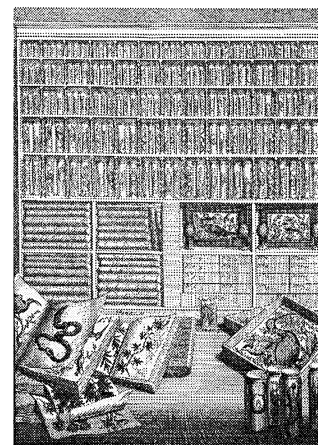


HISTORY OF SCIENCE 350 (spring 2005)
 Department of Special Collections
 976 Memorial Library
 Monday 3:30-5:30



History of the scientific book and journal

Using as examples rare books in Special Collections and a variety of other printed and electronic resources, this course explores the printing and publication of science from the late 15th century to the present, with attention to cultural, economic, social, esthetic, and technological factors affecting the dissemination of scientific ideas. The reading list draws from history of science and technology, history of the book, and cultural history. We can adjust the material to accommodate special interests.

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For urgent matters, please phone rather than send e-mail.

Office hours: Tuesday 1:00-2:00 or by appointment ■ 990 Memorial Library

Schedule and expectations

The readings and assignments specified in this schedule are required; see the bibliography for details on readings. You are also expected to attend and participate in class. For each writing/presentation assignment listed in the schedule, you will receive a separate description of the assignment. Lists A-D as mentioned in the schedule will also be supplied separately.

For the readings in common, you will receive a sheet describing the reading(s) and suggesting several questions for you to consider. As specified in the schedule, you are expected to hand in – at the beginning of class that week – a reading response of 1 page (on paper, handwritten okay, word-processed preferred) that responds to the questions or presents your own reaction to the readings. All assigned readings for the course are to be completed before class for the week in question. Unless a choice is indicated, all readings listed are required.

<i>Class</i>	<i>Date</i>	<i>Topics</i>	<i>Readings</i>	<i>Assignment</i>
1	1/24	Technological transitions		
2	1/31	Means of production Questions of commerce	Twyman, ch. 1; Febvre and Martin, pp. 128-142, 159-166	
3	2/7	Discovery and print	Nummedal and Findlen; either Lowood or Reeds article; Gingerich	Reading response
4	2/14	A new institutional base for science in print	Bazerman, ch. 3, 5	Reading response on Bazerman article. Also, choose article on List A for paper due on 2/21

5	2/21	Early journals	Article/chapter on early journals chosen from List A	Short paper on article chosen from List A
6	2/28	Matters of credibility	Reading to be supplied	
7	3/7	A quickening pace	Houghton, ch. 1-4	Reading response
8	3/14	Picturing nature	Gascoigne 5a-6e, 9a-10e; Knight, ch. 2; Blum, introduction	Choose article from List B for presentations on 3/28 and 4/4
9	3/21	<i>Spring break</i>		
10	3/28	Images of nature: New techniques, new practices	Sheets-Pyenson, "The effect of changes"; plus article on images of nature chosen from List B	Short in-class student presentations on articles from List B
11	4/4	Images of nature (continued). Specialization and popularization	Secord, ch. 1; Day, ch. 3, 18	Short presentations on articles from List B (continued from 3/31 as necessary)
12	4/11	Specialized journals (cont.)	Meadows, "Access to the results of scientific research"; Hufbauer; article on scientific journals chosen from List C	Reading response. Also, choose scientific book or journal for paper due 4/25.
13	4/18	Assessing value Issues of ownership New models	Guédon, esp. ch. 7; Tenopir and King; Barschall Web site; article on new models of scientific communication chosen from List D	Reading response
14	4/25	Overview, with examples		Short paper due, describing book or journal relevant to class themes. Very short in-class presentations summarizing same.
15	5/2	Overview, with examples (continued)		Very short in-class presentations summarizing your description (cont.) Take-home final distributed.
16	5/9 5 pm	FINAL DUE (note date and time)		Your choice of take-home final or final paper* (subject requires prior approval)– due 5 p.m.

If you intend honors enrollment, please confer with me.

Please turn in all written assignments on paper (not by e-mail). No late papers. No plagiarism. No papers recycled from other classes.

* Instead of the take-home final, graduate students are expected to turn in an essay, also due at 5 p.m. on 5/9 -- topic and readings to be chosen in consultation with the instructor.

Grades will be weighted as follows:

- 20% for reading responses and participation in class
- 40% for paper due on 2/21, presentations on 3/28 and 4/4, and short paper due on 4/25
- 40% for take-home final

Bibliography

This selected bibliography, divided into sections that match the schedule, addresses issues of the look and feel of scientific books and journals, their content, their production and distribution, and connections to the scientific enterprise, as well as prospects for the future. For specific assignments, see the schedule. For two assignments, you will be asked to choose among several readings on separate lists (A-D) to be supplied later. Thus, some required readings for the course are not included in this bibliography. I'll be happy to suggest other readings as well.

Books vs. e-reserves versions for course readings

Whenever possible, please look at the actual books rather than just the e-reserves (scanned versions available online). Scanned versions, especially those made from photocopies, do not do justice to the many and important illustrations in the readings for this class; besides, one objective of the course is to raise your consciousness about the "look and feel" of books. However, for your convenience, scanned versions are available through College Library's e-reserve collections. If everything marked ER is not yet available at the beginning of the term, please be patient: the reserves operation in College Library handles mountains of materials quickly and efficiently, just not instantaneously.

