

HIST 619 – RACK 619 – AC 620 – COMM 820 – SI 719
Knowledge/Power/Practice in Science, Technology & Medicine

Winter 2018
Wednesdays, 4-7 pm
3448 Mason Hall

Instructors

Prof. Henry Cowles
cowles@umich.edu
1658 Haven Hall
Office hours: Weds 2:30-4pm, or by appt.

Prof. Christian Sandvig
csandvig@umich.edu
5385 North Quad
Office hours: Weds 3-4pm, or by appt.

Overview

This graduate reading and discussion seminar provides an intensive introduction to some of the major themes and issues in the field of Science and Technology Studies (STS). Drawing on scholarship from a range of fields including history, anthropology, sociology, philosophy, communication, and information studies, the course mixes theoretical material with more empirically oriented studies. The course introduces a dozen (or so) core concepts from STS through both classic papers and more recent engagement with those concepts by a wide variety of scholars. The goal is to leave students from all disciplines with a sense of what STS has to offer and how they might concretely implement these concepts in their own work.

Crucial topics (e.g. race, gender, labor, colonialism, medicine, power, the body, &c.) are threaded throughout the syllabus, rather than separated out into their own weeks. This means that, rather than address each one time, we will engage with these topics all semester. While some background in science, technology and/or medicine is helpful, this course does not require any particular expertise. Work for the seminar will include reading a clutch of articles or chapters (and writing a think-piece) every week, leading a class session (alone or with a partner, once or twice, depending on enrollment), active participation in discussions, and a final short paper of 2500-3500 words that you can think of as the core of a future research paper (if you want).

Learning Objectives

- Recognize and explain foundational concepts and vocabulary from STS.
- Apply foundational concepts and vocabulary from STS to your own topical interests.
- Identify and take an informed position on the intellectual debates important to STS.
- Practice scholarly writing and argumentation that either targets the audience of STS scholars or brings ideas from STS to bear in another domain of scholarship.
- Learn to uncover conceptual, theoretical, and political commitments of scholarly texts.

Requirements: Assignments and Expectations

Reading

All required readings will be available for download through the course Canvas site, where any course announcements (as well as your weekly think-pieces) will also be posted.

Grading Breakdown

- Weekly think pieces (10 x 3% each): 30%
- Participation in discussion (14 x 1% each): 14%
- Leading discussion (1 x 20%): 20%
- Final paper (including prep stages): 36%

Assignments

There are three key assignments in the course:

1. **Weekly think piece**: Starting in week 2, every week (*except* the week in which you co-lead discussion) you must turn in a “think piece,” or response to the readings, of 250 words. Rather than summarize the readings, this piece should engage them synthetically: assess, critique, compare, contrast. The electronic version of this response is due at noon on the day of the seminar, submitted to Canvas in the Discussion section as a post. Think pieces are both a record of your thinking and a spur to discussion. Faculty, student facilitators, and students will have the chance to review others’ posts before class to plan discussion and reflect on their own readings. We will build in ways to engage with the readings from the perspective of our areas of expertise as the course progresses.

One free skip: You can skip one weekly think piece between February and April, no reason needed. No skips in January.

2. **Discussion leading**: Once during the term, you will help lead class discussion together with other students. This is a substantial assignment, as it shapes the way we engage with the week’s readings and provides practice at running a seminar.
 - Meet with the other student(s) presenting in that session and prepare two things:
 - **A one-page handout** as an aid to class discussion. This handout should list what you consider to be the three or four most interesting analytical points for the week’s reading. The handout should also offer several questions designed to provoke interesting, wide-ranging general class discussion. The questions should focus on the concepts, theories, or historiographical frames from the readings.
 - **A 15-minute presentation** outlining the themes from the week’s readings and elaborating your discussion questions. Presentations should draw upon the readings as appropriate, but the goal is not to provide reviews/summaries of those readings. They should instead provide context and impetus for discussion.
 - Feel free to “cheat” and draw on other writing online, such as book reviews, response articles, blog posts, etc., that are relevant. If such material forms a significant aspect of your thinking for the discussion questions, please add it to Canvas / Files.

