COMM 574: Science & Technology Studies for Communication & Media Studies
[updated 11 January 2018]

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Office hours:
Dunbar-Hester (ANN 414J): M 5-6pm
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Spring 2018
W 12-2:50pm, ANN 414C

"Technology is society made durable." (Bruno Latour)

How does knowledge acquire the status of fact, and how does it travel through the world? What is the relationship between science, technology, and social order? It's tempting to see new technologies, especially new media technologies, as drivers of political and social change. But technological artifacts also embody the values and assumptions — and conflicts — of the societies that produce them, in complicated and surprising ways. This course provides an introduction to the field of Science & Technology Studies, examining the intersection of technology, knowledge, power, and society, with particular attention to cases and theories relevant to the study of communication and media. It takes as its premise that assumptions about society may come to be embodied in technological artifacts and technical knowledge, and undertakes to study how social relations get "inside" technology. We will read examples of sociological, historical, and ethnographic approaches to the study of knowledge production and its relationship to media and information technologies. This will provide doctoral students with a foundation for analyzing the material and epistemological dimensions of media and communication.

Course objectives:

- achieve a command of foundational literature in Science & Technology Studies, especially as they relate to research in Communication;
- articulate differences and similarities between how STS and Communication scholars approach the study of media technologies, media institutions, technological practices, and technological cultures;
- complete a literature review and propose how this contributes to original research at the intersection of Communication & STS.

COURSE POLICIES:

The most important assignment is to complete all of the reading assigned. Your participation is also crucial to the success of the course. It is the best way to demonstrate what you have been learning as well as to fine-tune your ideas in dialogue with your classmates.

Readings:

Complete the readings before class on the day they are listed on the syllabus.

Journal articles are available through USC library electronic access. Some readings are available online, via a URL provided on the syllabus. The assigned books are recommended for purchase, but are also on reserve at Leavey Library. All other readings will be available as PDFs on the Blackboard site for our course (alphabetical by author last name), and they will be posted no later than one week before the session for which they are assigned.

If readings are not where they seem like they should be, or there is a problem with a reading, please send an email about the problem as soon as you notice it. A logistical problem is not a reason for us to fail to address a reading!!

Required Books:

Bijker, Wiebe, Thomas Hughes, and Trevor Pinch (eds.). *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge, MA: MIT Press, 1987.

Daipha, Phaedra. *Masters of Uncertainty: Weather Forecasters and the Quest for Ground Truth*. Chicago: University of Chicago Press, 2015.

Downey, Greg. *Telegraph Messenger Boys*. New York: Routledge, 2002.

Eubanks, Virginia. *Automating Inequality: How High Tech Tools Profile, Police, and Punish the Poor*. St. Martin's Press, 2018.

Gillespie, Tarleton Pablo Boczkowski, Kirsten Foot (eds.). *Media Technologies: Essays on Communication, Materiality, and Society*. Cambridge, MA: MIT Press, 2014.

Lakoff, Andrew. *Unprepared: Global Health in a Time of Emergency*. Berkeley, CA: University of California Press, 2017.

Medina, Eden. (2011). *Cybernetic revolutionaries: Technology and politics in Allende's Chile.* Cambridge, MA: MIT Press.

Smith, Merritt Roe and Leo Marx. *Does Technology Drive History?* Cambridge, MA: MIT Press, 1994.

Turner, Fred. (2006). *From counterculture to cyberculture: Stewart Brand, the Whole Earth Network, and the rise of digital utopianism*. Chicago, IL: University of Chicago Press.

Recommended Books:

Callison, Candis. (2014). *How climate change comes to matter: The communal life of facts*. Durham, NC: Duke University Press.

Chan, Anita. *Networking Peripheries*. Cambridge, MA: MIT Press, 2014.

Coleman, E. Gabriella. *Coding Freedom*. Princeton, NJ: Princeton University Press, 2012.

Peters, Benjamin. *How Not to Network a Nation: The Uneasy History of the Soviet Internet*. Cambridge, MA: MIT Press, 2016.

Sharma, Sarah. (2014). *In the meantime: Temporality and cultural politics*. Durham, NC: Duke University Press.