Location codes

- CLR book on reserve in College Library Reserve Book Coll., 1st Fl.
- ER scanned version on e-reserve through College Library
- SC book in Special Collections, 990 Memorial Library

Books in Special Collections

The readings often discuss early and rare scientific books, and we are fortunate to have such rare books available for more detailed examination in the Department of Special Collections. During class we will spend time with many of these volumes, and you are also invited to look at them on your own in the Special Collections Reading Room. To that end, we'll keep a list of books we've examined, together with their call numbers.



Typographic culture & scientific knowledge (weeks 2,3)

- Lucien Febvre and H.-J. Martin, *The coming of the book: The impact of printing 1450-1800*, trans. David Gerard (London: Verso, 1984), excerpts. Book on reserve in College Library Reserve Book Coll., 1st Fl.
- Owen Gingerich, "Copernicus and the impact of printing," in *Copernicus yesterday and today*, ed. Arthur Beer and K. Aa. Strand (Oxford: Pergamon Press), 201-218. ER
- Henry Lowood, "The New World and the European catalog of nature," in *America in European consciousness, 1493-1750*, ed. Karen Ordahl Kupperman (Chapel Hill: [University of North Carolina Press], 1995), 295-323. ER
- T. Nummedal and P. Findlen, "Words of nature: Scientific books in the seventeenth century," *Thornton and Tully's scientific books, libraries, and collectors: A study of bibliography and the book trade in relation to the*

history of science, 4th ed., considerably rev. and rewritten, ed. Andrew Hunter (Brookfield, VT: Ashgate, 1999), 164-215. ER

- Karen Reeds, "Publishing scholarly books in the sixteenth century," *Scholarly publishing*, 14 (1983), 259-274. ER
- Michael Twyman, *The British Library guide to printing: History and techniques* (Toronto: University of Toronto Press, 1998), ch. 1. ER, SC

Credibility & the experimental report (weeks 4-6)

- Charles Bazerman, *Shaping written knowledge* (Madison: University of Wisconsin Press, 1988), selected chapters. ER
- Another reading to be supplied

plus

- Choose one article/chapter about early journals from List A (to be supplied later)

Specialization and popularization (weeks 7, 11, 12)

- Robert A. Day, *How to write & publish a scientific paper* [computer file], 5th ed. (Phoenix, Az.: Oryx Press, 1998), selected chapters. Available through netLibrary – MadCat record for this journal title contains Internet link
- Bernard Houghton, *Scientific periodicals: Their historical development, characteristics, and control* (Hamden, Conn.: Linnet Books, 1975), selected chapters. ER
- Karl Hufbauer, "Solar physics' evolution into a subdiscipline (1945-1975)," *New trends in the history of science*, ed. R.P.W. Visser et al. (Amsterdam: Rodopi, 1989), 73-91. ER
- A.J. Meadows, "Access to the results of scientific research," *Development of science publishing in Europe*, ed. A.J. Meadows (Amsterdam [etc.]: Elsevier Science Publishers, 1980), 43-62. ER
- James A. Secord, *Victorian sensation. The extraordinary publication, reception, and secret authorship of "Vestiges of the natural history of creation"* (Chicago: University of Chicago Press, 2000), selected chapters. CLR

plus

- Choose one article/chapter about early journals from List C (to be supplied later)

Picturing nature (weeks 9-10)

- Ann Shelby Blum, introduction to *Picturing nature: American nineteenth-century zoological illustration* (Princeton, N.J.: Princeton University Press, 1993). ER, CLR
- Bamber Gascoigne, *How to identify prints* (New York: Thames and Hudson, 1986), sections 5a-6e, 9a-10e. ER, also College Library Main Book Collection, 3rd Fl. West, Rm 3191
- David Knight, *Zoological illustration: An essay towards a history of printed zoological pictures* (Folkstone, Kent / Hamden, Conn.: Wm Dawson & Son / Archon Books, 1977), ch. 2. ER, CLR

- Susan Sheets-Pyenson, "The effect of changes in printing technology on the development of natural history sciences during the 19th century," *Advent of printing: Historians of science respond to E. Eisenstein's The printing press as an agent of change*, ed. Peter F. McNally (Montreal: Graduate School of Library and Information Studies, McGill Univ., 1987), 21-26. ER

plus

- Choose one article/chapter from List B (to be supplied later)

Print and beyond (weeks 13-14)

- Jean-Claude Guéron, *In Oldenburg's Long Shadow: Librarians, Research Scientists, Publishers, and the Control of Scientific Publishing*. Washington, DC: Association of Research Libraries, 2001. Available at <http://www.arl.org/arl/proceedings/138/guedon.html> . Concentrate on ch. 7-12 (these are very short chapters!)
- Carol Tenopir and Donald W. King, "Trends in scientific scholarly journal publishing in the United States," *Journal of scholarly publishing*, 28 (1996), 135-170. ER
- Barschall Web site, concerning Gordon & Breach v. American Institute of Physics and American Physical Society. <http://www.library.yale.edu/barschall/> or <http://barschall.stanford.edu>

plus

- Choose from List D (to be supplied later) one article/chapter about new models of scientific communication and/or issues of ownership