- Print and distribute hard copies of the handout to all class members at the start of the seminar. This will help focus our attention (away from our screens).
 - These presentations can be split up over the course of the seminar time – however you think makes sense for the week’s readings. We will model these in the first week. The key thing is to keep to your time limit—concision is a crucial skill as both a researcher and a teacher, and we want to have enough time to discuss as a group.
3. **Final paper:** Your final paper should be 2500-3500 words in length (not counting the references). The choice of topic and format is up to you. You may write a literature review, a grant proposal, an analysis of current events, or whatever other format suits your professional training or needs. You must, however, receive approval for the topic and format you choose. Whatever you choose, you must directly engage with some aspect of the STS literature (i.e. with something on the syllabus) and must read additional material (i.e., articles and/or books beyond those assigned in the course). This assignment has three parts:
- A. A preliminary proposal that clearly outlines the topic, format, and 7-9 relevant works for your paper will be the object of discussion in the first half of the course (exact date TBA). This is to be sure you are conceptualizing your paper in an appropriate way and to allow us to check in with how your thinking is progressing before work begins in earnest.
 - B. We will workshop drafts of some sort – outlines, introductions, something that shows the next steps you have taken – with a few weeks to go before the end of class. Again, this is so that we can be sure progress is happening and to give us an opportunity to check in with one another’s work before the end of semester. The exact nature of this check-in will be discussed just after the midway point of the semester (once topics are approved).
 - C. The final version, edited, revised, and proofread, is due during exam period. Date TBA.

Discussion

This is a discussion seminar. Its success depends on the commitment and involvement of all the participants, us included. You are of course expected to arrive in class on time and thoroughly prepared to participate actively in all discussions. Any necessary absences must be cleared in advance—and think-pieces will still be expected for weeks you are forced to miss.

Grading will depend on both the regularity and the quality of your participation, as outlined in the requirements section above.

This seminar practices the “Guidelines for Dialogue” developed by students and faculty from the University of Michigan Program on Intergroup Relations. That means that we will do our best to:

1. Maintain confidentiality. We want to create an atmosphere for open, honest exchange.
2. Commit to learning from each other. We will listen to other and not talk at each other. We acknowledge differences among us in backgrounds, skills, interests, identities and

values. We realize that it is these very differences that will increase our awareness and understanding through this process.

3. Not demean, devalue, or “put down” people for their experiences, lack of experiences, or difference in interpretation of those experiences.
4. Trust that people are always doing the best they can.
5. We will give each other the benefit of the doubt. We will assume we are all trying our hardest and that our intentions are good even when the impact is not.
6. Challenge the idea and not the person. If we wish to challenge something that has been said, we will challenge the idea or the practice referred to, not the individual sharing this idea or practice.
7. Speak our discomfort. If something is bothering us, we will share this with the group. Often our emotional reactions to this process offer the most valuable learning opportunities.
8. Step Up, Step Back. We will be mindful of taking up much more space than others. On the same note, empower ourselves to speak up when others are dominating the conversation.
9. Not to freeze people in time. We are all works in progress. We will be willing to change and make space for others to do so. Therefore we will not assume that one comment or one opinion made at one time captures the whole of a person's character.

Device Use in Class

Except for those who choose to present with slides (which is not a requirement), or who require them for special accommodation, the use of laptops, smartphones, and other digital devices are discouraged. For the most part, *devices should be closed, face down, or turned off* during class discussion and student presentations. However, in cases where you need to refer to online readings to contribute to discussion, you are welcome to do so. We both know how necessary and yet how problematic our screens are, and will be attentive to our own behavior as well.

Special Accommodations, Lateness, and Incompletes Policy

If you need special accommodations – e.g., for a disability, for scheduled conflicts, etc. – please let us know in advance. Arrangements will be made, to the extent possible. However, “Incompletes” will only be granted for exceptional circumstances (not as a matter of course).

Science, Technology, Medicine & Society (STeMS) Colloquium Series

Everyone is welcome and encouraged to attend the Science, Technology, Medicine, and Society (STeMS) faculty-graduate student colloquium. STeMS meets a few times each semester, usually on Monday afternoons from 4 to 5:30 in 1014 Tisch Hall. Consult the STS program website for a list of current events. Three semesters of attendance at the STeMS colloquium are required for the STS Graduate Certificate Program. To receive credit toward the certificate, you must register for Rackham 571 (a 1-credit course) each semester. If you are even thinking about the certificate, we recommend you register for 571 and attend the STeMS series this semester.

