Data and the Politics of Evidence
CCTP 729
Spring 2021 / Wednesdays, 2-4:30PM
Office Hours: Immediately after class, or upon request (by email)
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DATA AND THE POLITICS OF EVIDENCE

Course Description:

For multiple decades now, data has been increasingly portrayed as the new oil, a substance that is necessary to mine in order to advance society. Businesses espouse the need for data to build better systems. Consultants offer services to turn data-driven insights into action. Politicians push for evidence-based policymaking. Governments drive efforts to increase open data. Amidst the various tactical efforts to strengthen the capture and flow of data, there's an underlying belief that quantitative data is an essential ingredient to responsible decision-making. Yet as Geof Bowker has noted, "Raw data is both an oxymoron and a bad idea… data should be cooked with care."

The purpose of this course is to critically interrogate what data are, how they are formed, how they are situated, how they are used, and how they are politicized. This course will draw on literature from Science and Technology Studies, Sociology, and Critical Data Studies to grapple with the politics of evidence and the contestations that surround data infrastructures, with an emphasis on the ecosystem of federal statistics in the US context. Students will learn why data are never neutral and, thus, how data infrastructures embed values into their design. Students will also grapple with how data infrastructures – and the algorithmic and social systems that depend on data – are politicized, manipulated, and weaponized. Moving beyond the ideals of ethics, students will be asked to contend with how values, beliefs, and moral commitments are enacted through data practices and technical systems. Students can expect to come away from this class with a deeper appreciation for the challenges underpinning technocratic dreams of evidence-based policymaking and a data-driven future.

Students will be expected to read scholarship from a range of critical disciplines and actively participate in class discussions about the implications of these readings to contemporary data-oriented issues. The assignments in this class will emphasize original research as well as persuasive written and oral argumentation. The midterm assignment will be a collaborative analysis; the final paper will be an independent project. This course will be hybrid, requiring active participation both online and in the classroom.

This course is designed for graduate students and advanced undergraduates who are comfortable with significant reading, writing, and research requirements. Students from any discipline are welcome and encouraged to bring their unique knowledge and experiences to the conversations.

Because this course will deal with contestations over data, students are encouraged to grapple with how different perspectives shape the politics of data.

Course Objectives:
- This course will strengthen students' critical thinking skills, asking them to challenge assumptions that they might have about what constitutes facts, evidence, and truth.
- This course will offer students the ability to develop their research, writing, and argumentation skills.

Course Grading:

Attendance and Participation: 20%
Weekly Reflection Questions/Memos: 20%
Primary Interlocutor Presentation: 10%
Midterm Essay: 20%
Final Paper: 30%

Participation: The success of this class depends upon each student being prepared (carefully completing the reading) and actively participating in class. Attendance alone will not be sufficient for a passing grade in this category – you are each expected to participate fully in class discussions and activities. This requires reading the materials in advance.

Weekly Reflection Questions/Memos: To aid in regular participation, you are expected to respond to a prompt related to your reading each week. The prompt will be provided on a shared Google Doc each week; you are to respond on that Google Doc each week by midnight the night before class. The standard weekly prompt is:
- *What stood out for you in this week's reading that you want to discuss in class? Feel free to offer questions, make connections to other things you know, or describe something that didn't make sense.*

The maximum word count for the standard weekly prompt is 100 words. In some weeks, you will be asked to respond to a slightly different prompt or to produce a longer memo reflecting more deeply on an issue. You will have access to each other's prompts. It is your responsibility to ask a novel question or build on the questions proposed by students who responded earlier.

Primary Interlocutor Presentation: Each student will be asked on the first day to "own" the readings of a week. During that week's class discussion, the primary interlocutor will be asked to present the key issues and lessons from that week's readings, with an eye to the optional readings, and raise questions for the room to discuss. Most weeks will have two primary interlocutors; you are encouraged to work as a pair and split up the optional readings.

Midterm Paper: You will be given the details of the midterm paper on the first day of class. In short, you will be asked to analyze a type of public-sector data with the theoretical tools given to you in the class. Your midterm paper will be due March 4.

Final Paper: You will be given the details of the final paper on the first day of class. This paper will require reading and research throughout the semester. This paper should not be

procrastinated. The crux of this paper is that you will be asked to analyze the 2018 Evidence-Based Policymaking Act based on the lessons you learned in this class.

Practical Matters:

Readings. Every week, you will be given a small number of required readings. You will also be offered supplemental readings on this syllabus and a primer filled with other related readings. I strongly encourage you to read more than the required reading. This additional reading will be necessary to successfully complete the final paper. So I encourage you to read as you go with an eye towards those two assignments.

