

Sociology 476:
The Politics of Knowledge:
A Sociological Introduction to
Science and Technology Studies
Spring 2016

Mondays, 10:00-12:50 pm, in Allison 1021

****First course meeting on Tuesday, March 29****

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Drop-in office hours this quarter:

Mondays, 2:00-3:30, in University Hall 020 (basement level)

A copy of this syllabus can be found on the Canvas site for the course.

Summary:

This course is motivated by the assumption that questions of knowledge and technology have become central to the political and cultural organization of modern societies. The fundamental goal of the course is to develop tools to understand both the social organization of science and the technoscientific dimensions of social life. Although much of the actual course content concerns science and technology, the theoretical and analytical frameworks developed in this course are intended to apply to any domain involving knowledge, expertise, or technical tools.

By examining the social, cultural, political and material dimensions of knowledge production, the course provides a broad introduction to sociological perspectives within Science & Technology Studies (STS). While being sensitive to the interdisciplinary character of STS, we will emphasize the following questions:

- What have been the dominant approaches to the sociological study of science and technology? How have different schools developed, what sorts of questions do they ask, and what theories and analytical tools do they offer?
- How do these various approaches help us understand such topics as the organization of intellectual work, the politics of knowledge production, the design and dissemination of technologies, the standardization of knowledge products, the character of “knowledge societies,” the resolution of conflicts around knowledge and technology, the relations between laypeople and experts, the tensions between expertise and democracy, the measurement and management of technological risk, the technological mediation of identity formation, and the nature of governance in technologically sophisticated societies?
- In which ways are present-day studies of science and technology consistent with, and in which ways are they in tension with, other approaches to understanding knowledge, culture, politics, etc., that are employed within sociology today?
- How might sociology as a field of study benefit from closer engagement both with epistemic concerns and with the material aspects of our technosocial world?

In a course of nine weeks, the assigned reading is a highly selective (and ultimately somewhat arbitrary) subset of relevant literature, and we will be leaving out many classics as well as many important recent works. I will be posting on Canvas a separate list of recommendations for further reading and notes about relevant journals in the field. That information should be helpful to you as you work on your papers for the course; it should also provide resources for students who seek a more thoroughgoing expertise in STS or the sociology of science and technology.

Although many of the themes we will address have a long history, the emphasis will be on intellectual developments of the last several decades. The course focuses largely (but not completely) on the United States, though we will try whenever possible to place developments in a global context. While much of the scholarship we will consider is broadly sociological, some of it is drawn from other fields. Students from other disciplines are welcome.

Course Mechanics:

- ◆ This course will make use of the “**Canvas**” course management system (<http://www.it.northwestern.edu/education/learning-management/login.html>). Students are responsible for logging in, checking regularly for posted announcements, and obtaining readings and assignments from the site.
- ◆ Important course **announcements** may also be sent to students’ registered campus email addresses. You are responsible for monitoring those email accounts.
- ◆ This syllabus and schedule are **subject to change** in the event of circumstances unforeseen circumstances. Announcements of changes will be posted on Canvas and emailed to students.
- ◆ All required **course readings** are available for download from the Canvas site in the form of PDFs. Please bring readings with you to class (as printouts or in electronic form).

A list of **recommended readings**, organized by week, will be posted on Canvas.

- ◆ We will use a **discussion format**. Typically I will make a short introductory presentation at the beginning. (I will post the PowerPoint afterward on Canvas. However, these PowerPoints are not meant to stand alone.) The discussion that follows should be grounded in the reading, and it’s taken for granted that everyone had done the reading carefully. We will also be guided by the discussion questions that students have prepared and distributed in advance (see below). To make discussions as participatory as possible (and welcoming to students coming from multiple disciplines), I discourage “name-dropping” and “-ism-dropping,” unless you take the time to explain the reference to the thinker or school.
- ◆ Your grade for the quarter will be based on the following **course requirements**:

1) Students (including auditors) are expected to attend the seminar regularly and **participate** actively in discussions.

