

## *Sociology of Science*

HTS 3082

Class 1:20 pm - 2:25 pm MW Army Office 2 Aug 17, 2009 - Dec 4, 2009

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Office Hours: 11:00-12:00 MTW and other hours by appointment.

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**Introduction:** My objective in teaching this course is to introduce you to using a sociological, cultural, philosophical and historical imagination to explore science and society through classroom discussions, readings and assignments. We will explore and analyze what science is as well as how it works.

### **Books:**

*Making Sense of Science*, Steven Yearley, Sage, 2005, 9780803986923

*Science In Society*, Massimiano Bucchi, Routledge, 2004, 978-0-415-32200-3

Additional pdfs on T-Square and Journal articles, see list at the end.

### **Course Requirements:**

#### **Attendance and Participation:**

You are expected to be present for the entire class to be counted as present and to receive 1 pt. You must be present for the entire class period to submit work timely on the due date. In addition class participation is valued at 1 pt per day.

**Critical Reflection Papers** (10 pts each) will be submitted every Wednesday until 28 October 2009. A critical reflection paper is a one page, single space word essay that analyzes your thoughts and questions about that readings assigned that week. The CRP includes the reading scheduled for the day it is due. Critical reflection papers are a chance for you *to think critically* about the readings. Questions to ask yourself while writing: why it is the way it is? What are implications of this idea? What is the reading telling me about science? society? Identify and explore patterns that tell you something about the relationship of science and society, and provide support for your ideas. Please use proper citation methods in your paper. (This is a single authored assignment if you would like to incorporate ideas from another, illustrate that with a reference.)

**Article Review: Due 18 November (30 pts).** Select and identify three articles of interest to you from the journals listed below (or select an article or chapter that is referenced in the bibliography of one of the class texts). Verify in writing with the instructor before 1 September that this is an appropriate article for the class assignment. Read the articles and write a short bibliographic entry for each article. Approved journals for this assignment, please visit any of the following journals:

*Science, Technology and Human Values; Social Studies of Science; Social Epistemology; Bulletin of Science Technology and Society; Signs; Studies in History and Philosophy of Science; Isis; Science as Culture; Science Communication, Science and Policy,*

**Final Paper:** Due 8 December, approximately 10 pages and 80 points. Please include a Bibliography that includes at least 3 readings from science studies that you found outside of class readings that supplement and contribute to your essay in a meaningful way. We will discuss the perimeters of this paper as the semester progresses.

Week	Reading Monday	Reading Wednesday
17, 19 Aug		Bucchi chp 1/Yearley chp 1
24, 26 Aug	Merton, Hagstrom	Kuhn, Bucchi chp 2
31, 2 Sept	Bloor, Keller, Hubbard	Mulkay, Collins
9 Sept		Yearley chp 2, Bucchi chp 3
14, 16 Sept	Bucchi chp 4 Latour and Woolgar	Bourdieu,
21, 23 Sept	Yearley chp 3	Traweek
28, 30 Sept	Latour & Callon	Yearley chp 4
7 Oct		Pickerings, Fausto-Sterling
12, 14 Oct	Yearley chp 5, Spanier	Haraway,
19, 21 Oct	Yearley chp 6, Lynch	Lynch and Law
26, 28 Oct	Yearley chp 7,	Martin, Moore
2, 4 Nov	Bucchi chp 7, Spanier	Yearley chp 8
9, 11 Nov	Yearley chp 9	Rappert, Douglas
16, 18 Nov	Yearley chp 10	Reardon, Nelkin
23, 25 Nov	Yearley chp 11/	Epstein
30, 2 Dec	Yearley chp 12	Bucchi Chp 8

**Grading Scale:**

- Your Points/Total Points = 90% and above) = A
- Your Points/Total Points = 80% to 89% = B
- Your Points/Total Points = 70% to 79% = C
- Your Points/Total Points = 60% to 69% = D
- Your Points/Total Points = less than 59% = Failing

**General Notice:**

All writing assignments are to be typed with a 10 or 12 point font. If this is a hardship for you, please see me. Please use gender neutral pronouns (i.e. he/she, they) and proper citations. All written work is to be your own original work and may not have been submitted in another class for a grade. Plagiarism violates GaTech's code of conduct and students who plagiarize will be reported to the Dean of Students. If you have

any questions whatsoever, read the Honor Code and discuss it with me. It is available at:  
[www.deanofstudents.gatech.edu/Policy/code.in.sections.htm#AHC](http://www.deanofstudents.gatech.edu/Policy/code.in.sections.htm#AHC).

Always use proper citation practices. If you have questions about writing and citation practices, please see me and/or the library's website: [http://www.library.gatech.edu/search/citation\\_guide.php](http://www.library.gatech.edu/search/citation_guide.php). If it should happen that you need to deviate from the established syllabus in any way for any reason please be respectful of yourself, your classmates and the instructor by attending to the situation in a respectful, honest and professional manner.

Georgia Tech complies with the regulations of the Americans with Disabilities Act of 1990 and offers accommodations to students with disabilities. If you are in need of a classroom accommodation, please make an appointment with the ADAPTS office to discuss the appropriate procedures as soon as possible in order for us to make appropriate modifications to ensure your success in HTS 3020. The website for ADAPTS is: <http://adapts.gatech.edu>. Please note that accommodations can only be made for the future.

The instructor reserves the right to alter the syllabus as needed. All changes will be announced in class and on T-Square. It is the student's responsibility to stay informed.

