

History of Science 921/Sociology 901
Core Seminar: Science, Technology, and Medicine in Society

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Course Description:

This core seminar is designed to introduce graduate students to key themes, issues, and scholarship in the interdisciplinary field of science and technology studies. We will draw from scholarship in the history, philosophy, and sociology of science, as well as cultural and feminist studies, to explore how different disciplinary perspectives have contributed to the development of science studies and the ways in which this interdisciplinary field has in turn reshaped the questions, methods, and theoretical approaches within particular fields.

Centered around the production, consumption, and epistemologies of science, the readings for this seminar range from classics to new directions, highlighting important topics such as work, representation, gender, race, and materiality. Themes include the social character of science, networks of power, postcolonial technoscience, and cultures of risk. The readings, themes, and topics have been chosen to place different disciplinary and theoretical approaches in dialogue with one another. In doing so, we hope that students in the seminar will gain a better critical understanding and appreciation of the commonalities and productive tensions across the inter- (multi-?, trans-?) disciplinary playing field of science and technology studies.

This seminar is a required course for any graduate student interested in pursuing the new Ph.D. minor in Science and Technology Studies. For more information on this, please consult with one of us.

Course Requirements:

The following required books are available at the University Bookstore:

- Bloor, David. *Knowledge and Social Imagery*. Chicago: University of Chicago Press, 1991.
- Escobar, Arturo. *Encountering Development*. Princeton: Princeton University Press, 1994.
- Foucault, Michelle. *The Order of Things: An Archaeology of the Human Sciences*. New York: Vintage Books, 1970
- Geison, Gerald. *The Private Science of Louis Pasteur*. Princeton: Princeton University Press, 1996.
- Hacking, Ian. *Representing and Intervening*. Cambridge: Cambridge University Press, 1983.

- Haraway, Donna. *Modest_Witness@Second-Millennium: Femaleman Meets Oncomouse: Feminism and Technoscience*. New York: Routledge, 1996.
- Hayles, Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press, 1999.
- Jasanoff, Sheila. *The Fifth Branch: Science Advisors as Policymakers*. Cambridge: Harvard University Press: 1990.
- Latour, Bruno. *The Pasteurization of France*. Cambridge: Harvard University Press, 1993.
- Rapp, Rayna. *Testing Women, Testing the Fetus: The Social Impact of Amniocentesis in America*. New York: Routledge, 1999.
- Rudwick, Martin J. S. *The Great Devonian Controversy: The Shaping of Scientific Knowledge Among Gentlemanly Specialists*. Chicago: University of Chicago Press, 1988.
- Shapin, Steven and Simon Schaffer, *Leviathan and the Air Pump*. Princeton: Princeton University Press, 1985.
- Traweek, Sharon. *Beamtimes and Lifetimes: The World of High Energy Physicists*. Cambridge: Harvard University Press, 1992.

In-class discussion (20%): This seminar is primarily designed as a reading/discussion seminar. This means that you are responsible for coming to class having read and reflected on the material and prepared to discuss the book at length.

Analytic Reading Memos (2 x 20%): Each of you will be responsible for organizing and leading discussion of the readings for two weeks. In most cases, this will mean pairing up with another person, preferably from another department, in the seminar. To help facilitate discussion, you will be asked to prepare a two- to three-page analytic reading memo that highlights the books main themes, as well as questions, critical concerns, and reflective comments. The format can be relatively free-form; its main purpose is to serve as a launching point for discussion. They are due by noon on Monday, the day before the seminar meeting. You are also responsible for bringing to the seminar at least one review of the book under discussion that you think offers an insightful analysis.

Historiographic or Theoretical Paper (40%): You will also be required to write a 15- to 20-page historiographic or theoretical paper that will provide an overview and critical analysis of the secondary literature around a particular key theme or topic. We will provide a list of themes/topics to choose from. The paper will be due during the last week of class.

Topics and Readings:

The Social Production of Science

9/10

David Bloor, *Knowledge and Social Imagery* (Chicago: University of Chicago Press, 1991).

9/17

Steve Shapin and Simon Schaffer, *Leviathan and the Air Pump* (Princeton: Princeton University Press, 1985).

9/24

Martin J. S. Rudwick, *The Great Devonian Controversy: The Shaping of Scientific Knowledge Among Gentlemanly Specialists* (Chicago: University of Chicago Press, 1988).

Knowledge and Power

10/1

Michelle Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1970).

10/8

Bruno Latour, *The Pasteurization of France* (Cambridge: Harvard University Press, 1993).

10/15

Gerald Geison, *The Private Science of Louis Pasteur* (Princeton: Princeton University Press, 1996).

Laboratory Worlds

10/22

Ian Hacking, *Representing and Intervening* (Cambridge: Cambridge University Press, 1983).

10/29

Sharon Traweek, *Beamtimes and Lifetimes: The World of High Energy Physicists* (Cambridge: Harvard University Press, 1992).

Postcolonial Technoscience

11/2

Arturo Escobar, *Encountering Development*. (Princeton: Princeton University Press, 1994).

11/9 No class. HSS/4S/PSA meetings in Milwaukee

11/19

Donna Haraway, *Modest_Witness@Second-Millennium: Femaleman Meets Oncomouse: Feminism and Technoscience* (New York: Routledge, 1996).

11/26

Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).

Cultures of Risk?

12/3

Sheila Jasanoff, *The Fifth Branch: Science Advisors as Policymakers* (Cambridge: Harvard University Press: 1990).

12/10

Rayna Rapp, *Testing Women, Testing the Fetus: The Social Impact of Amniocentesis in America* (New York: Routledge, 1999).