

Science, Gender, and Social Context
SCI 347 & WS 347
Winter 2008

Class Time: Tuesday/Thursday 10:00-11:50

Instructors: Johanna Brenner (5-3517, brennerj@pdx.edu) NH 470 & Linda George (5-3861, georgeL@pdx.edu) SBII 466.

Graduate Teaching Assistant:

Text: Women, Science and Technology, eds. Mary Weyer et. al. (Routledge, 2001)

Available at: In Other Words: Women's Books & Resources, 3734 SE Hawthorne Blvd.

Articles: "Consumption: North American Perspectives," pp. 189-201; "Taking Population Out of the Equation," pp. 39-73 both by H. Patricia Hynes in Dangerous Intersections: Feminist Perspectives on Population, Environment, and Development, eds. Jael Silliman and Ynestra King (South End Press, 1999)

Available on reserve at the PSU library.

WARNING:

You Are About to Enter the Multidisciplinary World of Feminist Science Studies

This course will explore how gender shapes scientific practice and public policy by considering the issue of global climate change. The goals of this course are:

- 1) to impart some basic knowledge about the physical processes that underlie atmospheric change. This course is constructed for non-science majors. Our hope is that taking the course will increase your confidence in seeking knowledge about the natural world.

- 2) to introduce students to the new field of feminist science studies, including feminist analysis of science as a knowledge-producing practice. We hope that after considering this approach, students will have better tools for asking critical questions about scientific research, funding of science, science education, and the uses of scientific knowledge.

- 3) to introduce students to feminist perspectives on the causes of and solutions to the problem of global warming. We hope that engaging in the public policy debate, students will be better prepared to think about the complex environmental policy issues which we all face as citizens.

First, we will read about women in science. Here, the emphasis is on understanding how gender affects women's experiences in relation to science and why women are so under-represented in some fields. Then we explore how science is done and discuss what a feminist science might look like. Next, we embark on a laboratory project where we will engage in scientific exploration and at the same time reflect on how gender might affect our practice of science inquiry. The laboratory project will also lay a foundation for the next step, which is to explore more completely the dynamics underlying global warming. Once students understand the causes of global warming--and particularly the role that carbon emissions play in the process--we will be ready to turn to the environmental policy issues. There are many possible strategies for reducing carbon emissions. For over three decades, a basic framework for understanding these strategies is a model called I=PAT. Over the last decade, some feminists have developed a critique of this framework and called for a fundamentally different approach. In the final project, students will take up roles as critic or defender of I=PAT, prepare their respective positions through research, and then enact the debate in the last class of the term and during the final exam period.

ASSIGNMENTS

- ◆ **Reading Responses.** This is an informal reflection on the assigned reading. You may write on one article or on a theme that spans across more than one article. The goal of this assignment is for you to assess arguments made in the reading--their logical structure as well as the strength of the evidence brought forward to support them. The paper must be typed and double-spaced. It should be two pages long. Response papers will be worth three points. One point for writing the paper, two points for turning it on time, three points for a paper that shows thought, explores the issue in some depth, and acknowledges the complexity of the issue.
- ◆ **Gender and Science Take-Home Essay Exam:** This will be based in the assigned course reading. The essay must be typed, double-spaced, four pages (1,000 words approximately). Essay questions will be distributed on Tuesday January 20. The essay is due at the beginning of class on January 27.
- ◆ **Laboratory Experiment:** Working in a research team, students will study the properties of a solar cooker of their own design. Each group will prepare a presentation that documents how a specific design feature affects the performance of the solar cooker. Each student will write a paper in scientific format that presents the results of the group experiment. Experimentation, data collection and oral presentation will be done as a group. Papers will be written individually.
- ◆ **Final Exam:** A take home essay exam covering Parts III (Global Climate Change) and IV (Global Warming: Feminist Perspectives on the Policy Debate) of the course. The exam is due by 4:30 p.m. Thursday March 17 in the Women's Studies office, 469 Neuberger Hall

GRADING**

Reading Responses (4)	(i)	10%
Gender & Science Essay	(i)	15%
Solar Cooker Project		
Presentation	(g)	15%
Paper	(i)	15%
Final Exam	(i)	25%
Attendance/Participation*		15%

(i)- individual assignment, (g)-group assignment

*Consistent participation in class, including completion of all assigned activities and work products, will be taken into consideration in the final grade.

** Students taking the class P/NP must satisfactorily complete all assignments in order to receive a passing grade.

Schedule

- January 8: **Introduction**
- January 10: Reading: "Introduction: Science and Feminism" (WST, pp.xvii-xxvii)
Movie: "Rachel Carson's Silent Spring"

I. Women in Science

- January 15 Reading: "Mixed Messages: Men and Women in Advertisements in *Science*" Mary Barbercheck (WST, pp. 117-131); "The Careers of Men and Women Scientists: Gender Differences in Career Attainments" Harriet Zuckerman (WST, pp. 69-78);
Handout: "Science: a white, male profession"
Reading response #1
- January 17 Reading: "Never Meant to Survive, A Black Woman's Journey: An Interview with Evelyn Hammonds," Aimee Sands (WST, pp. 17-25); "Gender Constructs and Career Commitment: The Influence of Peer Culture on Women in College," Margaret A. Eisenhart and Dorothy C. Holland (WST, pp. 26-35), "Snow Brown and the Seven Detergents," Banu Subramaniam (WST, pp. 36-41)
- Movie: "Asking Different Questions"
Reading response #2

II. Gender and Scientific Practice

- January 22 Reading: "Constructing Gender, Constructing Science," WST, pp. 143-152; "Science, Facts, and Feminism," Ruth Hubbard (WST, pp. 153-160)
Reading response #3
- January 24 Reading: "Can There Be a Feminist Science?" Helen E. Longino (WST, pp. 216-222); "Is Primatology a Feminist Science?" Linda Marie Fedigan (WST, pp. 239-253).
- January 29 Begin Solar Cooker Project
- Gender & Science Essay Due**
- January 31 Solar Cooker
- February 5 Solar Cooker
- February 7 Solar Cooker
- February 12 Solar Cooker
- February 14 **Solar Cooker Presentations**

February 19 Finish Solar Cooker Labwork
Solar Cooker Papers Due

February 21 Solar Cooker Scientific Practice

III. Global Climate Change

February 26 <http://www.exploratorium.edu/climate/primer/index.html>
<http://www.grida.no/climate/vital/>

February 28

March 4 Climate Change Impact and Policy
Kyoto Protocol <http://unfccc.int/2860.php>
“Taking Population Out of the Equation,” pp. 39-55 (in Dangerous Intersections, book on reserve at PSU library)

IV. Strategies to Address Global Warming--Feminist Perspectives and the Policy Debate

March 6 Introduction
Patricia Hynes: “Consumption: North American Perspectives,” pp. 189-201
Reading Response #4

March 11 Reading: WHAT IT WILL TAKE, By: Ehrlich, Paul R., Ehrlich, Anne H., Mother Jones,
Sep/Oct95, Vol. 20, Issue 5
“Taking Population Out of the Equation,” pp. 55-73 (in Dangerous Intersections, book on reserve at PSU library)

March 13

March Take Home Final -- Due in WS office (469 NH) by 12PM