Other University Policies

Academic Integrity

Unless otherwise specified in an assignment all submitted work must be your own, original work. Any excerpts, statements, or phrases from the work of others must be clearly identified as a quotation, and a proper citation provided. Any violation of university policies on academic integrity will result in serious penalties, which might range from failing an assignment, to failing a course, to being expelled from the degree program.

Mental Health and Wellbeing

The University of Michigan is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, contact Counseling and Psychological Services (CAPS) at (734) 764-8312 and <https://caps.umich.edu/> during and after hours, on weekends and holidays, or through its counselors physically located in schools on both North and Central Campus. You may also consult University Health Service (UHS) at (734) 764-8320 and <https://www.uhs.umich.edu/mentalhealthsvcs>, or for alcohol or drug concerns, see <http://www.uhs.umich.edu/aodresources>. For a listing of other mental health resources available on and off campus, visit: <http://umich.edu/~mhealth/>.

Sexual Misconduct

The University of Michigan is committed to fostering a safe, productive learning environment. University policy prohibits discrimination on the basis of sex, which regards sexual misconduct—including harassment, domestic and dating violence, sexual assault, and stalking. Sexual violence can undermine students' academic success and the university encourages students who have experienced some form of sexual misconduct to talk to someone about their experience, so they can get the support they need. Confidential support and academic advocacy can be found with the Sexual Assault Prevention and Awareness Center (SAPAC) on their 24-hour crisis line, 734-936-3333 and at <http://sapac.umich.edu/>. Alleged violations can be non-confidentially reported to the Office for Institutional Equity (OIE) at institutional.equity@umich.edu. Reports to law enforcement can be made to University of Michigan Police Department at 734-763-3434.

Schedule

Week 1. 9 January: Origins

Required

- **Winner**, Langdon. "Do Artifacts Have Politics?" *Daedalus* 109, no. 1 (1980): 121–36.
- **Latour**, Bruno. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry* 30, no. 2 (2004): 225–48.
- **Daston**, Lorraine. "Science Studies and the History of Science." *Critical Inquiry* 35, no. 4 (Summer 2009): 798–813.
- **Dear**, Peter, and Sheila Jasanoff. "Dismantling Boundaries in Science and Technology Studies." *Isis* 101, no. 4 (December 2010): 759–74.

Recommended

- **Fleck**, Ludwik. *Genesis and Development of a Scientific Fact*. Translated by Frederick Bradley. Chicago: University of Chicago Press, 1979 [1935].
- **Fanon**, Frantz. *Black Skin, White Masks*. Translated by Richard Philcox. New York: Grove Press, 2008 [1952].
- **Foucault**, Michel. *Madness and Civilization: A History of Insanity in the Age of Reason*. Translated by Richard Howard. New York: Pantheon Books, 1965 [1961].
- **Kuhn**, Thomas S. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1962.
- **Hesse**, Mary. *Models and Analogies in Science*. Notre Dame: University of Notre Dame Press, 1966.

Week 2. 16 January: Constructions 1 (SSK)

Required

- **Rosenberg**, Charles E. "The Therapeutic Revolution: Medicine, Meaning, and Social Change in Nineteenth-Century America." *Perspectives in Biology and Medicine* 20, no. 4 (1977): 485–506.
- **Latour**, Bruno, and Steve Woolgar. *Laboratory Life: The Construction of Scientific Facts*. London: Sage Publications, 1979, pp. 15-42.
- **Shapin**, Steven. "Pump and Circumstance: Robert Boyle's Literary Technology." *Social Studies of Science* 14, no. 4 (November 1, 1984): 481–520.
- **Haraway**, Donna. "Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936." *Social Text*, no. 11 (Winter 1984): 20–64.
- **Jasanoff**, Sheila. *States of Knowledge: The Co-Production of Science and the Social Order*. New York: Routledge, 2004, pp. 13-45.

Recommended

- **Bloor**, David. *Knowledge and Social Imagery*. Chicago: University of Chicago Press, 1976.
- **Shapin**, Steven, and Simon Schaffer. *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*. Princeton: Princeton University Press, 1985.
- **Collins**, H.M. *Changing Order: Replication and Induction in Scientific Practice*. London: Sage Publications, 1985.
- **Golinski**, Jan. *Making Natural Knowledge: Constructivism and the History of Science*. Chicago: University Of Chicago Press, 1998.
- **Hacking**, Ian. *The Social Construction of What?* Cambridge, MA: Harvard University Press, 2000.

