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Class Time: Wednesday's from 2:00-4:00PM. HKS, L130
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SCIENCE, POWER AND POLITICS

IGA-513, History of Science 2985 (Fall 2024)

This is a one-semester advanced graduate seminar on the major contributions of the field of science and technology studies (STS) to understanding the relationships of science, technology, and political power in democratic societies. The seminar is devoted to reading, analyzing, and critically integrating works by scholars in STS and related fields who have addressed such topics as the nature of scientific authority and expertise, science's relations with the state, science and democracy, scientific and technical controversies, and the politics of technology.

In this seminar, we explore how the modern state's capacity to produce and use scientific knowledge and technologies influences, and is influenced by, the production and maintenance of political order. What does it mean to say that states today are "states of knowledge"? Beginning with classical models of science and politics, such as the "republic of science," the syllabus develops an alternate framework that sees these two spheres of action not as cognitively and culturally divided but as engaged in a constant process of exchange and mutual stabilization—or coproduction. To this end, the course combines theoretical approaches and empirical examples from STS, both historical and contemporary, with closely related concepts from social and political theory. Particular attention is paid to the cultural resources used in the simultaneous production of scientific and political authority. These include technologies of visual representation, quantitative analysis, standardization, material stabilization, persuasion, and dispute resolution, as well as associated ideas of objectivity, rationality, credibility, legitimacy, accountability, and reliability. Viewing power as immanent, the course takes special note of the techniques and discourses through which modern polities frame and manage their perceptions of the world while defining new issues for political action. In keeping with one of the basic preoccupations of the social sciences, the course also deepens our understanding of structure, agency, and their interplay.

Readings

Articles and book chapters are available in pdf format at the course Canvas Site.

Jasanoff works for those interested: S. Jasanoff, ed., *States of Knowledge: The Co-Production of Science and Social Order* (Routledge, 2004); *Reframing Rights: Bioconstitutionalism in the Genetic Age* (MIT Press, 2011); (with S-H Kim) *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power* (University of Chicago Press, 2015); and Jasanoff, *Can Science Make Sense of Life?* (Polity, 2019); *The Ethics of Invention* (Norton, 2016); *Science and Public Reason* (Routledge, 2013); *Designs on Nature: Science and Democracy in Europe and the US* (Princeton University Press, 2005).

Requirements

All students in IGA-513 are expected to write weekly reading responses, as instructed, and to lead class discussion approximately twice during the semester. Leading discussion involves preparing written notes and questions for class use and is done in collaboration with others responsible for a given session. Credit students are expected to complete a final written exercise on a topic to be negotiated with the instructor.

All such writing is expected to be the student's own individual work and not done in collaboration or using generative AI tools. The course is most appropriate for Ph.D. students in any field. All students may enroll and auditors may attend **only** with the instructor's permission.

SYLLABUS

September 4: Introduction and Overview

What does the field of Science and Technology Studies (STS) contribute to the study of power, politics, and policy? How do the organization and materials of the course reflect perspectives from STS, and how do these relate to work on power and social order in other social science fields? What major themes does the course develop, and what is expected from students? We introduce the idea of coproduction, which forms a backbone of the course. Also, in-class self-introductions, explanations of people's interest in the course—and questions about it.

Suggested:

The Chomsky-Foucault Debate [[excerpt, part 1/2](#)].

Chomsky [Disagrees](#).

Video on coproduction and public truths.

September 11: STS Analytic Frameworks – Contingency and Interpretive Flexibility

What does STS add to the analysis of power, authority and expertise? What is at stake in questioning “realist” views of scientific knowledge or technological systems? How have other disciplines tackled the theme of contingency (or context-dependence), and how can we relate those writings to STS? How can artifacts and ideas be socially constructed and yet be perceived as if they are not social all the way down? Put differently, how should we problematize stable formations of ideas and things, and how do our answers bear on the legitimacy of politics and power, especially in a time when truth and facts are being radically devalued in public life? [Crib sheet concepts: social construction, boundary work, interpretive flexibility]

W. B. Gallie, “Essentially Contested Concepts,” *Proceedings of the Aristotelian Society*, 56:167-198 (1956).

D. Bloor, *Knowledge and Social Imagery* (Chicago: University of Chicago Press, 1991 [1976]), Ch. 1 (“The Strong Programme in the Sociology of Knowledge”), pp. 3-23.