Takhteyev, Yuri. (2012). *Coding places: Software practice in a South American city*. Cambridge, MA: MIT Press.

Wajcman, Judy. (2014). *Pressed for time: The acceleration of life in digital capitalism*. Chicago, IL: University of Chicago Press.

Recommended Book Chapters:

Boczkowski, Pablo and Leah Lievrouw. "Bridging STS and Communication Studies: Scholarship on Media and Information Technologies." In New Handbook of Science and Technology Studies. E.J. Hackett, O. Amsterdamska, M. Lynch and J. Wajcman (eds.) Cambridge, MA: MIT Press, 2008.

Siles, Ignacio and Pablo Boczkowski. "At the intersection of content and materiality: A texto-material perspective on agency in the use of media technologies." Communication Theory 22 (2012): 227-249.

Lievrouw, Leah. "Materiality and Meaning in Media and Technology Studies: An Unfinished Project." In Media Technologies. Tarleton Gillespie, Pablo Boczkowski, Kirsten Foot (eds.). Cambridge, MA: MIT Press, 2014.

Roosth, Sophia and Susan Silbey. "Science and Technology Studies: From Controversies to Post-Humanist Social Theory." In Blackwell Companion to Social Theory, Bryan S. Turner (ed.), 2008.

Attendance:

This seminar is *your* class. Our meeting time is a scarce and sacred space for the exploration of the theory and craft of research; we have a limited number of hours together to make a meaningful impact on your doctoral education. Instructors and students alike need to take responsibility for cultivating the seminar experience, including mutual trust, appropriate humility, and respect that will allow for the open exchange of ideas.

It is expected that students will be present (and on time) and prepared for all class meetings, without exception.

Students who observe religious holidays that may conflict with the class schedule should let us know at the beginning of the semester. There is no penalty for missing class due to religious

observance. Given that this is a small seminar, if we will have a critical mass who will be absent on a scheduled course day, we can discuss possibly rescheduling class that day, or else we will accept make-up work for the individual student(s).

Methods of Evaluation:

Weekly memos (20%): Each week, ***by Tuesday at 7pm***, each student will post to Blackboard a short reflective memo (approximately 350-500 words) focused on that week's readings. Your memo should engage with *at least* two of the required readings but, beyond that, you have considerable freedom; you might, *e.g.*, pose questions you had as you read; juxtapose readings that you saw in conflict; connect themes you saw among texts; critique authors' arguments or terminology; reflect upon the methods authors used to develop their arguments. The goal is to reflect upon the readings and share reflections with your classmates so you arrive to class ready to participate. Memos will not be graded but they are required; especially at the beginning of the semester, we'll provide feedback on whether memos are meeting expectations.

You can **skip the weekly memo one week of the semester** without affecting your grade. Please email us by 7pm Tuesday to let us know you are taking the pass so there are not crossed wires.

Discussion leader + participation (20%): Each student will sign up to be the discussion leader for three weeks of their choosing. While it is not expected that you will lecture or give a formal presentation, it is expected that you will be well prepared with a series of questions and/or topics, based on the week's readings, which will serve to provide focus and direction for in-class discussion. You do not need to prepare a PowerPoint™ presentation or something similarly formal. You may wish to bring a written summary/analysis of the readings and a list of questions to distribute, but this is not required.

Project proposal (5%, due March 29): This is a short (2-4 page) proposal for your final project. You will sketch out a research project or a literature review, and a consultation with one of us to discuss the project is strongly encouraged. Not graded but required.

Final project (55%, due May 10): In approximately 5000 words, undertake one of the following:

1. Literature-focused project:

Identify and then examine a sampling of important literature from outside our class on media and information technology (may be around a particular technology or an area of literature). Using the literature from the course, critically evaluate this outside literature. Write a paper in the style of Pinch and Bijker's "The Social Construction of Facts and Artifacts" or Boczkowski's and Lievrouw's "Bridging STS and Communication Studies." How can the theories of technology we have read in this course inform and improve our study of media and information technologies? What gaps and/or resonances do you encounter between tech studies and the literature you have sampled? How might a study of media and information technologies generate theory about technology more generally? Does a study of these particular technologies point to issues that more general studies of technology can or cannot account for?

