

# Gender and Science

## Spring 2004

### Instructors:

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### Course Description:

This course is an upper-level seminar-style course on the relationships between gender issues and science. Many kinds of questions can be asked about gender and science: questions regarding the social context of science with respect to gender issues; questions regarding the historical development of science and how the changing roles of women in society have affected science; and questions regarding the epistemological and ethical implications of these changing relationships. Two of the most important ongoing issues raised by the study of gender and science are: (1) If there has been gender bias in scientific practice, has this affected the content of scientific knowledge, and if so, in what ways? (2) If there has been gender bias in the practice of science, are there important ethical problems resulting from this bias? By exploring these questions and issues, we will be able to consider how science might better be a method of understanding in a democratic society.

### Required Readings and Other Course Assignments

The materials listed below are available from the Bookstore.

Harding, Sandra, *The Science Question in Feminism*, (Ithaca: Cornell University Press, 1986).

Keller, Evelyn Fox, *A Feeling for the Organism*, (New York: W. H. Freeman and Company, 1983).

Kosso, Peter, *Reading the Book of Nature*, (Cambridge University Press, 1992).

There are other required readings for the course as well, which are listed below the assignment schedule. Instructions for how to obtain these materials will be given out in class. The writing assignments include two short papers, a project consisting of an oral presentation and a written report, and a final integrative paper. Details about each of these assignments will be made available separately. All will be available as links off this page.

### ASSIGNMENT SCHEDULE: What we will discuss and/or What is due

T Jan 20 — Introduction to the course

Th Jan 22 — Martin, Emily, “The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles”; Stepan, Nancy Leys, “Race and Gender: The Role of Analogy in Science”; and Fausto-Sterling, Anne, “The Five Sexes: Why Male And Female Are Not Enough.”

T Jan 27 — Politics and Science in the Bush Administration: [Waxman Report](#).

Th Jan 29 — Kosso, Peter, *Reading the Book of Nature*, pp. 1-104.  
 T Feb 3 — Kosso, Remainder.  
 Th Feb 5 — Reports on samples of scientific method from science textbooks. [Paper Due](#)  
 T Feb 10 — Start reading: Keller, Evelyn Fox, *A Feeling for the Organism*.  
 Th Feb 12 — Finish Keller's book.  
 T Feb 17 — Rossiter, article in *Isis* on home economics  
 Th Feb 19 — Consultations about projects  
 T Feb 24 — Consultations about projects  
 Th Feb 26 — Project reports  
 T Mar 2 — Project reports  
 Th Mar 4 — Project reports  
 T Mar 9 — Project reports  
 Th Mar 11 — **Midterm**  
 Spring Break  
 T Mar 23 — Harding, Sandra, from *The Science Question in Feminism*, Chs. 1-4.  
 Th Mar 25 — Harding, Chs. 5-7  
 T Mar 30 — Harding, Chs. 8-10 and Giere, "The Feminist Question in Science"  
 Th Apr 1 — Keller, Evelyn Fox, "Feminism and Science"  
 T Apr 6 — Class: Physics experiment  
 Th Apr 8 — Peter Kosso, "Quantum Mechanics and Realism" and Karen Barad, "Agential Realism"  
 T Apr 13 — Lorraine Daston, "Objectivity and the Escape from Perspective" and Daston and Galison, "The Image of Objectivity"  
 Th Apr 15 — Helen Longino, "Values and Objectivity" and Sharon Crasnow, "Can Science be Objective?"  
 T Apr 20 — Frayn, *Copenhagen*.  
 Th Apr 22 — **Paper due** (5-page paper comparing the views on objectivity described or implied by Kosso, Barad, Daston, and Longino). Read: Laura Rediehs, "Implications of Relational Realism" and Karen Johnson, "Science at the Breakfast Table"  
 T Apr 27 — Haraway, "A Manifesto for Cyborgs"  
 Th Apr 29 — Final Thoughts  
**Final Exam Week — Final Paper Due**

### **Bibliography of Readings Listed Above:**

- Barad, Karen, "Agential Realism: Feminist Interventions in Understanding Scientific Practices," from *The Science Studies Reader*, ed. Mario Biagioli (New York: Routledge, 1999).
- Crasnow, Sharon, "Can Science be Objective?" from *Scrutinizing Feminist Epistemology*, ed. Cassandra Pinnick, Noretta Koertge, and Robert Almeder. Rutgers, 2003, pp. 130-141.
- Daston, Lorraine, "Objectivity and the Escape from Perspective," *Social Studies of Science*, 22 (1992).
- Daston, Lorraine and Peter Galison, "The Image of Objectivity," *Representations*, 40 (1992).
- Fausto-Sterling, Anne, "The Five Sexes: Why Male and Female Are Not Enough," *The Sciences*, v. 33 (Mar./Apr. 1993), p. 20-25.
- Frayn, Michael. "Afterword," *Copenhagen*.