T. F. Gieryn, “The Boundaries of Science,” in S. Jasanoff et al., eds., *Handbook of Science and Technology Studies* (Thousand Oaks, CA: Sage Publications, 1995), pp. 393-443.

M. Callon, “Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay,” in J. Law, ed., *Power, Action, and Belief: A New Sociology of Knowledge?* (London: Routledge and Kegan Paul, 1986), pp. 196-233.

S. L. Star and J. 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(3): 387-420 (1989).

D. Haraway, *Simians, Cyborgs and Women* (London: Routledge, 1991), Ch. 9 (“Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective”), pp. 183-201.

G. Lewis-Kraus, [“How Harmful Is Social Media?”](#), New Yorker, June 3, 2022.

R. Luscombe, [“Google engineer put on leave after saying AI chatbot has become sentient,”](#) The Guardian, June 12, 2022.

Recommended:

I. Hacking, *The Social Construction of What?* (Cambridge, MA: Harvard University Press, 1999), Ch. 2 (“Too Many Metaphors”), pp. 35-62.

Suggested:

P. Kitcher, *Science, Truth, and Democracy* (Oxford: Oxford University Press, 2001), Ch. 4 (“The World as We Make It”), pp. 43-53.

A. MacIntyre, *After Virtue*, 3rd ed. (Notre Dame: University of Notre Dame Press, 2007), Ch. 7 (‘Fact’, Explanation and Expertise), pp. 79-87.

September 18: Autonomy and Self-Governance

Is science a distinct organizational form, a culture, an interest group, or a model political system? How do we know? Using what criteria? Can science be self-governing? What about technology? How does our characterization of science matter to our characterizations of ourselves as autonomous agents and political actors? [Crib sheet concepts: reflexivity, transparency and accountability]

- M. Polanyi, "The Republic of Science," *Minerva* 1:54-73 (1962).
M. J. Mulkay, "Norms and Ideology in Science," *Social Science Information* 15:637-656 (1976).
B. Latour, "Give Me a Laboratory and I Will Raise the World," in M. Biagioli, ed., *The Science Studies Reader* (New York: Routledge, 1999), pp. 258-275
S. Visvanathan, *A Carnival for Science Delhi*: Oxford University Press, 1997), Ch. 2 ("On the Annals of the Laboratory State"), pp. 15-47.
N. Rose, *The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century* (Princeton: Princeton University Press, 2007), Ch. 2 ("Politics and Life"), pp. 41-76.
H. Nowotny, P. Scott and M. Gibbons, *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty* (Cambridge: Polity, 2001), Ch. 3 ("The Co-Evolution of Society and Science"), pp. 30-49.
Facebook Oversight Board, "Former President Trump's suspension," February 1, 2021.
S. Bond, "Meta allows Donald Trump back on Facebook and Instagram," NPR, January 25, 2023.

Recommended:

- L. Fleck, *Genesis and Development of a Scientific Fact* (Chicago: University of Chicago Press, 1979), Ch. 2 ("Epistemological Conclusions from the Established History of a Concept"), pp. 20-51.
S. Jasanoff, "Genealogies of STS," *Social Studies of Science* 42(3) (2012). pp. 435-441.

Suggested:

- D.K. Price, *The Scientific Estate* (Cambridge, MA: Harvard University Press, 1965), Ch. 1 ("Escape to the Endless Frontier"), pp. 1-20.
E. F. Keller, *Reflections on Gender in Science* (New Haven: Yale University Press, 1985), pp. 75-94.
D.H. Guston, *Between Politics and Science* (New York: Cambridge University Press, 2000), Ch. 2 ("Understanding the Social Contract for Science"), pp. 37-63.