Presence. You are expected to be present during class. You are expected to engage and contribute. Half of this class will take place in person, in the Ethics Lab. Half will take place via Zoom. The activities will be structured accordingly. But so too will be your modes of interacting. With Zoom, raise your "hand" to participate, and feel free to add additional notes and comments and questions using the chat feature. In the classroom, embodied hand raising is possible. Crucial parts of each class will involve breakouts or small group activities where interactivity and participation are especially important. Technology is a tool – it can serve you well as you're participating in class, or it can give you an opportunity to let your mind wander. It is your responsibility to engage with technology in a way that keeps you present and engaged.

Attendance. Attendance is required and your participation grade depends on attendance, but things do come up. Everyone gets one "personal day" that is forgiven, no questions asked. Beyond that, we are happy to excuse absences due to illness or through advanced agreement; you should expect that such absences may require additional work to make up for your absence in class. It is your responsibility to communicate with us about any factors that get in the way of your participation.

Email. Please email us whenever there are logistical issues. Please note that we will not be able to respond to all communications. If you are seeking research guidance, work with your peers first. We will be available after class each week to talk if you have questions. Otherwise, please contact us to schedule a meeting.

Students with disabilities. We are happy to discuss academic accommodations for students with disabilities. Please contact us within the first three weeks of the semester so that there is enough time for appropriate arrangements to be made.

Integrity. All students are expected to adhere to the academic integrity policies and ethical guidelines at Georgetown. Plagiarism or other academic misconduct will not be tolerated. In every assignment, you are given the opportunity to collaborate with others, so long as you properly credit them. In your assignments, you will be drawing from various sources; credit is essential. If you have any questions about how to properly credit ideas that shaped your thinking, please reach out to us.

Week 1: Epistemology / January 19th
Location: Ethics Lab, 201b Healy Hall
- Introduce the class, the people, the assignments.
- Discuss the relationship between data and knowledge production.

Week 2: Evidence and Objectivity / January 26th
Location: Zoom
- Grapple with neutrality, objectivity, facts, and official statistics.
- Introduce a tool: strategic memoing.
Required Reading:
- Porter, Theodore. 1995. *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*. Read chapter 1-2, pages 3-48. (Additional chapters encouraged.)
- Starr, Paul. 1987. "The Sociology of Official Statistics." In *The Politics of Numbers (eds. William Alonso, Paul Starr),* pp. 7-57.
Optional Reading:
- Porter, Theodore. 2012. "Funny Numbers." *Culture Unbound* 4(4). https://cultureunbound.ep.liu.se/article/view/2022
- Daston, Lorraine and Peter Galison. 2007. *Objectivity.*
- Bouk, Dan. 2015. *How Our Days Became Numbered: Risk and the Rise of the Statistical Individual*.
- Stone, Deborah. 2020. *Counting: How We Use Numbers to Decide What Matters.*

Week 3: Seeing the World Through Categories / February 2nd
Location: Zoom
- Appreciate how categories are socially constructed.
Required Reading:
- Bowker, Geoffrey and Susan Leigh Star. 1999. *Sorting Things Out: Classification and Its Consequences.* Read chapter 6, pp. 195-225.
- Mora, Cristina. 2014. *Making Hispanics: How Activists, Bureaucrats & Media Constructed a New American*. Read intro (pp. 1-16) and chapter 3 (pp. 83-118).
Optional Reading:
- Nobles, Melissa. 2000. *Shades of Citizenship: Race and the Census in Modern Politics*.
- Hacking, Ian. 2006. "Making Up People." *London Review of Books* 28(16). https://www.lrb.co.uk/the-paper/v28/n16/ian-hacking/making-up-people
- TallBear, Kim. 2013. *Native American DNA: Tribal Belonging and the False Promise of Genetic Science.*
- Deloria Jr., Vine. 1969. *Custer Died for Your Sins*. (Chapter 8.)

Week 4: Data Infrastructures / February 9th
Location: Ethics Lab, 201b Healy Hall
- Explore how data becomes infrastructure and the formations of standards.
Required Reading:
- Lampland, Martha and Susan Leigh Star. 2009. "Reckoning with Standards." In *Standards and their Stories (eds. Lampland and Star),* pp. 3-34.

- Edwards, Paul. 2010. *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming*. Read chapters 1 (pp. 1-26), 8 (pp. 187-228), 10 (pp. 251-287). (Note: I strongly encourage you to read the full story.)

