Blackwell, 1985)

Harry Collins, *Changing Order: Replication and Induction in Scientific Practice* (Beverly Hills and London: Sage Publications, 1985)

Ian Hacking, *The Social Construction of What?* (1999)



## 10/19: Feminism and HSTM

J. R. R. Christie, "Feminism and the History of Science," *Companion*, pp. 100-109.

\*Evelyn Fox Keller, "Gender and Science: Origin, History, and Politics," *Osiris* 1995, 10: 27-38

\*Sally Gregory Kohlstedt, "Women in the History of Science: an Ambiguous Place," *Osiris* 1995, 10: 39-58

\*Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" (1985) reprinted as pp. 149-181 in idem, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991)

### Individual Reading:

#### Books:

Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (NY: Harper and Row, 1980)

Margaret Rossiter, *Women Scientists in America: Struggles and Strategies to 1940* (Baltimore: Johns Hopkins, 1982)

Evelyn Fox Keller, *A Feeling for the Organism: The Life and Work of Barbara McClintock* (San Francisco: Freeman, 1983)

Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from to the Microwave*. (1983)

Evelyn Fox Keller, *Reflections on Gender and Science* (New Haven: Yale U. Press, 1985)

Judith Walzer Leavitt, *Brought to Bed: Childbearing in America 1750-1950* (NY: Oxford, 1986)

Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (NY: Routledge, 1989)

#### Articles:

Ruth Schwartz Cowan, "The Industrial Revolution in the Home: Household Technology and Social Change in the 20<sup>th</sup> Century," *T&C* 1976, 17: 1-24

Margaret Rossiter, "Women's Work in Science," *Isis* 1980, 71: 381-398

## 10/26: Patients, Consumers, Technicians, Workers: The Agency of Non-Elites

\*Ruth Schwartz Cowan, "The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology," pp. 261-280 in Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch, *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. (Cambridge: MIT Press, 1987) [references at end of Pinch and Bijker article in reader]

\*Roy Porter, "The Patient's View: Doing Medical History from Below," *Theory and Society* 1985, 14: 167-174

\*Jane R. Camerini, "Wallace in the Field," *Osiris* 1996, n.s.11: 44-65

\*Anne Secord, "Science in the Pub: Artisan Botanists in Early Nineteenth-Century Lancashire," *History of Science*, 1994, 32: 269-315

### Individual Reading:

Judith Walzer Leavitt, "Birthing and Anesthesia: The Debate Over Twilight Sleep," *Signs* 1980, 6: 147-164

Judith A. McGaw, "No Passive Victims, No Separate Spheres: A Feminist Perspective on Technology's History," in *In Context: History and the History of Technology*, ed. Stephen H. Cutcliffe and Robert C. Post (Bethlehem, PA, 1989)

Steven Shapin, "The Invisible Technician," *American Scientist*, 1989, 77: 554-563

Colin Jones, "The Great Chain of Buying: Medical Advertisement, the Bourgeois Public Sphere, and the Origins of the French Revolution," *American Historical Review* 1996, 101: 13-40.

Vanessa Northington Gamble, "Under the Shadow of Tuskegee: African Americans and Health Care," *American Journal of Public Health*, Nov. 1997, 87:1773-1778

Ronald Kline and Trevor Pinch, "Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States," *Technology and Culture* 1996, 37: 763-795

### **Part III: Practicing HSTM: Recent Issues and Approaches**

#### **11/2: Disciplining and Boundary-Making: The (Social) Structuring of Scientific and Professional Knowledge and Identity**

Golinski, Ch. 2

\*Harold J. Cook, "The New Philosophy and Medicine in Seventeenth-Century England," pp. 397-436 in David C. Lindberg and Robert Westman, *Reappraisals of the Scientific Revolution* (Cambridge: Cambridge U. Pr. 1990)

\*Thomas Broman, "The Habermasian Public Sphere and 'Science in the Enlightenment,'" *History of Science*, 1998, 36: 123-149

\*Jan Goldstein, "Foucault Among the Sociologists: The 'Disciplines' and the History of the Professions," *History and Theory*, 1984, 23: 170-192

#### **Individual Reading:**

Rudolph Stichweh, "The Sociology of Scientific Disciplines: On the Genesis and Stability of the Disciplinary Structure of Modern Science," *Science in Context* 1992, 5: 3-15

David C. Lindberg, "Medieval Science and its Religious Context," *Osiris*, 1995, 10: 61-79

Roger L. Emerson, "The Organisation of Science and Its Pursuit in Early Modern Europe," pp. 960-979 in *Companion*

J. B. Morrell, "Professionalization," pp. 980-989 in *Companion*

John Warner, "Science, Healing, and the Physician's Identity: A Problem of Professional Character in Nineteenth-Century America," *Clio Medica* 1991, 22: 65-88

Micaela Sullivan-Fowler, "Doubtful Theories, Drastic Therapies: Autointoxication and Faddism in the Late Nineteenth and Early Twentieth Centuries," *J. Hist. Med. All. Sci.*, 1995, 50: 365-390