2) In addition, each student will be asked to circulate **discussion questions** in advance of two class meetings during the quarter. (Auditors are asked to do this once.) These questions must be distributed to all participants in the seminar by 4:00 pm on the day before class. Students will sign up for specific weeks at the first meeting of the seminar.

Ideally, the questions should help frame the seminar discussion by asking about key arguments and concepts, juxtaposing and comparing readings, raising concerns, and beginning the process of articulating critiques. Please come up with two or three questions per reading, for at least three of the readings for the week. Please number your questions (to make it easier to refer to them in class), and please take the time to spell authors’ names and terms correctly.

Everyone should read and think about the distributed discussion questions before class. I will try to make sure we address as many of them as possible during the seminar meeting. In addition, the students who prepare questions for the week are asked to take responsibility to help bring us back to those questions during the discussion.

3) Students taking the course for credit must submit a **paper** (around 20 pages in length, not including references) by noon on Monday, June 6. Please submit the paper as a Word file sent by email attachment to s-epstein@northestern.edu. I will do all my grading on the email attachment and then email it back to you.

The paper need not deal directly with the domains of science or technology, as long as it engages with the questions concerning the “politics of knowledge” that are at the heart of this course. I am relatively open about directions in which you might take your paper, provided that you get my approval for your topic as described below. Your paper may be empirical with a theoretical framing, or it may take the form of a critical review of the literature. In either case, the paper must draw on course materials but must also extend beyond course readings. (You may find the list of recommended readings helpful.)

Although in practice your paper may be a “first stab” at something you will develop in greater detail later (for example, a second-year paper, special field paper, or dissertation prospectus), it should stand on its own and not read like a rough draft. The paper should articulate an identifiable argument. (That is, even a paper that is just outlining a future research project should still have a thesis statement up front.) It should be addressed to a general academic reader and should not assume a reader who attended the class. (It should not reference class discussions or refer informally to “the articles we read for this seminar”). Please proofread carefully and pay close attention to matters of style, grammar, syntax, and organization. (If your paper has a lot of careless errors and does not seem to have been proofread adequately, I will send it back to you.) The paper should include a title and should be broken into sections with headings. Use parenthetical citations for quotes and references to other texts. List all such texts in your bibliography. (You may use any standard bibliographic style, as long as you are consistent.) Please use a standard font and a ragged right margin (rather than right justification).

You must get my **approval of your proposed topic** for the paper by emailing me a written description by no later than Friday, April 22 (1-2 paragraphs plus a short reference list). If your paper will be thematically similar to, or will have any overlap in actual content with, any other paper you have written in the past or are writing this quarter, please also provide a clear description of the overlap as well as an explanation of how your paper for this class will differ. Such overlap is not necessarily a problem, but we need to come to a clear understanding about it in advance.

In addition, I request that every student come to my office hours at least once (either before or immediately after the submission of the topic) to discuss the paper.

◆ **Incompletes** are heartily discouraged.

- ◆ Any student requesting accommodations related to a disability or other condition is required to register with AccessibleNU (accessiblenu@northwestern.edu; 847-467-5530) and provide me with an accommodation notification from AccessibleNU, preferably within the first two weeks of class. All information will remain confidential.

- ◆ I am committed to very strict enforcement of university regulations concerning **academic integrity**, which means that I report all suspected violations of the policy (including suspicion of cheating, plagiarism, fabrication, obtaining an unfair advantage, and aiding and abetting dishonesty) to campus authorities. Please be certain to familiarize yourself with the university's policy on academic integrity (<http://www.northwestern.edu/uacc/>), and ask me if you have any questions or concerns.

Schedule of Readings and Assignments:

WEEK 1 (TUESDAY, March 29): Course Introduction; Sociologies of Knowledge

Mannheim, Karl. 1936. *Ideology and Utopia*. New York: Harcourt, Brace & World. Pp. 49-78 (Ch. 2, sections 1-6 only).