This may be written as a literature review or as a research proposal for a specific project.

2. Book review essay project:

Choose a cluster of new books, from this syllabus and/or from elsewhere, and analyze them in a review essay. Make sure the review includes a perspective on the STS-Communication intersections we are exploring in this class. This can be geared towards a review essay publication. If you wish to do this, confer about a journal to approach. *IJOC* would be a sensible target. *Feminist Media Studies* has expressed interest in review essays if you are considering books that address feminism or gender.

3. Artifact/empirically-focused project:

Choose an empirical site and analyze it using appropriate concepts, theories, and methodologies from the literature we have read in the course (and probably other literature identified by you in conversation with us). You may still draw conclusions relevant to answering the questions in option one, but the primary focus should be on using what you have gained from the tech studies literature to provide a critical account of development and use in a particular case. You are encouraged to think of this as the kernel of a conference paper or publication, and thus you are more than welcome to map this to your larger research agenda (dissertation).

For all options, cite appropriately and include a bibliography. You are free to use your preferred citation style, but please use it consistently throughout your writing. Type and double-space written work, and number and staple multiple pages.

NB: Get in the habit of adding page numbers as soon as you start an electronic file. It is always useful for people giving you feedback to have page numbers to refer to, whether on hard copy or electronic file.

Human subjects and institutional review:

If you want to do a paper that involves human subjects, you will need to submit your IRB (Institutional Review Board) application in time to get approval in time to do the research and analysis before the end of the semester. (It takes a few to several weeks to get approval.) Right now, IRB boards often have a very broad understanding of what constitutes a "human subject" online. Because of the lack of standardization about online research in federal regulations on research, IRB wants people doing online research that could even remotely be conceived to involve humans (like online ethnography) at least to submit forms arguing that the research is exempt from oversight.

See: https://oprs.usc.edu/education/social-behavioral/ ; https://oprs.usc.edu/review/

Academic integrity:

Academic integrity is essential to the success of the educational enterprise and breaches of academic integrity constitute serious offenses against the academic community. Every member of that community bears a responsibility for ensuring that the highest standards of academic integrity are upheld. Students who plagiarize will automatically fail the class and it will be at the

instructor's discretion to report the student to the university. Remember, it is plagiarism if you use someone else's ideas without attribution or someone else's words without quotation. If you have any questions as to what constitutes plagiarism or how to properly cite your colleagues or reference resources, confer with instructors and/or turn to these helpful online resources:

USC guide to academic integrity for graduate students:
http://www.usc.edu/student-affairs/student-conduct/grad_ai.htm

A useful site about citation and avoiding plagiarism:
http://www.lib.berkeley.edu/TeachingLib/Guides/Citations.html

And another about how to think about bibliographies beyond their technical requirements:
http://reagle.org/joseph/2007/teaching/bp-bibliography.html

Student resources:

• Dornsife Writing Center: http://dornsife.usc.edu/writingcenter/

• The instructors respect and uphold all university policies with regard to disability, and support efforts to assist students in obtaining appropriate accommodations and services. Students with documented disabilities who wish accommodations in this class must seek assistance and documentation through the USC Disabilities Services and Programs department. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. See https://dsp.usc.edu/ for details.

Students who develop disabling medical problems or other issues during the semester that affect their ability to complete coursework should request advising and/or referral from Anne Marie Campian, campian@usc.edu.

Communication: Make sure to check your USC email regularly, or to have your USC email forward to the email you use so you don't miss any announcements sent over email. You can expect prompt responses to email (within 24-48 hours, more likely to be 48 on weekends).

Grading:

A = Outstanding – excellent, exceptional, superior. Work is comprehensive and integrates themes and concepts from readings and discussions, building an original analysis. Writing is clear, detailed, analytical, and organized. Students who earn this grade are prepared for class, contribute insightfully, synthesize course materials, and develop connections between course themes and their independent research agendas.

B = Good – competent, respectable, solid. References to the course material are complete, well-selected, and topical. Writing is clear and critical analysis is present, but may fall short in its extension beyond course topics to develop independent analysis. Classroom participation is consistent and thoughtful.