Optional Reading:
- Singh, Ranjit and Steven Jackson. 2021. "Seeing Like an Infrastructure: Low-resolution Citizens and the Aadhaar Identification Project." *PACM on Human-Computer Interaction* 5(CSCW2). https://secureservercdn.net/166.62.108.22/163.112.myftpupload.com/wp-content/uploads/2021/09/SLAI_RSSJ.pdf
- Gabrielle Hecht. 1998. *The Radiance of France: Nuclear Power and National Identity after World War II.*
- Starosielksi, Nicole. 2015. *The Undersea Network*.

Week 5: The Social Construction of Technology / February 16th
Location: Zoom
- Introduce key STS concepts.

Required Reading:
- Bijker, Wiebe. 1997. *Of Bicycles, Bakelites, and Bulbs: Towards a Theory of Sociotechnical Change*. Read chapters 1 and 2 (pp. 1-100).
- Law, John. 1987. "Technology and heterogeneous engineering: The case of Portuguese expansion." In *The Social Construction of Technological Systems* (Bijker, Hughes, and Pinch, eds.)

Optional:
- Leonardi, Paul and Michele Jackson. 2008. "Technological Grounding: Enrolling Technology as a Discursive Resource to Justify Cultural Change in Organizations." *Science, Technology, and Human Values* 34(3): 393-418.
- Wiebe E. Bijker, Thomas Parke Hughes, and T. J. Pinch (eds). 1987. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*.

Week 6: Destabilizing Knowledge / February 23rd
Location: Zoom
- Examine different forms of ignorance.

Required Reading:
- Proctor, Robert. 2008. "Agnotology: A Missing Term to Describe the Cultural Production of Ignorance (and Its Study)." In *Agnotology (eds. Proctor and Schiebinger)*, pp. 1-36.
- Michaels, David. 2008. "Manufactured Uncertainty: Contested Science and the Protection of the Public's Health and Environment." In *Agnotology (eds. Proctor and Schiebinger)*, pp. 90-107

Optional Reading:
- Proctor, Robert and Londa Schiebinger (eds.). 2008. *Agnotology: The Making and Unmaking of Ignorance.*
- Oreskes, Naomi and Erik M. Conway. 2008. "Challenging Knowledge: How Climate Science Became a Victim of the Cold War." In *Agnotology (eds. Proctor and Schiebinger)*, 55-89.
- Edwards, Paul. 2010. *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming*. Chapters 14-15.

Week 7: Reputation and Legitimacy / March 2nd

Location: Ethics Lab, 201b Healy Hall
- Consider how reputation is made as a social process.

Required Reading:
- Carpenter, Daniel. 2010. *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA.* Read introduction (pp. 1-32) and chapter 1 (pp. 33-70).

Optional Reading:
- Murphy, Michelle. 2006. *Sick Building Syndrome and the Problem of Uncertainty: Environmental Politics, Technoscience, and Women Workers.*
- Lewis, Michael. 2018. *The Fifth Risk.*

Week 8: Centralized Data and Its Discontents / March 16th

Location: Zoom
- Understand tensions around privacy and federal statistics.

Required Reading:
- Igo, Sarah. 2018. *The Known Citizen: A History of Privacy in Modern America.* Read chapter 2 (pp. 55-98).
- Kraus, Rebecca. 2013. "Statistical Déjà Vu: The National Data Center Proposal of 1965 and Its Descendants." *Journal of Privacy and Confidentiality* 5(1). https://doi.org/10.29012/jpc.v5i1.624

Optional Reading:
- Bouk, Dan. 2018. "The National Data Center and the Rise of the Data Double." *Historical Studies in the Natural Sciences* 48(5): 627–636.
- Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness.*
- Solove, Daniel. 2010. *Understanding Privacy.*

Week 9: Transparency Solutionism / March 23rd

Location: Ethics Lab, 201b Healy Hall
- Grapple with how transparency is imagined to be the "solution" to governmental problems.

Required Reading:
- Levy, Karen and David Merritt Johns. 2016. "When open data is a Trojan Horse: The weaponization of transparency in science and governance." *Big Data & Society* 3(1). https://doi.org/10.1177/2053951715621568
- Pozen, David. 2018. "Transparency's Ideological Drift." *Yale Law Journal.* https://www.yalelawjournal.org/pdf/Pozen_5xbpkxy6.pdf

Optional Reading:
- Birchall, Clare. 2021. *Radical Secrecy: The Ends of Transparency in Datafied America.*
- Schudson, Michael. 2018. *The Rise of the Right to Know: Politics and the Culture of Transparency, 1945-1975.*

Week 10: Failure and Friction / March 30th

Location: Zoom
- Consider what failure means in a public-sector context.

