

History 4P48

Science, Technology and Gender

Autumn 2012
Friday 10:00-13:00
Room MCD404

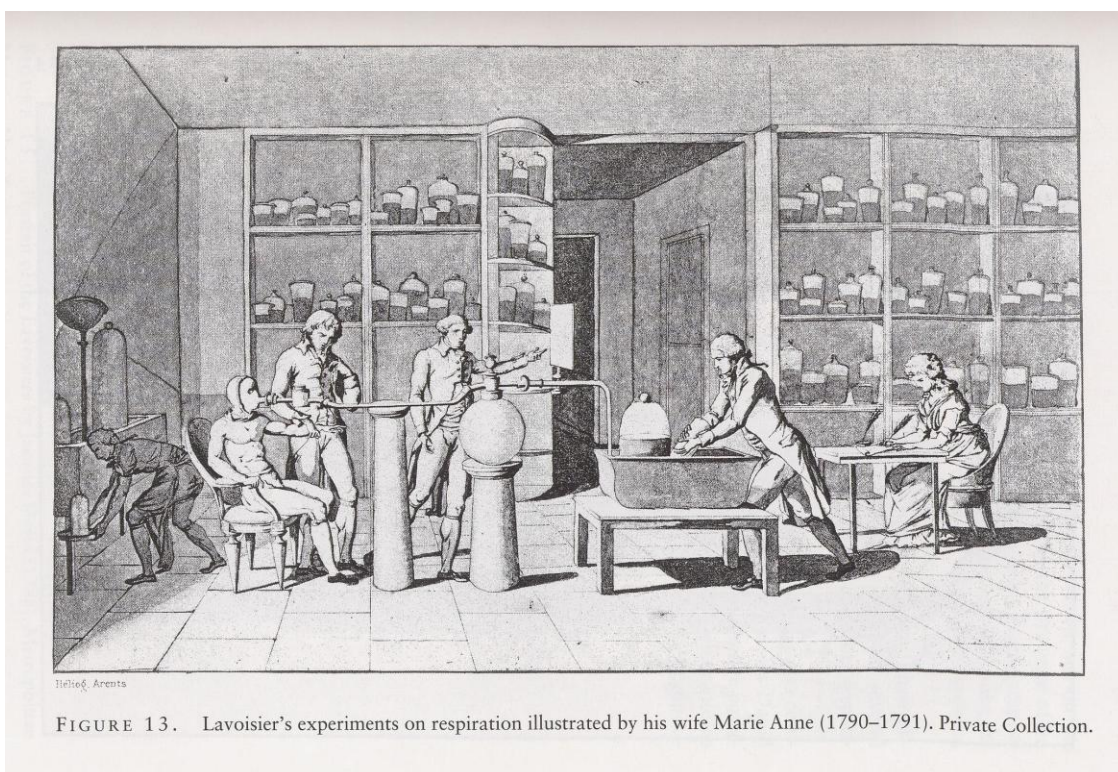


FIGURE 13. Lavoisier's experiments on respiration illustrated by his wife Marie Anne (1790–1791). Private Collection.

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Course Overview

Are science and technology as objective and impartial as we believe? Or do scientific theories and ideas of nature reflect the social concerns and hierarchies of the human world? Do men and women experience and participate in science and technology in the same ways? This course investigates these questions from the point of view of gender and asks how cultural perceptions of male and female shaped ideas of nature and technology, determined the scientific questions that could be asked and influenced the path of scientific discovery and technological innovation.

Course Requirements and Marking

1) Seminar participation: 30%

2) Seminar presentation and facilitation: 20%

The presentation should last 20 minutes. It should introduce the readings and their relevant themes, situate them within historical and/or academic debates if appropriate, draw connections to other seminar texts and themes when appropriate and summarize the articles as preparation for the discussion. Presenters are expected to have done broader reading into the historical context, time period, relevant events etc. connected to the topics discussed in the articles. Presenters are responsible for preparing discussion questions and facilitating the discussion.

3) Annotated Bibliography and Essay Outline: 10%

This outline is part of the essay preparation. It should consist of a two-page summary of the essay question and the structure of your argument. The bibliography should be directed toward your essay topic and include AT LEAST fifteen scholarly sources, including monographs, book chapters, journal articles and primary source material with a brief commentary on the material summarizing your opinion of the strengths, weaknesses and uses of each source for your essay topic. Get started early. You WILL need to use interlibrary loan. Due **October 12**

5) Essay: 40%

A research paper of 4,000-4,500 words on a topic agreed upon with the course instructor. The essay should address a question, develop an argument and come to a conclusion based upon this argument. It should use proper footnote or endnote references and include a bibliography of sources consulted. It should use a variety of sources including monographs, journal articles and primary sources. Essays will be due on **November 23**.

Formalities

- > Attendance is mandatory. More than one unexcused absence may jeopardize your grade.

- > Essay extensions will be considered in the case of medical or personal emergencies, but they must be substantiated by documentation and are subject to the instructor's discretion. Work handed in late without the instructor's permission will be penalized 5% for the first day and 5% for every two days after.

