

HISTORY OF SCIENCE 623
Studies in Early Modern Science
Spring 2005
5:00pm-6:00pm Th
6304 Social Science

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COURSE REQUIREMENTS

Fulfill requirements for History of Science/History 323, and attend an additional "weekly" seminar (10 weeks out of 15). You'll be asked to take turns presenting the materials assigned for HoS 623 (the number of presentations will depend on the number of seminar participants). A typed summary/critique (1 page in length) should accompany each of your presentations; please make copies for all seminar participants.

In lieu of the midterm and final exercises for HoS 323, you should complete 15-20 pages of prose writing in connection with this course, e.g.: a research paper, based on primary sources in early modern European science; a critical discussion of some historiographical issue in the secondary literature; two or more book reviews (situate the book with respect to existing scholarship and critique the author's use of source material); or a bibliographic survey in preparation for a prelim field. Please see me as early as you can in the semester to discuss how you propose to fulfill the writing requirement.

You should be prepared to present a prospectus and preliminary bibliography to the seminar on **April 14**. We will discuss written work-in-progress on **May 5** (please email your draft to all seminar participants by Monday, May 2.) All of your written work is due **Thursday, May 12, by 12:00 noon**. Grading will be based on class participation (~25%), presentations (~25%), and the written work (50%).

SCHEDULE OF READINGS AND MEETINGS

- Jan. 20 introductions
- Jan. 27 **historiographical perspectives**
- David C. Lindberg, "Conceptions of the Scientific Revolution," in Reappraisals of the scientific revolution, ed. Lindberg and Westman (Cambridge, 1990), pp. 1-26
 - Margaret J. Osler, "The canonical imperative," in Rethinking the scientific revolution, ed. Osler (Cambridge, 2000), pp. 1-22
- Feb. 3 **visual evidence**
- Owen Hannaway*, "Laboratory design and the aim of science: Andreas Libavius versus Tycho Brahe," Isis 77 (1986): 585-610; reprinted in The scientific enterprise in early modern Europe, ed. by Peter Dear (Chicago, 1997)
 - Jole Shackelford*, "Tycho Brahe, laboratory design, and the aim of science: reading plans in context," Isis 84 (1993): 211-30
- Feb. 10 **Kuhnian paradigms**
- Robert S. Westman*, "Two cultures or one? A second look at Kuhn's *The Copernican revolution*," Isis 85 (1994): 79-115
 - Robert S. Westman*, "The Melanchthon circle, Rheticus, and the Wittenberg interpretation of the Copernican theory," Isis 66 (1975): 165-93; reprinted in The scientific enterprise in early modern Europe, ed. by Peter Dear (Chicago, 1997)

- Feb. 17 no meeting
- Feb. 24 **scientific patronage**
- Richard S. Westfall*, "Science and patronage," *Isis* 76 (1985): 11-30; reprinted in The scientific enterprise in early modern Europe, ed. by Peter Dear (Chicago, 1997)
 - Mario Biagioli, "Galileo's system of patronage," *History of science* 28 (1990): 1-62
- March 3 **the Merton thesis and scientific institutions**
- Gary A. Abraham*, "Misunderstanding the Merton thesis: a boundary dispute between history and sociology," *Isis* 74 (1983): 368-87; abridged in Puritanism and the rise of modern science: the Merton thesis, ed. I. Bernard Cohen, New Brunswick: Rutgers University Press, 1990, pp. 233-45
 - Robert K. Merton, "Motive forces of the new science [1938]," reprinted in Puritanism and the rise of modern science: the Merton thesis, ed. by I.B. Cohen (Rutgers, 1990), pp. 112-31; skim the appendix (pp. 373-89), which outlines Merton's Science, technology and society in seventeenth-century England (1938)
 - Steven J. Harris, "Transposing the Merton thesis: apostolic spirituality and the establishment of the Jesuit scientific tradition," *Science in context* 3 (1989): 29-65
- March 10 **scientific audiences**
- Stephen D. Snobelen, "'God of gods, and lord of lords': the theology of Isaac Newton's General Scholium to the *Principia*," *Osiris* 16 (2001): 169-208
 - Steven Shapin*, "Of gods and kings: natural philosophy and politics in the Leibniz-Clarke disputes," *Isis* 72 (1981): 187-215
- March 17 no meeting
- March 19-27 SPRING BREAK
- March 31 no meeting
- April 7 no meeting
- April 14 presentations of prospectus and preliminary bibliography
- April 21 **scientific communities**
- David S. Lux and Harold J. Cook, "Closed circles or open networks?: communicating at a distance during the Scientific Revolution," *History of science* 36 (1998): 179-211
 - Steven J. Harris*, "Long-distance corporations, big sciences, and the geography of knowledge," *Configurations* 6 (1998): 269-304
 - Londa Schiebinger*, "Maria Winkelmann at the Berlin Academy," *Isis* 78 (1987): 174-200; reprinted in The scientific enterprise in early modern Europe, ed. by Peter Dear (Chicago, 1997)
- April 28 no meeting
- May 5 discussion of drafts (please email your draft to all seminar participants by Monday, May 2.)
- May 12 **All written work is due Thursday, May 12, by 12:00 noon.**