C = Satisfactory – adequate, average, acceptable. References to the course material are well-selected and topical, but student performs little or no critical analysis. Problems exist in student's work. Work includes underdeveloped ideas, off-topic sources or examples, inappropriate research, or anecdotes. Work is descriptive, and/or fails to integrate course material into an original analysis. Participation is inadequate or inconsistent.

F = Failing – inadequate, pervasive problems.

IN = incomplete.

How your grade will be calculated:

Final assignment: 55%
Project proposal (not graded): 5%
Kick off discussion weeks: 20%
Weekly memos: 20%

Schedule:

The following is a "working schedule." We may make changes as we move through the semester. Please stay on top of any changes.

Week 1: January 10: Course introduction, mechanics

Week 2: January 17: Science, epistemography

Daston, Lorraine and Peter Galison. "The Image of Objectivity." *Representations* 40 (1992): 81-128.

Johns, Adrian. pp. 108-160 (portion of chapter "Literatory Life"). *The Nature of the Book.* Chicago: Chicago University Press, 1998.

Shapin, Steven and Simon Schaffer. Chapter 2: "Seeing and Believing". *Leviathan and the Airpump*. Princeton: Princeton University Press, 1985.

Come prepared to assign yourselves to discussion leader slots.

Recommended:

Golinski, Jan. "Introduction" and "Chapter 1: An Outline of Constructivism". *Making Natural Knowledge: Constructivism and the History of Science*. Chicago: University of Chicago Press. 1998. pp. 1-46.

Kuhn, Thomas. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1962.

Fleck, Ludwik. *Genesis and Development of a Scientific Fact*. Chicago: University of Chicago Press, 1979 (1935).

Week 3: January 24: What is technology?

Foucault, Michel. "Panopticism." In *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan. New York: Vintage Books, 1977. pp. 195-228.

Marx, Leo. "The Idea of 'Technology' and Postmodern Pessimism." In *Does Technology Drive History*? ed. Merritt Roe Smith and Leo Marx (Cambridge, Mass., 1994), 238–57.

Marx, Leo. "Technology: The Emergence of a Hazardous Concept." *Technology and Culture, Volume* 51, Number 3 (2010): 561-577.

Ferguson, James. *The Anti-Politics Machine*. Minneapolis, MN: University of Minnesota, 1994. Selections.

Recommended:
Ezrahi, Yaron. "Technology and the Civil Epistemology of Democracy." *Inquiry* 35 (1992): 363-376.

Week 4: January 31: Technological determinism?

Carey, James. "Technology and Ideology: The Case of the Telegraph." *Communication as Culture: Essays on Media and Society*, Revised Edition, pp. 155–177. Taylor & Francis.

Smith, Merrit Roe. "Technological Determinism in American Culture." In Merritt Roe Smith and Leo Marx, eds. *Does Technology Drive History?* Cambridge, MA: MIT Press, 1994.

Hughes, Thomas. "Technological Momentum." In Merritt Roe Smith and Leo Marx, eds. *Does Technology Drive History?* Cambridge, MA: MIT Press, 1994.

Winner, Langdon. "Do Artifacts Have Politics?" In *The Whale and the Reactor*. Chicago: University of Chicago Press, 1988.

Week 5: February 7: Social Construction of Technology/Social Shaping of Technology

Pinch, Trevor and Wiebe Bijker. "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: New Directions in the Sociology and History of Technology*. Wiebe Bijker, Thomas Hughes, and Trevor Pinch, eds. Cambridge, MA: MIT Press, 1987.

Cowan, Ruth Schwartz. "How the Refrigerator Got Its Hum." In *The Social Shaping of Technology*. Donald Mackenzie and Judy Wajcman (eds). Open University Press, 1985.

Hughes, Thomas. "The Evolution of Large Technological Systems." In *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Wiebe Bijker, Thomas Hughes, and Trevor Pinch, eds. Cambridge, MA: MIT Press, 1987.

Kline, Ronald and Trevor Pinch. "Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States." *Technology and Culture* 37 (1996): 763-795.