Durkheim, Emile. 1915. *The Elementary Forms of the Religious Life*. London and New York: G. Allen & Unwin. Pp. 462-496 (Conclusion).

Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 (3): 575-599.

WEEK 2 (April 4): Early Sociologies of Science

Merton, Robert K. 1973. *The Sociology of Science: Theoretical and Empirical Investigations*. Chicago: University of Chicago Press. Pp. 439-459 (Ch. 20: "The Matthew Effect in Science").

Bourdieu, Pierre. 1975. "The Specificity of the Scientific Field and the Social Conditions of the Progress of Reason." *Social Science Information* 14 (6): 19-47.

Latour, Bruno, and Steve Woolgar. [1979] 1986. *Laboratory Life: The Construction of Scientific Facts*. Princeton, NJ: Princeton University Press. Pp. 15-53 (Ch. 1 and part of Ch. 2).

WEEK 3 (April 11): The Sociology of Scientific Knowledge

Bloor, David. [1976] 1991. *Knowledge and Social Imagery*. 2nd ed. Chicago: University of Chicago Press. Pp. 3-23, 46-54 (Ch. 1 and 3).

Collins, Harry M. 1974. "The TEA Set: Tacit Knowledge and Scientific Networks." *Science Studies* 4: 165-86.

Shapin, Steven. 1995. "Cordelia's Love: Credibility and the Social Studies of Science." *Perspectives on Science* 3 (3): 76-96.

Pinch, Trevor J., and Weibe E. Bijker. 1993. "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." Pp. 17-50 in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, edited by W. E. Bijker, T. P. Hughes and T. J. Pinch. Cambridge, MA: MIT Press.

WEEK 4 (April 18): Actor-Network Theory

Latour, Bruno. 1983. "Give Me a Laboratory and I Will Raise the World." Pp. 141-170 in *Science Observed: Perspectives on the Social Study of Science*, edited by K. D. Knorr-Cetina and M. Mulkay. London: Sage.

Callon, Michel. 1986. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay." Pp. 196-233 in *Power, Action, and Belief*, edited by J. Law. London: Routledge & Kegan Paul.

Latour, Bruno. 1992. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." Pp. 225-258 in *Shaping Technology, Building Society: Studies in Sociotechnical Change*, edited by W. E. Bijker and J. Law. Cambridge, MA: MIT Press.

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press. Pp. 1-17 (Introduction).

**REMINDER: PAPER TOPICS DUE FRIDAY, APRIL 22.

Week 5 (April 25): Within and Across Epistemic Cultures

Knorr Cetina, Karin. 1999. *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge, MA: Harvard University Press. Pp. 1-25, 46-78 (Ch. 1 and 3).

Star, Susan Leigh, and James R. Griesemer. 1989. "Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39." *Social Studies of Science* 19: 387-420.

Watson-Verran, Helen, and David Turnbull. 1995. "Science and Other Indigenous Knowledge Systems." Pp. 115-139 in *The Handbook of Science and Technology Studies*, edited by S. Jasanoff, G. Markle, J. C. Petersen and T. Pinch. Thousand Oaks, CA: Sage.

Mukerji, Chandra. 2003. "Intelligent Uses of Engineering and the Legitimacy of State Power." *Technology and Culture* 44 (October): 655-676.

WEEK 6 (May 2): Cultures of Knowledge and Evaluation

Camic, Charles, Neil Gross, and Michèle Lamont. 2011. "Introduction: The Study of Social Knowledge Making." In *Social Knowledge in the Making*, edited by Camic, Gross, and Lamont. Chicago: University of Chicago Press. Pp. 1-40.