Week 3. 23 January: Constructions 2 (SCOT)

Required

- **Noble**, David. "Social Choice in Machine Design," in: MacKenzie and Wajcman, *The Social Shaping of Technology*, 2nd edition, (Buckingham: Open University Press, 1999). pp. 161-176 (an edited excerpt from Noble's 1978 book).
- **Pinch**, Trevor and **Bijker**, Wiebe. "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might benefit Each

Other,” in *The Social Construction of Technological Systems*, eds. Wiebe Bijker, Thomas Hughes, and Trevor Pinch (Cambridge: MIT Press, 1987), pp. 17-50.

- **Hughes**, Thomas. “The Evolution of Large Technical Systems,” in Wiebe Bijker, Thomas Hughes, and Trevor Pinch, eds. *The Social Construction of Technological Systems* (Cambridge MA: MIT Press, 1987), pp. 51-82.
- **Winner**, Langdon. “Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology.” *Science, Technology, & Human Values*, Vol. 18, No. 3 (Summer, 1993), pp. 362-378.
- **Zuboff**, Shoshana. *Surveillance Capitalism*. (New York: Public Affairs, 2019). Definition and Ch. 1.

Recommended:

- **Bijker**, Wiebe. *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*. Cambridge, MA: MIT Press, 1997.
- **Douglas**, Susan J. *Inventing American Broadcasting, 1899-1922*. Baltimore, MD: Johns Hopkins University Press, 1989.
- **Hughes**, Thomas P. *Networks of Power: Electrification in Western Society, 1880-1930*. Baltimore, MD: Johns Hopkins University Press, 1983.
- **Oldenziel**, Ruth. *Making Technology Masculine: Men, Women, and Modern Machines in America, 1870-1945*. Amsterdam: Amsterdam University Press, 1989.
- **Cowan**, Ruth Schwartz. *More Work for Mother: The Ironies Of Household Technology From The Open Hearth To The Microwave*. New York: Basic Books, 1983.
- **Fischer**, Claude. *America Calling: A Social History of the Telephone to 1940*. Berkeley, CA: University of California Press, 1994.
- **Winner**, Langdon. *The Whale and the Reactor: A Search for Limits in an Age of High Technology*. Chicago: University of Chicago Press, 1989.

Week 4. 30 January: Knowledges

Required

- **Polanyi**, Michael. *The Tacit Dimension*. Chicago: University Of Chicago Press, 1999 [1966], 3-25.
- **Haraway**, Donna. “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective.” *Feminist Studies* 14, no. 3 (Autumn 1988): 575–99.
- **Harding**, Sandra. “Rethinking Standpoint Epistemology: What Is ‘Strong Objectivity’?” *The Centennial Review* 36, no. 3 (1992): 437–70.
- **Laveaga**, Gabriela Soto. “Uncommon Trajectories: Steroid Hormones, Mexican Peasants, and the Search for a Wild Yam.” *Studies in History and Philosophy of Science, Part C* 36, no. 4 (December 1, 2005): 743–60.
- **Livingston**, Julie. *Improvising Medicine: An African Oncology Ward in an Emerging Cancer Epidemic*. Durham, NC: Duke University Press, 2012, pp. 29-51.

Recommended

- **Daston**, Lorraine. “Scientific Error and the Ethos of Belief.” *Social Research* 72, no. 1 (Spring 2005): 1–28.
- **Zakariya**, Nasser. “Making Knowledge Whole: Genres of Synthesis and Grammars of Ignorance.” *Historical Studies in the Natural Sciences* 42, no. 5 (November 1, 2012): 432–75.

- **Kohn**, Eduardo. *How Forests Think: Toward an Anthropology Beyond the Human*. Berkeley: University of California Press, 2013.
- **Hayles**, N. Katherine. "Cognition Everywhere: The Rise of the Cognitive Nonconscious and the Costs of Consciousness." *New Literary History* 45, no. 2 (August 6, 2014): 199–220.
- **Struck**, Peter T. *Divination and Human Nature: A Cognitive History of Intuition in Classical Antiquity*. Princeton, New Jersey: Princeton University Press, 2016.