Recommended:

Bloor, David. "The Strong Programme in the Sociology of Science." Excerpted reprint from *Knowledge and Social Imagery*. Chicago: University of Chicago Press, 1976.

Cowan, Ruth Schwartz. "The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology." In *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Wiebe Bijker, Thomas Hughes, and Trevor Pinch, eds. Cambridge, MA: MIT Press, 1987.

Winner, Langdon. "Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology." *Science, Technology, & Human Values 18*.3 (1993): 362–378.

Week 6: February 14: Actor-Network Theory

Callon, Michel. "Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay." Available online: http://ionesco.sciences-po.fr/com/moodledata/3/Callon_SociologyTranslation.pdf

Akrich, Madeleine. "The De-Scription of Technical Objects." In Wiebe Bijker and John Law, eds. *Shaping Technology / Building Society: Studies in Sociotechnical Change*. Cambridge, MA: MIT Press, 1994.

Latour, Bruno. "Where are the Missing Masses? The Sociology of a Few Mundane Artifacts." In Wiebe Bijker and John Law, eds. *Shaping Technology / Building Society: Studies in Sociotechnical Change*. Cambridge, MA: MIT Press, 1994.

Latour, Bruno. "Visualisation and Cognition: Thinking with Eyes and Hands." In Henrika Kuklick (editor). *Knowledge and Society Studies in the Sociology of Culture Past and Present* vol. 6. Jai Press, 1986 pp. 1-40.

Recommended:

Akrich, Madeleine and Bruno Latour. "A Summary of a Convenient Vocabulary for the Semiotics of Human and Nonhuman Assemblies." In Wiebe Bijker and John Law, eds. *Shaping Technology / Building Society: Studies in Sociotechnical Change*. Cambridge, MA: MIT Press, 1994. (NB: This is at the end of the Latour "Missing Masses" piece in the same PDF.)

Further reading on ANT:

Latour, Bruno. *Science in Action*. Cambridge, MA: Harvard University Press, 1987.

Latour, Bruno. *Reassembling the Social*. Oxford: Oxford University Press, 2005.

Lezaun, Javier. "Actor Network Theory." Claudio Benzecry, Monika Krause and Isaac Reed (eds.), Social Theory Now. Chicago University Press, forthcoming.

Further reading on visualization in science:

Rudwick, Martin. "The Emergence of a Visual Language for Geological Science, 1760-1840." *History of Science* 14.3 (1976): 149-195.

IRB DEADLINE??

Week 7: February 21: Expertise and Translation

Marvin, Carolyn. "Chapter 1: Inventing the Expert." In *When Old Technologies Were New: Thinking About Electric Communication in the Late Nineteenth Century*. New York: Oxford University Press, 1988.

Douglas, Susan. "Chapter Six: Popular Culture and Populist Technology: The Amateur Operators, 1906-1912." In *Inventing American Broadcasting, 1899-1922.* Baltimore: Johns Hopkins University Press, 1987.

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

Wynne, Brian. "Misunderstood Misunderstandings: Social Identities and the Public Uptake of Science." In *Misunderstanding Science? The Public Reconstruction of Science and Technology*. Eds. Alan Irwin and Brian Wynne. Cambridge: Cambridge University Press, 1996.

Further reading:

Dunbar-Hester, Christina. "What's Local? Localism as a Discursive Boundary Object in Low-Power Radio Policymaking." *Communication, Culture & Critique* 6 (2013): 502-524.

Epstein, Steven. "The Construction of Lay Expertise: AIDS activism and the forging of credibility in the reform of clinical trials." *Science, Technology & Human Values* 20 (1995): 408-437.

Week 8: February 28: Feminist STS

Haraway, Donna. "The Cyborg Manifesto." In *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991.

Haraway, Donna. "Situated Knowledges." In *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991.

Star, Susan Leigh. "Power, technology, and the phenomenology of conventions: On being allergic to onions." In *A Sociology of Monsters: Essays on power, technology and domination.* John Law, ed. New York: Routledge, 1991.