September 25: Constitutions of Modernity – The Co-Production of Science, Technology and Power

How does the constitution of knowledge relate to political constitution-making and the constitution of nation states? How do modern states constitute themselves as knowledgeable and capable of deploying knowledge for public purposes? How do knowledge and knowledge-based technologies function to advance or impede democratic action and the expression of democratic values in a global world? [Crib sheet concept: symmetry].

- Y. Ezrahi, *The Descent of Icarus* (Cambridge, MA: Harvard University Press, 1990), Ch. 2 ("Science and the Making of Representative Actions"), pp. 41-66.
B. Anderson, *Imagined Communities*, Chs. 1 ("Introduction") and 3 ("The Origins of National Consciousness"), pp. 1-8 and 37-46.
B. Latour, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993), Chs. 1-2, pp. 1-48.
A. MacIntyre, *After Virtue*, 3rd ed. (Notre Dame: University of Notre Dame Press, 2007), Ch. 7 ('Fact', Explanation and Expertise), 79-87.
S. Glasser, ["Covering Politics in a 'Post-Truth' America,"](#) *Brookings Institution*, December 2, 2016.
S. Jasanoff, ed., *States of Knowledge: The Co-Production of Science and Social Order* (London: Routledge, 2004), Ch. 2 ("Ordering Knowledge, Ordering Society"), pp. 13-45.
S. Frenkel, ["Meta's 'Biggest Single Takedown' Removes Chinese Influence Campaign,"](#) *New York Times*, August 29, 2023.
B. Dutt, ["The unsung heroes of India's moon landing offer a lesson on brain drain,"](#) *Washington Post*, August 31, 2023.

Recommended:

S. Jasanoff, "In a Constitutional Moment: Science and Social Order at the Millennium," in B. Joerges and H. Nowotny, eds., *Social Studies of Science and Technology: Looking Back, Ahead*, (Dordrecht: Kluwer, 2003), pp. 155-180.

Suggested:

H. Arendt, "Truth and Politics," *New Yorker*, February 25, 1967.
 D.K. Price, *The Scientific Estate*, Ch. 6 ("Constitutional Relativity"), pp. 163-207.
 D. S. Greenberg, *Science, Money, and Politics: Political Triumph and Ethical Erosion* (Chicago: University of Chicago Press, 2001), Ch. 3 ("Vannevar Bush and the Myth of Creation"), pp. 41-58.
 J. Krige, *American Hegemony and the Postwar Reconstruction of Science in Europe* (Cambridge, MA: MIT Press, 2006), Ch. 1 ("Basic Science and the Coproduction of American Hegemony"), pp.1-14.
 Video, NSA Whistleblower Edward Snowden: "I don't want to live in a society that does these sorts of things," <http://www.youtube.com/watch?v=5yB3n9fu-rM> [what "public" does Snowden call on?]

October 2: Networks, Materiality and Power

How does materiality affect the exercise of power, and vice versa? What makes technological systems take the forms they take? How do machines and nonhumans interact with social and political actors? How should we think about the exercise of epistemic and technological power across political borders, especially when we consider the interpretive flexibility of knowledge and its material forms? [Crib sheet concepts: social construction, interpretive flexibility, black-boxing, transparency and accountability]