Nina E. Lerman, "The Uses of Useful Knowledge: Science, Technology, and Social Boundaries in an Industrializing City," *Osiris*, 2<sup>nd</sup> ser., 1997, 12: 39-59

Thomas Gieryn, George M. Bevens, and Stephen Zehr, "Professionalization of American Scientists: Public Science in the Creation/Evolution Trials," *American Sociological Review*, 1985, 50: 392-409

## 11/9 Uncovering Past Meanings: Hermeneutic and Semiotic Approaches

Golinksy, Ch. 4

\*Ronald Numbers, "Creating Creationism: Meanings and Uses Since the Age of Agassiz," pp. 49-57 in idem, *Darwinism Comes to America* (Cambridge, Mass.: Harvard U. Press, 1998)

\*Eric Schatzberg, "Materials, Symbols, and Ideologies of Progress," pp. 3-21 in idem, *Wings of Wood, Wings of Metal: Culture and Technical Choice in American Airplane Materials, 1914-1945* (Princeton U. Pr., 1999)

\*Barbara Duden, "Medicine and the History of the Body: The Lady of the Court," pp. 39-51 in Jens Lachmund and Gunnar Stollberg, eds., *The Social Construction of Illness: Illness and Medical Knowledge in Past and Present*. (Stuttgart: Franz Steiner Verlag, 1992).

### Individual Reading:

Daniel M. Siegel, "Text and Context in Maxwell's Electromagnetic Theory," *Physis* 1996, ns. 33, fasc. 1-3: 125-140.

Simon Schaffer, "Glass Works: Newton's Prisms and the Uses of Experiment," pp. 67-104 in Gooding, Pinch, and Schaffer, eds., *The Uses of Experiment: Studies in the Natural Sciences*. (Cambridge U. Pr., 1989)

Lorraine Daston and Peter Galison, "The Image of Objectivity," *Representations* 1992, 40: 81-128.

Foucault, *The Order of Things: An Archaeology of the Human Sciences* (1970)

## 11/16: Telling Stories: Rhetorics and Narratives in Science and Medicine

\*Mary Fissell, "The Disappearance of the Patient's Narrative and the Invention of Hospital Medicine," in *British Medicine in an Age of Reform*, ed. Roger French and Andrew Wear (Routledge, 1991)

\*Bruce Hevly, "The Heroic Science of Glacier Motion," *Osiris*, 2nd. Ser., 1996, 11: 66-86

\*John Harley Warner, "Remembering Paris: Memory and the American Disciples of French Medicine in the 19th Century," *Bulletin of the History of Medicine* 1991, 65: 301-325.

### Individual Reading:

Peter Dear, "Totius in Verba: Rhetoric and Authority in the Early Royal Society, *Isis*, 1985, 145-161

Mary Terrall, "Heroic Narratives of Quest and Discovery," *Configurations*, 1998, 6: 223-242

Donna Haraway, "Teddy Bear Patriarchy," Ch. 3 in idem, *Primate Visions* (London: Routledge, 1989)

Richard Harvey Brown, "Ch. 4: Science and Storytelling: Creating Truths through Narratives of Conversion," and Ch. 5: Narrative and Truth in Scientific Practice," pp. 64-121 in idem, *Toward a Democratic Science: Scientific Narration and Civic Communication* (New Haven: Yale U. Pr., 1998)

Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot, and Nineteenth-Century Fiction* (London, 1983)

Barbara T. Gates, *Kindred Nature: Victorian and Edwardian Women Embrace the Living World* (Chicago: U. of Chicago Press, 1998)

## 11/23: Material Culture and Practice

Golinski Chs. 3 and 5

\*Henry E. Lowood and Robin Rider, "Literary Technology and Typographic Culture: The Instrument of Print in Early Modern Science," *Perspectives on Science* 1994, 2: 1-37

\*Lindsay Prior, "The Local Space of Medical Discourse: Disease, Illness, and Hospital Architecture," pp. 67-84 in Jens Lachmund and Gunnar Stollberg, eds., *The Social Construction of Illness: Illness and Medical Knowledge in Past and Present*. (Stuttgart: Franz Steiner Verlag, 1992).

\*Muriel Lederman and Richard M. Burian, "Introduction" to "Special Section: The Right Organism for the Job," *J. Hist. Biol.* 1993, 26: 235-237, and

\*Robert E. Kohler, "'Drosophila': A Life in the Laboratory," *J. Hist. Biol.* 1993, 26: 233-267.