## PDFs on T-Square or Journal Articles

1. Robert K Merton (1942) "The Institutional Imperatives of Science" pp 65-79 in *Sociology of Science* edited by Barry Barnes, Middlesex: Penguin Books 1972
2. Thomas S Kuhn (1963) "Scientific Paradigms" pp 80-104 in *Sociology of Science* edited by Barry Barnes, Middlesex: Penguin Books 1972
3. Michael Mulkay (1969) "Cultural Growth in Science" pp 126-142 in *Sociology of Science* edited by Barry Barnes, Middlesex: Penguin Books 1972
4. Michael Mulkay, "Norms and Ideology in Science", *Social Science Information*, 15, (1976), 637-56.
5. Bruno Latour and Steve Woolgar *Laboratory Life: The construction of a scientific fact*. Princeton: Princeton 1986. Chp 2 & 6
6. Pierre Bourdieu (1975) "The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason" pp 31-50 in *The Science Studies Reader* edited by Mario Biagioli, New York and London: Routledge, 1999.
7. Michel Callon, "Some Elements of a sociology of translation: Domestication of the Scallops and the Fishermen of St Briec Bay", in John Law (ed) *Power, Action and Belief: A New Sociology of Knowledge?*, (1986), 196-233.
8. Bruno Latour, "Give me a Laboratory and I will Raise the World", in Knorr-Cetina and Mulkay (eds) *Science Observed*. (1983), 141-70.
9. Rappert, Brian. 2008. 'The Benefits, Risks, and Threats of Biotechnology' *Science & Public Policy* February 35(1): 37-44.
10. Kelly Moore "Powered by the People: Scientific Authority in Participatory Science" pp 299-326 in *The New Political Sociology of Science* edited by Scott Frickel and Kelly Moore, Madison: The University of Wisconsin Press 2006
11. Brian Martin "Strategies for Alternative Science" pp 272-298 in *The New Political Sociology of Science* edited by Scott Frickel and Kelly Moore, Madison: The University of Wisconsin Press 2006
12. Steven Epstein "Institutionalizing the New Politics of Difference in U.S. Biomedical Research: Thinking across Science/State/Society Divides" pp 327-350 in *The New Political Sociology of Science* edited by Scott Frickel and Kelly Moore, Madison: The University of Wisconsin Press 2006
13. Jenny Reardon "Creating Participatory Subjects: Science, Race and Democracy in a Genomic Age" pp 351-377 in *The New Political Sociology of Science* edited by Scott Frickel and Kelly Moore, Madison: The University of Wisconsin Press 2006

14. Michael Lynch, "Ethnomethodology", Chapter 1 of *Scientific Practice and Ordinary Action*, Cambridge, (1993). 1-38.
15. Michael Lynch and John Law "Pictures, Texts, and Objects: The Literary Language Game of Bird-Watching" pp 317-341 in *The Science Studies Reader* edited by Mario Biagioli, New York and London: Routledge, 1999.
16. Emily Martin "Toward an Anthropology of Immunology: The Body as Nation State" pp 358-371 in *The Science Studies Reader* edited by Mario Biagioli, New York and London: Routledge, 1999.
17. Donna Haraway "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective" pp 172-188 in *The Science Studies Reader* edited by Mario Biagioli, New York and London: Routledge, 1999.
18. Sharon Traweek "Pilgrim's Progress: Male Tales Told during a Life in Physics" pp 525-542 in *The Science Studies Reader* edited by Mario Biagioli, New York and London: Routledge, 1999.
19. Anne Fausto-Sterling "Gender, Race, and Nation: The Comparative Anatomy of "Hottentot" Women in Europe 1815-1817" pp 343-366 in *The Gender and Science Reader* edited by Muriel Lederman and Ingrid Bartsch, London and New York: Routledge 2001.
20. Evelyn Fox Keller "From Working Scientist to Feminist Critic" pp 59-62 in *The Gender and Science Reader* edited by Muriel Lederman and Ingrid Bartsch, London and New York: Routledge 2001.
21. Bonnie Spanier "From Molecules to Brains, Normal Science Supports Sexist Beliefs about Difference" pp 367-372 in *The Gender and Science Reader* edited by Muriel Lederman and Ingrid Bartsch, London and New York: Routledge 2001.
22. Ruth Hubbard "Science and Science Criticism" pp 49-51 in *The Gender and Science Reader* edited by Muriel Lederman and Ingrid Bartsch, London and New York: Routledge 2001.
23. Warren O. Hagstrom "Gift Giving as An Organizing Principle in Science" pp 21-34 in *Science in Context* edited by Barry Barnes and David Edge, Milton Keynes: The Open University Press, 1982.
24. H.M. Collins "Tacit Knowledge and Scientific Networks" pp 44-64 in *Science in Context* edited by Barry Barnes and David Edge, Milton Keynes: The Open University Press, 1982.
25. David Bloor "Formal and Informal Thought" pp 117-124 in *Science in Context* edited by Barry Barnes and David Edge, Milton Keynes: The Open University Press, 1982.
26. Andrew Pickering "Interests and Analogies" pp 125-146 in *Science in Context* edited by Barry Barnes and David Edge, Milton Keynes: The Open University Press, 1982.
27. Mary Douglas "Environments at Risk" pp 260-275 in *Science in Context* edited by Barry Barnes and David Edge, Milton Keynes: The Open University Press, 1982.
28. Dorothy Nelkin "Controversy as a political Challenge" pp 276-281 in *Science in Context* edited by Barry Barnes and David Edge, Milton Keynes: The Open University Press, 1982.