Y. Ezrahi, *Descent of Icarus*, Ch. 6 ("Machines and Images of Order"), pp. 149-166.
 S. Shapin, ["What Else Is New? How uses, not innovations, drive human technology."](#) *New Yorker*, May 7, 2007.
 B. Latour, "Third Source of Uncertainty: Objects too Have Agency," in *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford: Oxford University Press, 2005), 63-86.
 E. Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge, MA: MIT Press, 2011), Ch. 3 ("Designing a Network"), pp. 69-94.
 W. Bijker, T. Pinch and T. Hughes, eds., *The Social Construction of Technological Systems* (Cambridge, MA: MIT Press, 1987), Ch. 1 (Pinch and Bijker, "The Social Construction of Facts and Artifacts"), pp. 17-50.
 L. Winner, "Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology," *Science, Technology, and Human Values* 18:362-378 (1993).
 S. Jasanoff, "Contingent Knowledge: Implications for Implementations and Compliance," in H. Jacobson and E. Brown Weiss, eds., *Engaging Countries: Strengthening Compliance with International Environmental Accords* (Cambridge, MA: MIT Press, 1998), pp. 63-87.
 E. Press, "The Wounds of the Drone Warrior," *New York Times*, June 13, 2018, <https://www.nytimes.com/2018/06/13/magazine/veterans-ptsd-drone-warrior-wounds.html>.
 A. Satariano, S. Reinhard, C. Metz, S. Frenkel, and M. Khurana, ["Elon Musk's Unmatched Power in the Stars,"](#) *New York Times*, July 28, 2023.

Recommended:

L. Winner, "Do Artifacts Have Politics," in *The Whale and the Reactor* (Chicago: University of Chicago Press, 1986), pp. 19-39.
 B. Joerges, "Do Politics Have Artefacts," *Social Studies of Science* 29 (1999), pp. 411-431.

Suggested:

A. Mol and J. Law, "Regions, Networks and Fluids: Anaemia and Social Topology," *Social Studies of Science* 24 (1994), pp. 641-671.

October 9: Constitutive Visions

How does seeing influence the making of a communal political space and the legitimation of the rules that bind politics together? How does the interpretive flexibility of seeing get disciplined to make points of view that we

consider “objective” or position-independent? How are particular “witness” positions established and authorized? In other words, whose sight matters in the public domain, and why?

M. Foucault, *Discipline and Punish* (New York: Vintage, 1979), Part III, Ch. 3 (“Panopticism”), pp. 195-228.
Shapin and Schaffer, *Leviathan*, Ch. 2 (“Seeing and Believing”), pp. 22-79.

B. Latour, “Drawing Things Together,” in M. Lynch and S. Woolgar, eds. *Representation in Scientific Practice* (Cambridge, MA: MIT Press, 1990), pp. 19-68.

D. Haraway, *Primate Visions* (New York: Routledge, 1989), Ch. 3 (“Teddy Bear Patriarchy”), pp. 26-58.

J. C. Scott, *Seeing Like a State* (New Haven: Yale University Press, 1998), Ch. 1 (“Nature and Space”) and Ch. 3 (“Authoritarian High Modernism”), pp. 1-52, 87-102.

J. Ferguson, “Seeing Like an Oil Company: Space, Security, and Global Capital in Neoliberal Africa,” *American Anthropologist* 107(3):377-382 (2005).

M. Mahony, “The Predictive State: Science, Territory and the Future of the Indian Climate,” *Social Studies of Science* 44(1):109-133 (2014).

V. Goel, [“India’s Top Court Limits Sweep of Biometric ID Program,”](#) *New York Times*, September 26, 2018.

K. Hill, [“The Secretive Company That Might End Privacy as We Know It,”](#) *New York Times*, November 2, 2021 (updated).

K. Hill, [“The Technology Facebook and Google Didn’t Dare Release,”](#) *New York Times*, September 9, 2023.

Suggested:

M. Foucault, *The Order of Things* (New York: Vintage, 1973), pp. 3-16.

S. Alpers, “Interpretation without Representation, or, The Viewing of *Las Meninas*,” *Representations* 1 (1983), pp. 30-42 [available through JSTOR].

S. Jasanoff, “Image and Imagination: The Formation of Global Environmental Consciousness,” in C. Miller and P. Edwards, eds., *Changing the Atmosphere: Expert Knowledge and Environmental Governance* (Cambridge, MA: MIT Press, 2001), pp. 309-337.