### Individual Reading:

Langdon Winner, "Do Artifacts Have Politics?" *Daedalus* 1980:

Joseph J. Corn, "Object Lessons/Object Myths? What Historians of Technology Learn from Things," pp. 35-54 in *Learning from Things: Method and Theory of Material Culture Studies*, ed. W. David Kingery (Washington, DC: Smithsonian Institution Press, 1996)

John Pickstone, "Museological Science? The Place of the Analytical/Comparative in Nineteenth-Century Science, Technology, and Medicine." *History of Science*, 1994, 32: 111-138

Anne Larsen, "Equipment for the Field," pp. 358-377 in Nicholas Jardine et al., *Cultures of Natural History* (Cambridge: Cambridge U. Pr., 1996)

Allan Franklin, "Review Essay: Experimental Questions," *Perspectives on Science* 1993, 1:127-146

Alex Soojung-Kim Pang, "The Social Event of the Season: Solar Eclipse Expeditions and Victorian Culture," *Isis*, 1993, 84: 252-277

Deborah Fitzgerald, "Farmers Deskilled: Hybrid Corn and Farmers' Work." *Technology and Culture* 1993, 34: 324-343.

Christoph Bonneuil, "Crafting and Disciplining the Tropics: Plant Science in the French Colonies," pp. 77-96 In *Science in the 20th century*. Edited by John Krige and Dominique Pestre. (Amsterdam : Harwood Academic, 1997).

### 11/30: Transfer, Translation, Appropriation, Assimilation

\*I. A. Sabra, "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam" *History of Science* 1987, 25: 223-243, reprinted as pp. 3-27 in F. Jamil Ragep and Sally P. Ragep, eds., *Tradition, Transmission, Transformation. Proceedings of Two Conferences on Pre-Modern Science held at the University of Oklahoma* (NY: Brill, 1996).

\*Susan Leigh Star and James R. Griesemer, "Institutional Ecology, 'Translations,' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39," *Social Studies of Science* 1989, 19: 387-420

\*John Carson, "Army Alpha, Army Brass, and the Search for Army Intelligence," *Isis* 1993, 84: 278-309

\*Lynn K. Nyhart, "Civic and Economic Zoology: The 'Living Communities' of Karl Möbius," *Isis* 1998, 89: 605-630

### Individual Reading:

Peter Galison, "Material Culture, Theoretical Culture and Delocalization," pp. 669-682 In *Science in the 20th century*. Edited by John Krige and Dominique Pestre. (Amsterdam : Harwood Academic, 1997).

Nick Hopwood, "Producing a Socialist Popular Science in the Weimar Republic," *History Workshop Journal* 1996, 41: 118-153

Bruce V. Lewenstein, "Cold Fusion and Hot History," *Osiris*, 2nd. ser., 1992, 7: 135-163

Gillian Beer, "Parable, Professionalization, and Literary Allusion in Victorian Scientific Writing," pp. 196-215 in idem, *Open Fields: Science in Cultural Encounter* (Oxford: Clarendon Press, 1996) Other essays in this book are excellent, too.

### 12/7 Boundary-Crossing, Liminality, and Hybridity

\*Paul White, "Science at Home: The Space between Henrietta Heathorn and Thomas Huxley," *History of Science* 1996, 34: 33-56.

\*Judith W. Leavitt, "'A Worrying Profession': The Domestic Environment of Medical Practice in Mid-Nineteenth-Century America" (Fielding H. Garrison Lecture) *Bull. Hist. Med.* 1995, 69:1-29

\*Gyan Prakash, "Science 'Gone Native' in Colonial India" *Representations* 1992, 40: 153-178

### Individual Reading:

Deborah E. Harkness, "Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy," *Isis*, 1997, 88: 247-262

Arwen Mohun, "Laundrymen Construct Their World: Gender and the Transformation of a Domestic Task to an Industrial Process" *T&C* 1997, 38: 97-120



## 12/14: The Historian's Obligations: What Stories Do We Tell?

### Everyone:

Golinski, "Coda: The Obligations of Narrative"

Michael H. Shank, "The Problem of the Fifteenth Century," ms. chapter, to appear in David C. Lindberg and Michael Shank, eds., *Cambridge History of Science Vol. 2: The Middle Ages*. [to be handed out separately]

\*Betty Jo Teeter Dobbs, "Newton as Final Cause and First Mover," *Isis* 1994, 85: 633-643.

\*William Cronon, "A Place for Stories: Nature, History, and Narrative," *Journal of American History*, March 1990, 78: 1347-1376

### Individual Reading:

Perez Zagorin, "History, the Referent, and Narrative: Reflections on Postmodernism Now," *History and Theory* 1999, 1-24

Peter Dear, "The Mathematical Principles of Natural Philosophy: Toward a Heuristic Narrative for the Scientific Revolution," *Configurations* 1998, 6:173-193

Gary Hatfield, "Was the Scientific Revolution Really a Revolution in Science?" in F. Jamil Ragep and Sally P. Ragep, eds., *Tradition, Transmission, Transformation. Proceedings of Two Conferences on Pre-Modern Science held at the University of Oklahoma* (NY: Brill, 1996), pp. 489-525

Alex Roland, "What Hath Kranzberg Wrought? Or, Does the History of Technology Really Matter?" *T&C* 1997, 38: 697-713