Lamont, Michèle, and Katri Huutoniemi. 2011. "Comparing Customary Rules of

Fairness: Evaluative Practices in Various Types of Peer Review Panels.” In *Social Knowledge in the Making*, edited by Charles Camic, Neil Gross and Michèle Lamont, 209-232. Chicago: University of Chicago Press.

Espeland, Wendy Nelson, and Mitchell L. Stevens. 2008. “A Sociology of Quantification.” *European Journal of Sociology* XLIX (3): 401-436.

Lezaun, Javier. 2007. “A Market of Opinions: The Political Epistemology of Focus Groups.” *Sociological Review* 55 (suppl. 2): 130-151.

Wahlberg, Ayo. 2013. “Measuring Progress: Calculating the Life of Nations.” *Distinktion: Scandinavian Journal of Social Theory* no. 8 (1): 65-82.

WEEK 7 (May 9): Institutions, Politics, and Social Order

Frickel, Scott, and Kelly Moore. 2006. “Prospects and Challenges for a New Political Sociology of Science.” In *The New Political Sociology of Science: Institutions, Networks, and Power*. Madison: University of Wisconsin Press. Pp. 3-14 **only**.

Epstein, Steven. 2006. “Institutionalizing the New Politics of Difference in U.S. Biomedical Research: Thinking across the Science/State/Society Divides.” Pp. 327-350 in *The New Political Sociology of Science: Institutions, Networks, and Power*, edited by S. Frickel and K. Moore. Madison: University of Wisconsin Press.

Medvetz, Thomas. 2012. *Think Tanks in America*. Chicago: University of Chicago Press, 1-46 (Prologue and Ch. 1).

Reardon, Jennifer. 2001. “The Human Genome Diversity Project: A Case Study in Coproduction.” *Social Studies of Science* 31 (3): 357-388.

Jackson, Myles W. 2014. “The Biology of Race: Searching for No Overlap.” *Perspectives in Biology and Medicine* 57 (1): 87-104.

Waidzunus, Tom, and Steven Epstein. 2015. “‘For Men Arousal Is Orientation’: Bodily Truthing, Technosexual Scripts, and the Materialization of Sexualities through the Phallometric Test.” *Social Studies of Science*: 1-27.

WEEK 8 (May 16): Professionals, Laypeople, and the Politics of Expertise

Wynne, Brian. 1992. “Misunderstood Misunderstandings: Social Identities and Public Uptake of Science.” *Public Understanding of Science* 1: 281-304.

Epstein, Steven. 1995. “The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials.” *Science, Technology, &*

Human Values 20 (4): 408-437.

Collins, H.M., and Robert Evans. 2002. “The Third Wave of Science Studies: Studies of Expertise and Experience.” *Social Studies of Science* 32 (2): 235-296.

Eyal, Gil. 2013. “For a Sociology of Expertise: The Social Origins of the Autism Epidemic.” *American Journal of Sociology* no. 118 (4): 863-907.

WEEK 9 (May 23): Participatory Politics and Technoscientific Governance

Jasanoff, Sheila. 2005. *Designs on Nature: Science and Democracy in Europe and the United States*. Princeton, NJ: Princeton University Press. Pp. 247-271 (Ch. 10).

Brandt, Marisa. 2014. “Zapatista Corn: A Case Study in Biocultural Innovation.” *Social Studies of Science* 44 (6):874-900.

Frickel, Scott, Sahra Gibbon, Jeff Howard, Joanna Kempner, Gwen Ottinger, and David J. Hess. 2010. “Undone Science: Charting Social Movement and Civil Society Challenges to Research Agenda Setting.” *Science, Technology & Human Values* no. 35: 444-473.

Laurent, Brice. 2011. “Technologies of Democracy: Experiments and Demonstrations.” *Science and Engineering Ethics* 17:649-666.

****REMINDER: PAPERS DUE BY NOON ON MONDAY, JUNE 6 (WORD DOCUMENTS BY EMAIL ATTACHMENT TO S-EPSTEIN@NORTHWESTERN.EDU).**