Week 5. 6 February: Actants

Required

- **Latour**, Bruno. "Give Me a Laboratory and I will Raise the World," in Karin Knorr-Cetina and Michael Mulkay, eds., *Science Observed: Perspectives on the Social Study of Science*, pp.141-170, Thousand Oaks, CA: Sage, 1983.
- **Callon**, Michel. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Briec Bay," in John Law, ed., *Power, Action, Belief: A New Sociology of Knowledge?*, pp 196-233, (Sociological Review Monograph), London: Routledge and Kegan Paul, 1986.
- **Akrich**, Madeleine. "The De-Description of Technical Objects," in W. Bijker and J. Law, eds., *Shaping Technology/Building Society: Studies in Sociotechnical Change*, pp 205-224, Cambridge, MA: MIT Press, 1992.
- **Latour**, Bruno. "Introduction: How to Resume the Task of Tracing Associations*," in B. Latour, *Reassembling the social: an introduction to actor-network theory*, pp. 1-17. Oxford: Oxford University Press, 2005.
- **Singleton**, Vicky and **Law**, J. "Devices as rituals: notes on enacting resistance." *Journal of Cultural Economy* 6, no. 3 (2013), p. 259-277.

Recommended

- **Amsterdamska**, Olga. "Surely you are joking Monsieur Latour!" *Science, Technology & Human Values* 15, no. 4 (1990): 495-504.
- **Law**, John (ed.). *A Sociology of Monsters: Essays on Power, Technology and Domination*. (Sociology Review Monograph.) New York: Routledge, 1991.
- **Law**, John. "Notes on the Theory of the Actor Network: Ordering, Strategy and Heterogeneity." *Systems Practice* 5, no. 4 (1992): 379-393.
- **Bloor**, David. "Anti-Latour." *Studies in History and Philosophy of Science, Part A* 30, no. 1 (1999): 81-122.
- **Latour**, Bruno. "For David Bloor... and Beyond." *Studies in History and Philosophy of Science, Part A* 30, no. 1 (1999): 113-129.
- **Bloor**, David. "Reply to Bruno Latour." *Studies in History and Philosophy of Science, Part A* 30, no. 1 (1999): 131-136.

Week 6. 13 February: Boundaries

Required

- **Gieryn**, Thomas F. "Boundary-Work and the Demarcation of Science from Non-Science: Strains and Interests in Professional Ideologies of Scientists." *American Sociological Review* 48, no. 6 (December 1983): 781–95.

- **Star**, Susan Leigh, and James R. Griesemer. “Institutional Ecology, ‘Translations’ and Boundary Objects: Amateurs and Professionals in Berkeley’s Museum of Vertebrate Zoology, 1907-39.” *Social Studies of Science* 19, no. 3 (August 1989): 387–420.
- **Shapin**, Steven. “Discipline and Bounding: The History and Sociology of Science as Seen Through the Externalism-Internalism Debate.” *History of Science* 30, no. 4 (December 1992): 333–69.
- **Helmreich**, Stefan. “How Scientists Think; About ‘Natives’, for Example. a Problem of Taxonomy Among Biologists of Alien Species in Hawaii.” *Journal of the Royal Anthropological Institute* 11, no. 1 (March 2005): 107–28.
- **Osseo-Asare**, Abena Dove. “Writing Medical Authority: The Rise of Literate Healers in Ghana, 1930-1970.” *The Journal of African History* 57, no. 1 (March 2016): 69–91.

Recommended

- **Shapin**, Steven. “The Invisible Technician.” *American Scientist* 77, no. 6 (November 1, 1989): 554–63.
- **Haraway**, Donna. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991.
- **Haraway**, Donna. *Modest_Witness@Second_Millennium.FemaleMan_Meets_Onco-Mouse: Feminism and Technoscience*. New York: Routledge, 1997.
- **Park**, Katharine. *Secrets Of Women: Gender, Generation, and the Origins of Human Dissection*. New York : Zone Books, 2010.
- **Benjamin**, Ruha. *People’s Science: Bodies and Rights on the Stem Cell Frontier*. Stanford: Stanford University Press, 2013.