October 16: The Politics of Numbers – Statistics and Indicators

Quantification and calculation are considered by many to be the most powerful technologies for producing objectivity, and we rely on (ac)counting in particular to establish the legitimacy of many kinds of social and political decisions. But how apolitical are numbers? How do they mediate politics and society, and how do they relate to more qualitative modes of accounting? Do numbers reveal, conceal, or produce social problems?

A. Desrosières, “How to Make Things Which Hold Together: Social Science, Statistics and the State,” in P. Wagner, B. Wittrock, and R. Whitley, eds., *Discourses on Society: The Shaping of the Social Science Disciplines* (Dordrecht: Kluwer, 1991), pp. 195-218.

T. Porter, *Trust in Numbers* (Princeton, NJ: Princeton University Press, 1995), Ch. 7 (“U.S. Army Engineers and the Rise of Cost-Benefit Analysis”), pp. 148-189.

J. Carson, “The Science of Merit and the Merit of Science: Mental Order and Social Order in Early 20th Century France and America,” in Jasanoff, *States of Knowledge*, pp. 181-205.

M. Power, *The Audit Society* (Oxford: Oxford University Press, 1997), Ch. 5 (“Audit Knowledge and the Construction of Auditees”), pp. 91-121.

M. Strathern, “The Tyranny of Transparency,” *British Educational Research Journal* 26(3) (2000), pp. 309-321.

A. S. Mathews, “Scandals, Audits and Fictions: Linking Climate Change to Mexican Forests,” *Social Studies of Science* 44(1):82-108 (2014).

J. Karabel, *The Chosen: The Hidden History of Admission and Exclusion at Harvard, Yale, and Princeton* (New York: Houghton Mifflin, 2005), extract from Ch. 4 (“The ‘Jewish Problem’ at Yale and Princeton”), pp. 119-136.

A. Hartocollis, A. Harmon, and M. Smith, [“‘Lopping,’ ‘Tips’ and the ‘Z-List’: Bias Lawsuit Explores Harvard’s Admissions Secrets,”](#) *New York Times*, July 29, 2018.

A. Hartocollis, [“U.S. News Ranked Columbia No. 2, but a Math Professor Has His Doubts,”](#) *New York Times*, March 17, 2022.

Strongly recommended:

Documentary: E. Morris, *The Fog of War*.

Suggested:

- M. Strathern, "Introduction: New Accountabilities; "Afterword: Accountability and Ethnography," in Strathern, ed., *Audit cultures. Anthropological studies in accountability, ethics and the academy* [EASA series in Social Anthropology], (London: Routledge, 2000).
- W. Espeland and M. Sauder, "Rankings and Reactivity: How Public Measures Recreate Social Worlds," *American Journal of Sociology* 113 (1) (2007), pp. 1-40.

October 23: Science, State, and Markets

How do theories of capital reflect our notions of structure and agency? Is it useful to think of knowledge as a form of capital? Why? Markets depend on calculation, but are there forms of capital that elude calculation? How do people acquire the power or the right to calculate for others?

- P. Bourdieu, "The Forms of Capital," in J. G. Richardson, ed., *Handbook of Theory and Research for the Sociology of Education* (New York: Greenwood Press, 1986), pp. 241-258.
- R. D. Putnam, "[Bowling Alone: America's Declining Social Capital](#)," *Journal of Democracy* 6(1) (1995), pp. 65-78.
- T. Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), Ch. 3 ("The Character of Calculability"), pp. 80-119.
- M. Callon and F. Muniesa, "Economic Markets as Calculative Collective Devices," *Organization Studies* 26(8):1229-1250 (2005).
- J. Wajcman, *Pressed for Time: The Acceleration of Life in Digital Capitalism* (Chicago: University of Chicago Press, 2015), Ch. 4 ("Working with Constant Connectivity"), pp. 87-109.
- K. Sunder Rajan, "Two Tales of Genomics: Capital, Epistemology, and Global Constitutions of the Biomedical Subject," Ch.9 in S. Jasanoff, ed., *Reframing Rights*, pp. 193-216.
- S. Jasanoff, "Subjects of Reason: Goods, Markets and Competing Imaginaries of Global Governance," *London Review of International Law* 4(3):361-391 (2016).
- W. D. Nordhaus, "The Pope & the Market," *New York Review of Books*, October 8, 2015, <https://www.nybooks.com/articles/2015/10/08/pope-and-market/>.