Suchman, Lucy. "Located Accountabilities in Technology Production." Published by the Centre for Science Studies, Lancaster University. Online at: http://www.lancs.ac.uk/fass/sociology/papers/suchman-located-accountabilities.pdf

Wajcman, Judy. "TechnoCapitalism Meets TechnoFeminism." *Labour & Industry* 16 (2006): 7-20.

Haraway, Donna. "When Species Meet: Introductions." *When Species Meet*. Minneapolis: University of Minnesota Press, 2008.

Recommended:

Oudshoorn, Nelly, Els Rommes & Marcelle Stienstra. "Configuring the User as Everybody: Gender and Design Cultures in Information and Communication Technologies." *Science, Technology & Human Values* 29 (2004): 30-63.

Week 9: March 7: Standards, Infrastructure, Platforms

DeNardis, Laura. (2012). Hidden levers of internet control: An infrastructure-based theory of internet governance. *Information, Communication & Society,* 15(5), 720-738.

Gillespie, Tarleton. (2017). Governance of and by platforms. In Jean Burgess, Thomas Poell, & Alice Marwick (Eds.), *SAGE Handbook of Social Media* (pp. 254-278). London, UK: SAGE.

Star. Susan Leigh. "The Ethnography of Infrastructure." *American Behavioral Scientist* 43 (1999): 377-391.

Bowker, Geoffrey and Susan Leigh Star. "Chapter 6: The Case of Race Classification and Reclassification Under Apartheid." *Sorting Things Out.* Cambridge, MA: MIT Press, 1999.

Nguyen, Lilly. "Infrastructural Action in Vietnam: Inverting the technopolitics of hacking in the global South." *New Media & Society* 18.4 (2016): 637–652.

Recommended:

Ananny, Mike. "Toward an Ethics of Algorithms: Convening, Observation, Probability, and Timeliness." *Science, Technology & Human Values* 2016 (41): 93-117.

Edwards, Paul. (2003). 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.

Ford, Heather, & Wajcman, Judy. (2017). 'Anyone can edit', not everyone does: Wikipedia's infrastructure and the gender gap. *Social Studies of Science*. doi:doi:10.1177/0306312717692172

Gillespie, Tarleton. "The Politics of Platforms." New Media & Society 12 (2010): 347-364.

Howe, Cymene, Lockrem, Jessica, Appel, Hannah, Hackett, Edward, Boyer, Dominic, Hall, Randal, . . . Mody, Cyrus. (2015). Paradoxical Infrastructures: Ruins, Retrofit, and Risk. Science, *Technology & Human Values*. doi:10.1177/0162243915620017

Larkin, Brian. (2013). The politics and poetics of infrastructure. *Annual Review of Anthropology, 42*, 327-343. doi:10.1146/annurev-anthro-092412-155522

Plantin, Jean-Christophe, Lagoze, Carl, Edwards, Paul N, & Sandvig, Christian. (2016). Infrastructure studies meet platform studies in the age of Google and Facebook. *New Media & Society*. doi:10.1177/1461444816661553

Sterne, Jonathan. "The MP3 as Cultural Artifact." *New Media & Society* 8 (2006): 825-842.

Week 10: March 14: NO CLASS, SPRING BREAK **Think about final projects.**

Week 11: March 21: Work

Downey, Greg. *Telegraph Messenger Boys*. New York: Routledge, 2002.

Orr, Julian. "Sharing Knowledge, Celebrating Identity: Community Memory in a Service Culture." In Collective Remembering. David Middleton and Derek Edwards, eds. London: Sage, 1990.

Star, Susan Leigh, & Strauss, Anselm. (1999). Layers of silence, arenas of voice: The ecology of visible and invisible work. *Computer Supported Cooperative Work, 8*(1-2), 9-30. doi:10.1023/a:1008651105359

Recommended:

Amrute, Sareeta. "Proprietary freedoms in an IT office: how Indian IT workers negotiate code and cultural branding." Social Anthropology 22.1 (2014): 101–117.

Amrute, Sareeta. (2016). *Encoding race, encoding class: Indian IT workers in Berlin*. Durham, NC: Duke University Press.

Shapin, Steve. (1989). The invisible technician. *American Scientist, 77*(6), 554-563.