Week 7. 20 February: Infrastructures

Required

- **Bowker**, Geoffrey C. and **Star**, Susan Leigh. “Some Tricks of the Trade in Analyzing Classification,” in *Sorting Things Out: Classification and Its Consequences*, pp. 33-50, Cambridge, MA: MIT Press, 1999. Note: Ch. 1 is required, Ch. 6 is included as it is on the recommended list below.
- **Edwards**, Paul N. “Infrastructure and modernity: Force, time, and social organization in the history of sociotechnical systems.” in: T. J. Misa, P. Brey, & A. Feenberg, eds., *Modernity and Technology*, pp. 185-225, Cambridge, MA: The MIT Press, 2003.
- **Sterne**, Jonathan. “Format Theory” (partial excerpt) and “Making a Standard” in: *MP3: The Meaning of a Format*, pp. 1-23, 128-147. Durham, NC: Duke University Press, 2012.
- **Jackson**, Steven J. “Rethinking Repair.” In: Tarleton Gillespie, Pablo J. Boczkowski, and Kirsten A. Foot, eds., *Media Technologies: Essays on Communication, Materiality, and Society*, pp. 221-239. Cambridge, MA: MIT Press, 2014.
- **Parks**, Lisa. “Vertical Mediation and the US Drone War in the Horn of Africa.” In: Lisa Parks and Caren Kaplan, eds., *Life in the Age of Drone Warfare*, pp. 134-157. Durham, NC: Duke University Press, 2017.

Recommended

- **Bowker**, Geoffrey C. and **Star**, Susan Leigh. “The Case of Race Classification and Reclassification Under Apartheid,” in *Sorting Things Out: Classification and Its Consequences*, pp. 195-225, Cambridge, MA: MIT Press, 1999.

- **Jackson**, Steven J.; **Edwards**, Paul N.; **Bowker**, Geoffrey C.; and **Knobel**, Cory. “Understanding Infrastructure: History, Heuristics, and Cyberinfrastructure Policy,” *First Monday* 12, no. 6 (June 2007): n.p.
- **Graham**, Steve and **Marvin**, Simon. *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. New York: Routledge, 2001.
- **Sandvig**, Christian. “The Internet as Infrastructure.” In: W. Dutton (ed.), *The Oxford Handbook of Internet Studies*, pp. 86-106. Oxford: Oxford University Press, 2013.
- **Larkin**, Brian. “The politics and poetics of infrastructure.” *Annual Review of Anthropology* 42 (2013): 327-343.

Week 8. 27 February: Economies

Required

- **Shapin**, Steven. “The House of Experiment in Seventeenth-Century England.” *Isis* 79, no. 3 (September 1988): 373–404.
- **Kohler**, Robert E. “Drosophila and Evolutionary Genetics: The Moral Economy of Scientific Practice.” *History of Science* 29, no. 4 (December 1991): 335–375.
- **Daston**, Lorraine. “The Moral Economy of Science.” *Osiris* 10 (January 1995): 2–24.
- **Tsing**, Anna. “The Global Situation.” *Cultural Anthropology* 15, no. 3 (August 2000): 327–60.
- **Murphy**, Michelle. *The Economization of Life*. Durham, NC: Duke University Press Books, 2017, pp. 1-34.

Recommended

- **Hessen**, Boris. “The Social and Economic Roots of Newton’s *Principia*.” In *Science at the Crossroads*. Edited by N.I. Bukharin. London: Cass, 1971 [1931].
- **Merton**, Robert King. *Science, Technology & Society in Seventeenth Century England*. New York: H. Fertig, 1938.
- **Thompson**, E. P. *The Making of the English Working Class*. New York: Vintage, 1966.
- **Thompson**, E. P. “The Moral Economy of the English Crowd in the Eighteenth Century.” *Past & Present*, no. 50 (February 1, 1971): 76–136.
- **Tsing**, Anna. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton, NJ: Princeton University Press, 2017, pp. 11-44.

Spring Break. 2-10 March

Week 9. 13 March: Interactions

Required

- **Suchman**, Lucy A. *Human-Machine Reconfigurations: Plans and Situated Actions*. (2nd ed.) Cambridge: Cambridge University Press, 2006. (Excerpts: “Interactive Artifacts,” pp. 33-50 and “Readings and Responses [to the 1987 edition], pp. 8-23.)
- **Grint**, Keith and **Woolgar**, Steve. “Configuring the User: Inventing New Technologies.” in K. Grint & S. Woolgar, *The Machine at Work: Technology, Work, and Organization*, pp. 65-94. London: Polity Press, 1991.
- **Schüll**, Natasha Dow. “Engineering Experience.” in *Addiction by Design: Machine Gambling in Las Vegas*, pp. 52-75. Princeton, NJ: Princeton University Press, 2012. (Excerpt.)