Suggested:

- M. Fourcade, "Theories of Markets and Theories of Society," *American Behavioral Scientist* 50: 1015-1034 (2007).
- D. MacKenzie, "Making Things the Same: Gases, Emission Rights and the Politics of Carbon Markets," *Accounting, Organizations and Society* 34(30-4):440-455 (2009).
- R.A. Posner, "[Will Economists Escape a Whipping?](#)" *The Atlantic*, August 16, 2009.

October 30: Objectivity – The Display of Public Reason

Reason in public life does not consist merely of justifying official decisions with reference to pre-existing principles in designated political fora. Rather, reason results from active performances, enactments, and embodiments of agreed-upon forms of rationality in varied cultural domains, not all of which are recognizably "political." What are some of the most prominent strategies for displaying public reason in contemporary political systems? How do they integrate knowledge with power?

- Y. Ezrahi, *Descent of Icarus*, Ch. 3 ("Science and the Visual Culture of Liberal-Democratic Politics"), pp. 67-96.
- B. Anderson, *Imagined Communities*, Ch. 10 ("Census, Map, Museum"), pp. 163-185.
- S. Shapin and S. Schaffer, *Leviathan and the Air-Pump* (Princeton: Princeton University Press, 1985), Ch. 8 ("The Polity of Science: Conclusions"), pp. 332-344.
- L. Daston and P. Galison, "The Image of Objectivity," *Representations* 40 (1992), pp. 81-128.

- M. Wadman, [“New paper ignites storm over whether teens experience ‘rapid onset’ of transgender identity,”](#) *Science*, August 30, 2018.
- S. Hilgartner, *Science on Stage: Expert Advice as Public Drama* (Stanford, CA: Stanford University Press, 2000), Introduction, pp. 3-41.
- S. Jasanoff, “The Practices of Objectivity in Regulatory Science,” in C. Camic, N. Gross, and M. Lamont, eds., *Social Knowledge in the Making* (Chicago: University of Chicago Press, 2011), pp. 307-337.
- E. Yong, “Psychology’s Replication Crisis Is Running Out of Excuses,” *The Atlantic*, November 19, 2018, <https://www.theatlantic.com/science/archive/2018/11/psychologys-replication-crisis-real/576223/>.

Suggested:

- P. Galison, “Aufbau/Bauhaus: Logical Positivism and Architectural Modernism,” *Critical Inquiry* 16(4) (1990), pp. 709-752.
- I. Buruma, *Wages of Guilt* (London: Vintage, 1995), Part III (“Memorials, Museums and Monuments”).
- T. F. Gieryn, “Balancing Acts: Science, *Enola Gay* and History Wars at the Smithsonian,” in S. Macdonald, *The Politics of Display* (London: Routledge, 1998), pp. 197-227.

November 6: The Politics of Classification and Normalization

Many social arrangements and political decisions hinge on determinations of what counts as normal: in identity, behavior, social relationships. How are these normalizing moves made in society, where do standards of normality come from, and how do they reflect the institutionalization and exercise of power? How do ideas of normality relate to classificatory judgments of sameness and difference?