- > To pass the course, you must complete ALL assigned work AND receive an average passing mark on each assignment.

- > Plagiarism is the use of another writer's thoughts, words or ideas without giving him/her credit. Paraphrases and footnotes are ways of giving credit to the other writer. If in doubt, ask your instructor or consult a standard style manual. Plagiarism will NOT be tolerated and will AUTOMATICALLY result in failing the assignment. For further consequences of plagiarism consult the university calendar.

- > A guest lecture is planned for Friday, November 30 at 6:00 pm. This must still be confirmed. Keep the date open.

Course Reading

Course readings are available electronically or in library reserves. Due to the current copyright situation, only one copy of each book chapter can be made available. In most cases, it will be in an edited volume. Be considerate of your classmates and copy and return the books quickly and get your readings early. "The book was lent out" will not be considered an acceptable excuse for being unprepared.

Seminar Plan

1) September 7

Introduction

2) September 14

Women in Early Modern and Enlightenment Science

- i) Londa Schiebinger, *The Mind has No Sex? Women in the Origins of Modern Science*, Cambridge MA/ London: Harvard University Press 1989, Chp. 3: Scientific Women in the Craft Tradition, 66-101.
- ii) Monika Mommertz, "The Invisible Economy of Science", in Judith P. Zinsser (ed.), *Men, Women, and the Birthing of Modern Science*, DeKalb: Northern Illinois Press 2005, 159-178.
- iii) Paula Findeln, "Becoming a Scientist: Gender and Knowledge in Eighteenth-Century Italy", *Science in Context* 16 (2003), 59-87.
- iv) Margaret C. Jacob and Dorothee Sturkenboom, "A Women's Scientific Society in the West", *Isis* 94 (2003), 217-252.

BBC 4 Podcast: Women and Enlightenment Science

http://downloads.bbc.co.uk/podcasts/radio4/iot/iot_20101104-1023a.mp3

3) September 21

Botany: A gendered science?

- i) Londa Schiebinger, *Nature's Body. Gender in the Making of Modern Science*, chp. 1: The Private Lives of the Plants, pp. 11-39.
- ii) Sara Stidstone Gronim, 'What Jane Knew. A Woman Botanist in the Eighteenth Century', *Journal of Women's History* 19 (2007), pp. 33-59.
- iii) Janet Browne, 'Botany for Gentlemen. Erasmus Darwin and the Loves of the Plants', *Isis* 80 (1989), pp. 593-621.
- vi) Lisbet Koerner, 'Goethe's Botany. Lessons of a Feminine Science', *Isis* 84 (1993), pp. 470-495.
- v) Ann B. Shteir, 'Gender and "Modern" Botany in Victorian England', *Osiris* 12 (1997), pp. 29-38.

September 28: No Class

4) October 5

Making Women

- i) Katharine Park, *Secrets of Women. Gender, Generation, and the Origins of Human Dissection*, Cambridge MA: Zone Books 2006, chp. 2: Secrets of Women, pp. 77-120.
- ii) Thomas Laquer, *Making Sex. Body and Gender from the Greeks to Freud*, Cambridge MA: Harvard University Press 1990, chp. 3: New Science, One Flesh, pp. 63-113.

iii) Ornella Moscucci, *The Science of Women. Gynaecology and Gender in England 1800-1929*, Cambridge: Cambridge University Press 1990, chp. 4: Woman and her diseases, 102-133.

iv) Emily Martin, 'The Egg and the Sperm: How Science has constructed a romance based on stereotypical male-female roles', *Signs* 16 (1991), 485-501.

5) October 12

Outlines due today.

Making Men:

i) Andrew Warwick, "Exercising the Student Body. Mathematics and Athleticism in Victorian Cambridge," in Christopher Lawrence and Steven Shapin (eds.), *Science Incarnate. Historical Embodiments of Natural Knowledge*, Chicago: University of Chicago Press 1998, 288-326.

ii) Sally Gregory Kohlstedt, "Nature by Design. Masculinity and Animal Display in Nineteenth-Century America", in: Ann B. Shteir and Bernard Lightman (eds.), *Figuring it Out. Science, Gender and Visual Culture*, Chicago: University of Chicago Press 2006, 110-139.

iii) Robert A. Nye, "Medicine and Science as Masculine 'Fields of Honor'", *Osiris* 12 (1997), 60-79.

iv) Stephanie A. Shields, "Passionate Men, Emotional Women: Psychology Constructs Gender Difference in the Late 19th Century", *History of Psychology* 10, 92-110.

6) October 19

Domestic Technologies

i) Shelley Nickles, "'Preserving Women'. Refrigerator Design as Social Process in the 1930s", *Technology and Culture* 43 (2002), 693-727.

ii) Carolyn M. Goldstein, "From Service to Sales: Home Economics in Light and Power, 1920-1940", *Technology and Culture* 38 (1997), 121-152.

iii) Amy Sue Bix, "Equipped for Life. Gendered Technical Training and Consumerism in Home Economics, 1920-1980", *Technology and Culture* 43 (2002), 728-754.

iv) Joy Parr, "What Makes Washday less Blue? Gender, Nation, and Technology Choice in Postwar Canada", *Technology and Culture* 38 (1997), 153-186.