- Giere, Ronald, "The Feminist Question in Science," from *Science Without Laws*, (Chicago: University of Chicago Press, 1999).
- Haraway, Donna. 1990. "A Manifesto for Cyborgs," from *Feminism/Postmodernism*, edited by Linda Nicholson. Routledge. (handout)
- Harding, Sandra, *The Science Question in Feminism*, (Ithaca: Cornell University Press, 1986).
- Johnson, Karen, "Science at the Breakfast Table," *Physics in Perspective*, 1 (1999), 22-34.
- Keller, Evelyn Fox, "Feminism and Science," *Signs: Journal of Women in Culture and Society*, 7:3, 1982.
- Keller, Evelyn Fox, *A Feeling for the Organism*, (New York: W. H. Freeman and Company, 1983).
- Kosso, Peter, "Quantum Mechanics and Realism" (unpublished manuscript).
- Kosso, Peter, *Reading the Book of Nature*, (Cambridge University Press, 1992).
- Longino, Helen, "Values and Objectivity," from *Science as Social Knowledge* (Princeton University Press, 1990).
- Martin, Emily, "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles," *Signs: Journal of Women in Culture and Society*, 16:3, 1991.
- Rediehs, Laura, "Implications of Relational Realism" (unpublished manuscript, 2000).
- Rossiter, Margaret W., "Women's work" in science, 1880-1910, In: *Isis: International Review Devoted to the History of Science and its Cultural Influences* 1980, 71: 381-398.
- Stepan, Nancy Leys, "Race and Gender: The Role of Analogy in Science," *ISIS*, 77 (1986), 261-77.

### **Relative weights for the different assignments for the course:**

#### Assignment Weight

First report and paper (due 2/5) 15%

Project report 25%

Paper on scientific knowledge (due 4/30) 15%

Final paper 30%

Participation 15%

We will give you feedback and grades on all of these, but 50% of the grading for the course will be through self-assessment. Please see the [Self-Assessment Guidelines](#) for details. If you miss more than 2 classes, you will automatically lose a grade per absence off of your participation grade; if you miss more than 4 classes, you will lose self-grading privileges.

### **Our Rights Regarding Your Written Work**

We reserve the right to make copies of any of your assignments to use as samples of the work that our students do in our classes. In cases in which we choose to share these samples with others, we will always use these samples anonymously, except in cases in which we want to cite your brilliant ideas in our own academic writing, in which case we will cite you properly and send you a copy when it gets published. If you would prefer our not keeping copies of your work for any reason without permission, or if you would prefer to be informed when we do so, you must write, sign, and date a statement to that effect, detailing the restrictions you wish would be applied, and giving two copies of this statement to one of us, which we will then sign to

acknowledge receipt, returning one copy to you. Your not following these steps is implied consent to let us use your work for the educational and academic purposes outlined above. We hope that all of you will indeed so consent, as you can trust us to use your work respectfully and to preserve anonymity when we use your work for educational purposes, and to cite your work when proper acknowledgment is required and when doing so is complimentary to you.

Also, we reserve the right to dispose of your final papers for this course after the seventh week of the following semester if you have not picked them up by then. If you will want your final paper back, please make arrangements before the end of this present semester (the semester you are taking the course).

### **A Note on Academic Honesty**

Please remember that the written work that you submit must be your own work. Do not have anyone else write your papers for you, and do not represent anyone else's ideas or writing as your own. When referring to someone else's ideas, do so with proper acknowledgment (as detailed in a separate handout). Important note: At St. Lawrence, professors are required to report cases of suspected academic dishonesty to the Academic Honor Council. See your Student Handbook for details. Please do your share in helping create and maintain an atmosphere of trust—you will benefit much more in the long run by taking your education seriously and participating fully in this wonderful opportunity you have!