- M. Foucault, *Discipline and Punish*, Part III, Ch. 2 (“The means of correct training”), pp. 170-194.
- I. Hacking, *Rewriting the Soul* (Princeton, NJ: Princeton University Press, 1995), Ch. 4 (“Child Abuse”), pp. 55-68.
- G. C. Bowker and S. L. Star, *Sorting Things Out: Classification and Its Consequences* (Cambridge, MA: MIT Press, 2000), Ch. 6 (“The Case of Race Classification and Reclassification Under Apartheid”), pp. 195-225.
- S. Epstein, *Inclusion: The Politics of Difference in Medical Research* (Chicago: University of Chicago Press, 2007), Ch. 11 (“Sex Differences and the New Politics of Women’s Health”), pp. 233-257.
- J. E. Reardon, “Human Population Genomics and the Dilemma of Difference,” Ch. 10 in Jasanoff ed., *Reframing Rights*, pp. 217-238.
- J. Kahn, *Race in a Bottle: The Story of BiDiL and Racialized Medicine in a Post-Genomic Age* (New York: Columbia University Press 2013), Ch. 1 (“Organizing Race”), pp. 24-47.
- D. Reich, [“How to Talk About ‘Race’ and Genetics,”](#) *New York Times*, March 30, 2018.
- Buzzfeed Opinion, “How Not To Talk About Race And Genetics,” March 30, 2018, <https://www.buzzfeednews.com/article/bfopinion/race-genetics-david-reich>.

Recommended:

- W. Anderson, “The Possession of Kuru: Medical Science and Biocolonial Exchange,” *Comparative Studies in Society and History* 42(4):713-744 (2000).

Suggested:

- Z. Bauman, *Modernity and Ambivalence* (Ithaca, NY: Cornell University Press, 1991), pp. 18-52.
- M. Minow, *Making All the Difference* (Ithaca, NY: Cornell University Press, 1990), Ch. 2 (“Sources of Difference”), pp. 49-78.
- J. Nordell, [“Is This How Discrimination Ends?”](#) *The Atlantic*, May 7, 2017.

November 13: Discourses of Reason

Politics in complex societies is the art of living with irresolvable conflicts and irreducible uncertainties – cognitive, moral, social. How do politics make judgments that most citizens are willing to accept as binding, if not legitimate? What is the role of institutions? How do technical discourses (not just science but also law, ethics, or economics) influence subjects and subjectivities? How do such discourses reduce uncertainty in the political realm? Why do they sometimes fail?

- S. Shapin, "Cordelia's Love: Credibility and the Social Studies of Science," *Perspectives on Science* 3 (1995), pp. 255-275.
- C. Cohn, "Nuclear Language and How We Learned to Pat the Bomb," *Bulletin of the Atomic Scientists* 43(5):17-24 (June 1987).
http://www.genderandsecurity.org/Cohn_Nuclear_Language.pdf
- J. Cohen-Cole, *The Open Mind: Cold War Politics and the Sciences of Human Nature* (Chicago: University of Chicago Press, 2014), Ch. 7 ("Cognitive Theory and the Making of Liberal Americans"), pp. 190-217.
- A. Petryna, "[Experimentality: On the Global Mobility and Regulation of Human Subjects Research](#)," *Political and Legal Anthropology Review* 30(20):288-304 (2007).
- S. Jasanoff, "Making the Facts of Life," in Jasanoff, ed., *Reframing Rights*, pp. 59-83.
- J. B. Hurlbut, *Experiments in Democracy: Human Embryo Research and the Politics of Bioethics* (New York: Columbia University Press, 2017), Ch. 5 ("Confusing Deliberation"), pp. 179-208.
- E. S. Lander et al., "[Adopt a moratorium on heritable genome editing](#)," *Nature* 567(2019), pp. 165-168.

Suggested:

- S. Jasanoff, ed., *Reframing Rights: Bioconstitutionalism in the Genetic Age* (Cambridge, MA: MIT Press, 2011), Ch. 1 ("Rewriting Life, Reframing Rights"), pp. 1-27.
- J. Evans, "Between Technocracy and Democratic Legitimation: A Proposed Compromise Position for Common Morality Public Bioethics," *Journal of Medicine and Philosophy* 31(3):213-234 (2006).
- L. Stark, *Behind Closed Doors: IRBs and the Making of Ethical Research* (Chicago: University of Chicago Press, 2012), Ch. 1 ("Everyone's an Expert?"), pp. 21-39.