- **Irani**, Lilly; **Vertesi**, Janet; **Dourish**, Paul; **Philip**, Kavita; **Grinter**, Rebecca E. “Postcolonial computing: a lens on design and development.” *Proc. ACM CHI* 2010: 1311-1320.
- **Gillespie**, Tarleton. *Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media*. New Haven, CT: Yale University Press, 2018. (Excerpts: pp. 5-13, 14-19, 21-23, 111-140.)

Recommended

- **Weizenbaum**, Joseph. *Computer Power and Human Reason: From Judgment to Calculation*. New York: W H Freeman & Co., 1976.
- **Dourish**, Paul. *Where the Action Is: Foundations of Embodied Interaction*. Cambridge, MA: MIT Press, 2004.
- **Medina**, Eden. *Cybernetic Revolutionaries: Technology and Politics in Allende’s Chile*, Cambridge, MA: MIT Press, 2011.

Week 10. 20 March: Epistemologies

Required

- **Ginzburg**, Carlo. “Morelli, Freud and Sherlock Holmes: Clues and Scientific Method.” Translated by Anna Davin. *History Workshop*, no. 9 (April 1980): 5–36.
- **Rheinberger**, Hans-Jörg. “Experiment, Difference, and Writing: I. Tracing Protein Synthesis.” *Studies in History and Philosophy of Science, Part A* 23, no. 2 (June 1992): 305–31.
- **Daston**, Lorraine J., and Peter Galison. “The Image of Objectivity.” *Representations*, no. 40 (Autumn 1992): 81–128.
- **Croissant**, Jennifer L. “Agnotology: Ignorance and Absence or Towards a Sociology of Things That Aren’t There.” *Social Epistemology* 28, no. 1 (January 2014): 4–25.
- **Gómez**, Pablo F. “Incommensurable Epistemologies? The Atlantic Geography of Healing in the Early Modern Caribbean.” *Small Axe: A Caribbean Journal of Criticism* 18, no. 2 (44) (July 2014): 95–107.

Recommended

- **Foucault**, Michel. *The Order of Things: An Archaeology of the Human Sciences*. New York: Vintage Books, 1973.
- **Chandler**, James, Arnold I. Davidson, and Harry D. Harootunian, eds. *Questions of Evidence: Proof, Practice, and Persuasion across the Disciplines*. Chicago: University of Chicago Press, 1994, pp. 243-324.
- **Davidson**, Arnold I. *The Emergence of Sexuality: Historical Epistemology and the Formation of Concepts*. Cambridge, MA: Harvard University Press, 2001.
- **Feest**, Uljana, and Thomas Sturm. “What (Good) Is Historical Epistemology? Editors’ Introduction.” *Erkenntnis* 75, no. 3 (2011): 285–302.
- **Chiang**, Howard, ed. *Historical Epistemology and the Making of Modern Chinese Medicine*. Manchester: Manchester University Press, 2015.

Week 11. 27 March: Cyborgs

Required

- **Zuboff**, Shoshana. “Managing the Informed Organization,” in: *In the Age of the Smart Machine: The Future of Work and Power*, pp. 387-414, New York: Basic Books, 1988.

- **Haraway**, Donna. “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” in: Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature*, pp.149-181, New York: Routledge, 1991.
- **Sandoval**, Chela. “Revolutionary Force: Connecting Desire to Reality.” in: Chela Sandoval, *Methodology of the Oppressed*, pp. 160-177, Minneapolis, MN: University of Minnesota Press, 2000.
- **Suchman**, Lucy. “Subject Objects.” *Feminist Theory* 12, no. 2 (2011): 119-145.
- **Levy**, Karen E. C. 2015. “The Contexts of Control: Information, Power, and Truck Driving Work.” *The Information Society* 31: 160–174. (Nicholas C. Mullins Prize, Society for Social Studies of Science (4S), 2015) and: watch <https://www.youtube.com/watch?v=6kPjsfYSzp4> until 12:55

Recommended

- **Weiner**, Norbert. *The Human Use Of Human Beings: Cybernetics And Society*. (new ed.) Da Capo Press, 1989.