7) October 26

Workplace technologies and gender

i) Ruth Oldenziel, *Making Technology Masculine. Men, Women and Modern Machines in America 1870-1945*, Amsterdam: Amsterdam University Press 1999, Chp. 1: Unsettled Disputes, 19-49.

ii) Janet F. Davidson, "'Now That We Have Girls in the Office'. Clerical Work, Masculinity, and the Refashioning of Gender for a Bureaucratic Age, in Robert Horowitz (ed.), *Boys and Their Toys? Masculinity, Class, and Technology in America*, New York/ London: Routledge 2001, 55-90.

iii) Kenneth Lipartite, "When Women were Switches: Technology, Work, and Gender in the Telephone Industry", *The American Historical Review* 99 (1994), 1074-1111.

iv) Arwen Palmer Mohun, "Laundrymen Construct Their World: Gender and the Transformation of a Domestic Task to an Industrial Process", *Technology and Culture* 38 (1997), 97-120.

8) November 2

Gender Divisions of Scientific Labour

- i) Patricia Fara, *Pandora's Breeches. Women, Science and Power in the Enlightenment*, London: Pimlico 2004, Chp. 1: Women/Science, pp. 9-31.
- ii) Deborah Harkness, 'Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy', in: *Isis* 88 (1997), pp. 247-262.
- iii) Marilyn Bailey Ogilvie, 'Obligatory amateurs: Annie Maunder (1868-1947) and British women astronomers at the dawn of professional astronomy', *British Journal for the History of Science* 33 (2000), 67-84.
- iv) Patricia Fara, *Pandora's Breeches. Women, Science and Power in the Enlightenment*, London: Pimlico 2004, Chp. 9: Marie Paulze Lavoisier/ Antoine Lavoisier, pp. 167-185.
- v) Suzanne Le-May Sheffield, 'Gendered Collaborations. Marrying Art and Science', in Ann B. Shteir and Bernard Lightman (eds), *Figuring it Out. Science, Gender, and Visual Culture*, Hanover, NH: Dartmouth College Press 2006, pp. 240-264.

9) November 9:

A Woman's Place in Science

- i) Margaret W. Rossiter: "'Women's Work' in Science, 1880-1910", in *Isis* 41 (1980), 381-398.
- ii) Toby Appel, "Physiology in American Women's Colleges. The Rise and Decline of a Female Subculture", in *Isis* 85 (1994), 26-56.
- iii) Marsha L. Richmond, "'A Lab of One's Own". The Balfour Biological Laboratory for Women at Cambridge University, 1884-1914", in *Isis* 88 (1997), 422-455.
- iv) Marsha L. Richmond: "Women in the Early History of Genetics. William Bateson and the Newnham College Mendelians, 1900-1910", in *Isis* 92 (2001), 55-90.
- v) Naomi Oreskes, 'Objectivity or Heroism? On the Invisibility of Women in Science', *Osiris* 11 (2nd series) (1996), 87-113.

10) November 16

Lise Meitner

In-class film: The Path to Nuclear Fission. The Story of Lise Meitner and Otto Hahn

- i) R. Spence, "Otto Hahn", in *Biographical Memoirs of Fellows of the Royal Society* 16 (1970), 279-313.
- ii) O. Frisch, "Lise Meitner", in *Biographical Memoirs of Fellows of the Royal Society* 16 (1970), 405-420.

11) November 23

Science? Technology? Gender?

- i) Sally Gregory Kohlstedt, "Women in the History of Science: An Ambiguous Place", in *Osiris* 10 (1995), 39-58.
- ii) Margaret Rossiter, "Which Science? Which Women?", in *Osiris* 12 (1997), 169-185.

- iii) Sally Gregory Kohlestedt and Helen Longino, “The Women, Gender, and Science Question. What do Research on Women in Science and Research on Gender and Science Have to Do with Each Other?”, in *Osiris* 12 (1997), 3-15.
- iv) Nina E. Lerman/ Arwen Palmer Mohun/ Ruth Oldenziel, “The Shoulders We Stand On and the View from Here: Historiography and Directions for Research”, in *Technology and Culture* 38 (1997, 9-30.
- v) Carroll Pursell, “Feminism and the Rethinking of the History of Technology”, in Angela N. H. Creager/ Elizabeth Lunbeck/ Londa Schiebinger (eds), *Feminism in Twentieth-Century Science, Technology, and Medicine*, Chicago: University of Chicago Press 2001, 113-127.

12) November 30: Guest Lecture (to be confirmed)

Lee Dugaktin: Mr. Jefferson and the Giant Moose: Natural History in Early America

Friday, Nov. 30, 6 pm (to be confirmed)

Location: tba