November 20: Publics and Citizens in the Knowledge State

Who is the "demos" or the "public" that democracy seeks to serve? How has the advent of science and technology affected the ways in which we conceptualize and represent publics and citizens? How do publics emerge, and who gets to orchestrate their emergence? What opportunities exist for active intervention by citizens in the knowledge-making practices of modern states? How does political culture matter in the production of knowledgeable citizens?

- J. Dewey, *The Public and Its Problems* (New York: Henry Holt, 1927), Ch. 1 ("Search for the Public"), pp. 3-36.
- B. Wynne, "Misunderstood Misunderstandings: Social Identities and Public Uptake of Science," in A. Irwin and B. Wynne, eds., *Misunderstanding Science? The Public Reconstruction of Science and Technology* (Cambridge: Cambridge University Press, 1996), pp. 19-46.
- R. H. Thaler and C. S. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven: Yale University Press, 2008), Introduction, pp. 1-14.
- U. Beck and P. Wehling, "The Politics of Non-Knowing," Ch. 3 in F. D. Rubio and P. Baert, eds. *The Politics of Knowledge* (Abingdon, Oxon: Routledge, 2013), pp. 33-57.
- M. J. Smithson, "Social Theories of Ignorance," in R.N. Proctor and L. Schiebinger, eds., *Agnotology: The Making and Unmaking of Ignorance* (Stanford, CA: Stanford University Press, 2008), pp. 209-229.
- S. Jasanoff, *Designs on Nature: Science and Democracy in Europe and the United States* (Princeton, NJ: Princeton University Press, 2005), Ch. 10 ("Civic Epistemology"), pp. 247-271.

Suggested:

- M. Hardt and A. Negri, *Empire* (Cambridge, MA: Harvard University Press, 2000), Ch. 2 ("Biopolitical Production"), pp. 22-41.
- M. Kusch, "Towards a Political Philosophy of Risk," in T. Lewens, ed., *Risk: Philosophical Perspectives* (London: Routledge, 2007), pp. 131-155.

November 27: NO CLASS. Thanksgiving Break

December 4: Contested Futures

Politics is usually conceived of as a struggle for present advantage in present time. Science and technology, however, open up the future as a space of struggle through their capacity for innovation. How do the dynamics and instruments of politics change when futures are appropriated as political space? In particular, what is the role of collective imaginations?

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- B. Latour, *Politics of Nature: How to Bring the Sciences Into Democracy* (Cambridge, MA: Harvard University Press, 2004), Ch. 2 ("How to Bring the Collective Together").
- C. Bonneuil and J-B. Fressoz, "Capitalocene," in *The Shock of the Anthropocene: The Earth, History and Us* (London: Verso, 2016), Ch. 10 ("Capitalocene"), pp. 222-252.
- E. C. Ellis, "[Science Alone Won't Save the Earth. People Have to Do That.](#)" *New York Times*, August 11, 2018.
- Y. Ezrahi, "Science and the Political Imagination in Contemporary Democracies," in Jasanoff, ed., *States of Knowledge*, pp. 254-273.
- S. Visvanathan, "Knowledge, Justice and Democracy," in M. Leach, I. Scoones and B. Wynne, eds., *Science and Citizens* (London: Zed Books, 2005), pp. 83-94.
- M. Callon, P. Lascoumes, and Y. Barthe, *Acting in an Uncertain World: An Essay on Technical Democracy* (Cambridge, MA: MIT Press, 2009), Ch. 4 ("In Search of a Common World"), pp. 106-152.
- S. Jasanoff and H. Simmet, "No Funeral Bells: Public Reason in a 'Post-Truth' Age," *Social Studies of Science* 47(5):751-770 (2017).

Suggested:

- C.D. Stone, *Should Trees Have Standing?* (Oceana Publications, 1996).
- S. Jasanoff, "A New Climate for Society," *Theory, Culture & Society* 27(2-3):233-253 (March/May 2010).