Week 12. 3 April: Ontologies

Required

- **Hacking**, Ian. *Historical Ontology*. Cambridge, MA: Harvard University Press, 2002, pp. 1-26 and 99-114.
- **Mol**, Annemarie. “Mind Your Plate! The Ontonorms of Dutch Dieting.” *Social Studies of Science* 43, no. 3 (June 2013): 379–96.
- **Mukharji**, Projit Bihari. “The ‘Cholera Cloud’ in the Nineteenth-Century ‘British World’: History of an Object-Without-an-Essence.” *Bulletin of the History of Medicine* 86, no. 3 (December 2012): 303–32.
- **TallBear**, Kim. “Genomic Articulations of Indigeneity.” *Social Studies of Science* 43, no. 4 (December 2013): 509–33.
- **Campbell**, Nancy D., and Laura Stark. “Making up ‘Vulnerable’ People: Human Subjects and the Subjective Experience of Medical Experiment.” *Social History of Medicine* 28, no. 4 (November 2015): 825–48.

Recommended

- **Goffman**, Erving. *The Presentation of Self in Everyday Life*. Anchor Books, 1959.
- **Austin**, J.L. *How to Do Things With Words*. Cambridge, MA: Harvard University Press, 1975 [1962].
- **Butler**, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge, 1990.
- **Zammito**, John H. *A Nice Derangement of Epistemes: Post-Positivism in the Study of Science from Quine to Latour*. Chicago: University of Chicago Press, 2004.
- **Brown**, Bill, ed. *Things*. Chicago: University of Chicago Press, 2004.

Week 13. 10 April: TempoRealities

Required

- **Adams**, Vincanne, Michelle Murphy, and Adele E. Clarke. “Anticipation: Technoscience, Life, Affect, Temporality.” *Subjectivity* 28, no. 1 (September 2009): 246–65.

- **Kowal**, Emma, Joanna Radin, and Jenny Reardon. “Indigenous Body Parts, Mutating Temporalities, and the Half-Lives of Postcolonial Technoscience.” *Social Studies of Science* 43, no. 4 (August 1, 2013): 465–83.
- **Benjamin**, Ruha. “Racial Fictions, Biological Facts: Expanding the Sociological Imagination through Speculative Methods.” *Catalyst: Feminism, Theory, Technoscience* 2, no. 2 (2016): 1-28.

Recommended

Those who are interested should check out pieces collected for an ongoing research collaboration called “Histories of the Future,” available here: <http://histscifi.com/>. Appropriately enough, the future is an emerging area of study and we’ll update recommendations during the term.

Week 14. 17 April: Biopolitics

Required

- **Canguilhem**, Georges. *The Normal and the Pathological* trans. Carolyn R. Fawcett. Boston, MA: D. Reidel Publishing Company, 1943/1978. (excerpts from pp. 7, 11-14, 69-82)
- **Rabinow**, Paul and **Rose**, Nikolas. “Biopower Today,” *BioSocieties* 1 (2006): 195–217.
- **Landecker**, Hannah. Immortality, in Vitro: A History of the HeLa Cell Line. In Paul E. Brodwin (ed.), *Biotechnology and Culture: Bodies, Anxieties, Ethics*, pp. 53-72. Bloomington, IN: Indiana University Press, 2001.
- **Vora**, Kalindi. Limits of “Labor”: Accounting for Affect and the Biological in Transnational Surrogacy and Service Work. *The South Atlantic Quarterly* 111 (2012): 681-700.
- **Nafus**, Dawn and **Sherman**, Jamie. “This One Does Not Go Up to 11: The Quantified Self Movement as an Alternative Big Data Practice.” *International Journal of Communication* 8 (2014): 1784-1794.

Recommended

- **Epstein**, Steven. *Inclusion: The Politics of Difference in Medical Research*. Chicago, IL: University of Chicago Press, 2007.
- **Rosenberg**, Charles. *The Care of Strangers: The Rise of America's Hospital System*. Baltimore, MD: Johns Hopkins University Press, 1995.
- **Aronowitz**, Robert. *Making Sense of Illness: Science, Society, and Disease*. Cambridge, England: Cambridge University Press, 1999.
- **Nelson**, Alondra. *The Social Life of DNA: Race, Reparations, and Reconciliation After the Genome* Beacon Press, 2016.
- **Foucault**, Michel. *Society Must Be Defended: Lectures at the Collèges de France, 1975-1976* New York: Picador, 2003.
- Stern, Alexandra. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Berkeley, CA: University of California Press, 2005. (excerpts.)
- Parthasarathy, Shobita. *Building Genetic Medicine: Breast Cancer, Technology, and the Comparative Politics of Health Care*. Cambridge, MA: MIT Press, 2012. (excerpts.)

[Paper Due in Exam Week – 26 April 5pm]