Thompson, Edward P. (1967). Time, work-discipline, and industrial capitalism. *Past and Present, 38*, 56-97.

Turner, Fred. "Burning Man at Google: A Cultural Infrastructure for New Media Production." *New Media & Society* 11 (2009): 73-94.

Week 12: March 28: Utopianism, Universalism

Turner, Fred. (2006). *From counterculture to cyberculture: Stewart Brand, the Whole Earth Network, and the rise of digital utopianism*. Chicago, IL: University of Chicago Press.

Kelty, Christopher. "Chapter 10: The Fog of Freedom." In *Media Technologies*. Tarleton Gillespie, Pablo Boczkowski, Kirsten Foot (eds.). Cambridge, MA: MIT Press, 2014.

Recommended:

Dunbar-Hester, Christina. "Paradoxes of Participation." In *The Participatory Condition*. Darin Barney, Gabriella Coleman, Christine Ross, Jonathan Sterne, Tamar Tambeck, eds. Minneapolis: University of Minnesota Press, 2016.

Coleman, E. Gabriella. *Coding Freedom*. Princeton, NJ: Princeton University Press, 2012.

Kelty, Christopher. *Two Bits*. Durham, NC: Duke University Press, 2008.

FINAL PROJECT PROPOSAL DUE.

Week 13: April 4: Periphery-Metropole

Medina, Eden. (2011). *Cybernetic revolutionaries: Technology and politics in Allende's Chile.* Cambridge, MA: MIT Press.

Simone, AM. (2013). Cities of uncertainty: Jakarta, the urban majority, and inventive political technologies. *Theory, Culture & Society*. doi:10.1177/0263276413501872

Recommended:

Chan, Anita. *Networking Peripheries*. Cambridge, MA: MIT Press, 2014.

Takhteyev, Yuri. (2012). *Coding places: Software practice in a South American city*. Cambridge, MA: MIT Press.

Week 14: April 11: Producing Certainty

Daipha, Phaedra. *Masters of Uncertainty: Weather Forecasters and the Quest for Ground Truth*. Chicago: University of Chicago Press, 2015.

Finn, Megan. (2013). Information infrastructure and descriptions of the 1857 Fort Tejon earthquake. *Information & Culture, 48*(2), 194-221.

Recommended:

Callon, M., Lascoumes, P., & Barthe, Y. (2009). There's always someone more specialized *Acting in an uncertain world: An essay on technical democracy* (pp. 71-106). Cambridge, MA: MIT Press.

Elmer, Greg, & Opel, Andy. (2006). Surviving the inevitable future. *Cultural Studies, 20*(4-5), 477-492. doi:10.1080/09502380600708929

Week 15: April 18: Managing Risk

Andrew Lakoff. *Unprepared: Global Health in a Time of Emergency*. Berkeley, CA: University of California Press, 2017.

Rabinow, Paul. Chapter 3 ("Object"), *Anthropos Today*. Princeton, NJ: Princeton University Press, 2003.

Recommended:

Jasanoff, S. (2010). Beyond calculation: A democratic response to risk. In A. Lakoff (Ed.), *Disaster and the politics of intervention* (pp. 14-41). New York, NY: Columbia University Press.

Lakoff, A. (2007). Preparing for the next emergency. *Public Culture, 19*(2), 247-271.

Week 16: April 25: High-Tech Inequity

Eubanks, Virginia. *Automating Inequality: How High Tech Tools Profile, Police, and Punish the Poor*. St. Martin's Press, 2018.

At least one of:

Latour, Bruno. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry 30* (2004): 225-248.

Woodhouse, Edward, David Hess, Steve Breyman, and Brian Martin. "Science Studies and Activism: Possibilities and Problems for Reconstructivist Agendas." *Social Studies of Science* 32.2 (2002): 297–319.

Recommended:

Gates, Kelly. "Counting the Uncounted: What the Absence of Data on Police Killings Reveals." In Michael X. Delli Carpini (ed.) *Digital Media and the Future(s) of Democracy*. University of Pennsylvania Press (forthcoming).

FINAL PAPERS DUE MAY 10 (DISCUSS). Instructions will be given for how to hand them in.