Required Reading:
- Perrow, Charles. 1999. *Normal Accidents: Living with High-Risk Technologies*. Read chapter 3 (pp. 62-100.) I highly recommend reading chapters 1 and 2 to appreciate the history of Three Mile Island.
- Herd, Pamela and Don Moynihan. 2018. *Administrative Burden: Policymaking by Other Means.* Read Chapter 1 (pp. 15-42) and one additional chapter of your choosing (they are case studies).

Optional Reading:
- Vaughn, Diane. 1996. *The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA.*
- Mettler, Suzanne. 2011. *The Submerged State: How Invisible Government Policies Undermine American Democracy.*
- Rosenthal, Caitlin. 2018. *Accounting for Slavery: Masters and Management.*

Week 11: The Politics of Algorithms / April 6th
Location: Zoom
- Examine how data politics fed into algorithmic politics.

Required Reading:
- Eubanks, Virginia. 2018. *Automating Inequality*. Read chapter 2 (pp. 39-83)
- McIlwain, Charlton. 2020. *Black Software*. Read chapters 15 and 16 (pp. 218-245)

Optional Reading:
- Benjamin, Ruha. 2019. *Race After Technology.*
- Caplan, Robyn and danah boyd. 2018. "Isomorphism through algorithms: Institutional dependencies in the case of Facebook." *Big Data & Society* 5(1). https://doi.org/10.1177/2053951718757253
- Flood, Joe. 2010. *The Fires: How a Computer Formula, Big Ideas, and the Best of Intentions Burned Down NYC and Determined the Future of Cities.*

Week 12: Algorithmic Manipulation and Trust / April 13th
Location: Ethics Lab, 201b Healy Hall
- Explore algorithmic manipulation through search and social media.

Required Reading:
- Tripodi, Francesca. 2018. "Searching for Alternative Facts: Analyzing Scriptural Inference in Conservative News Practices." https://datasociety.net/library/searching-for-alternative-facts/
- Golebiewski, Michael and danah boyd. 2019. "Data Voids: Where Missing Data Can Easily Be Exploited." https://datasociety.net/library/data-voids/

Optional Reading:
- Marwick, Alice and Rebecca Lewis. 2017. "Media Manipulation and Disinformation Online." https://datasociety.net/library/media-manipulation-and-disinfo-online/
- Donovan, Joan and danah boyd. 2019. "Stop the Presses? Moving From Strategic Silence to Strategic Amplification in a Networked Media Ecosystem." *American Behavioral Scientist* 65(2): 333-350. https://doi.org/10.1177/0002764219878229

Week 13: Sociotechnical Accountability / April 20th
Location: Zoom

- Dive into how algorithms can or should be held accountable.

Required Reading:
- Elish, M.C. 2016. "Moral Crumple Zones: Cautionary Tales in Human-Robot Interaction." *Engaging Science, Technology, and Society*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2757236
- Brayne, Sarah and Angèle Christin. 2020. "Technologies of Crime Prediction: The Reception of Algorithms in Policing and Criminal Courts." *Social Problems*.

Optional Reading:
- Selbst, Andrew, danah boyd, Sorelle Friedler, Suresh Venkatasubramanian, and Janet Vertesi. 2019. "Fairness and Abstraction in Sociotechnical Systems." *ACM FAccT*, 59-68. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3265913
- Gebru, Timnit, Jamie Morgenstern, Briana Vecchione, Jennifer Wortman Vaughan, Hanna Wallach, Hal Daumé III, and Kate Crawford. 2018. "Datasheets for Datasets." https://arxiv.org/abs/1803.09010

Week 14: Sociotechnical and Statistical Imaginaries / April 27th
Location: Zoom or Ethics Lab, 201b Healy Hall (TBD)
- What do we imagine technology and data to be?

Required Reading:
- Jasanoff, Sheila and Sang-Hyun Kim. 2009. "Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and Korea." *Minerva* 47(2): 119-146.
- boyd, danah and Jayshree Sarathy. "Differential Perspectives: Epistemic Disconnects Surrounding the US Census Bureau's Use of Differential Privacy." *Harvard Data Science Review*.

Optional Reading:
- Messeri, Lisa and Janet Vertesi. 2015. "The Greatest Missions Never Flown: Anticipatory Discourse and the 'Projectory' in Technological Communities." *Technology and Culture* 56(1): 54-85.