Scientific and Technological Controversies
BASC 201/Fall 2019
Truth, Lies, Surveillance, and Bias in Science, Technology, & Journalism

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Monday & Wednesday—11:35 PM – 1:05 PM, DUFF TH/TR 1

Student Office Hours: You can come visit me and ask questions about the class, work, career advice, and so on.
Sign up here: https://pad.riseup.net/p/ColemanFallOfficeHours
West Arts 285
Wednesday 1:30 PM - 3:00 PM and by appointment.

Class Overview:

This class uses the angle of controversy to introduce students to various academic and popular approaches to the social scientific and humanistic study of science and technology. The class draws on classic academic works in diverse fields such as the history and philosophy of science, anthropology, and bioethics, while also integrating a broad range of engaging and accessible materials (editorials, op-eds and journalistic pieces) that educate and evoke critique and transformation of the complex contemporary practices, methods, and politics of science and technology.

This year the class will be organized around the interrelated themes of truth, lies, visibility/invisibility, and bias in the fields of Science, Technology, and Journalism. Among many themes, the course will examine: the nature of truth, uncertainty, and paradigm shifts in science, the role of values and bias in the design of technological production and scientific discovery, fights for openness and transparency in science and technology, and the politics of algorithms, surveillance, and leaking.

The class is organized around two weekly lectures, course readings, and movies and podcasts that students must listen to or watch before class.

WEEK 1: SEPTEMBER 4

September 4: Introduction/s

Loretta Jackson Heyes, “We don’t need more STEM majors. We need more STEM majors with liberal arts training.” Washington Post, February 18, 2015.
https://www.washingtonpost.com/posteverything/wp/2015/02/18/we-dont-need-more-stem-majors-we-need-more-stem-majors-with-liberal-arts-training/


Please Hum Now: https://hackcur.io/please-hum-now/

**WEEK 2: SEPTEMBER 9 & 11**

**September 9: Ignorance and Uncertainty, How It Drives Science**

Stuart Firestein, “Ignorance: How It Drives Science.” 2012. (Introduction, Chapter 1, 2)

**September 11: Ignorance, the Disunity of Science, and Uncertainty, How it Drives Science (even more)**

Stuart Firestein, “Ignorance: How It Drives Science.” 2012 (Chapter 5, 6, and 7)


*Read Galison's bio here: https://www.cbc.ca/radio/ideas/how-to-think-about-science-part-1-24-1.2953274*

**WEEK 3: SEPTEMBER 16 & 18**

**September 16: Exploiting/Manufacturing Scientific Uncertainty**


Naomi Oreskes and Erik M. Conway, "Merchants of Doubt." 2011 (Intro. and Chapter 1)

*For note taking: don’t focus on all of the tiny details! You will get overwhelmed - there are just too many. Focus on key points, arguments, or historical turning points. For instance, on p. 16 they author’s offer a key point: “The industry’s position was that there was “no proof” that tobacco was bad, and they fostered that position by manufacturing “a debate” convincing the mass media that responsible journalist had an obligation to present “both sides.” Writing this point down, either by copying the quote verbatim or a
short summary in your notebook is a good way to proceed for note taking in preparation for the quiz.

**September 18: Exploiting/Manufacturing Scientific Uncertainty**


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**WEEK 4: SEPTEMBER 23 & 25**

**September 23: The Morality of Truth and Lies**


**September 25: Language and Reality**


*Transcript:* https://static1.squarespace.com/static/542c2af8e4b00b7cfca08972/t/58ffb590db29d67edabd4e26/1493153189310/How+To+Think+About+Science.pdf


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**WEEK 5: SEPTEMBER 30 & OCTOBER 2**

**September 30: Paradigms and Scientific Dogma**


Transcript: https://static1.squarespace.com/static/542c2af8e4b00b7cfca08972/t/58ffbf590db29d67edabd4e26/1493153189310/How+To+Think+About+Science.pdf

October 2: Knowledge and Truth in the Making


October 7: One Truth, Occluding Other Truths: The Microbiome

Ed Yong, “I Contain Multitudes: The Microbes Within Us and a Grander View of Life.” 2016. (Chapter 2)


October 9: The Truth of Rationality and the Mad Pride Movement


October 14: No class and device free experiment begins.

October 16: Guest Lecture with Ziya Tong

Ziya Tong, currently the vice chair of WWF Canada, has worked as a TV producer, host, and journalist for over a decade. Perhaps best known for anchoring the Discovery Channel's Daily Planet from 2008-2018, she has also hosted ZeD on CBC, hosted and produced Wired Science on PBS and The Leading Edge on The Knowledge Network. An avid adventurer and scuba diver, the title of her guest lecture is Out of Sight, Out of Mind: The Adventures of a Science Communicator. There will also be time to ask her questions about working in TV, journalism, environmental advocacy.

WEEK 8: OCTOBER 21 & 23

October 21: Knowledge From Below

Midterm Essay Due

http://ambounds.org/docs/716/Steven%20Epstein.pdf


October 23: Disability and Eugenics (aka Techno-Scientific Solutionism Run Amok)

*The reading is quite short so discussion post must address the film and reading in equal parts


Visit and mention one thing you learned from the site in the discussion post:
http://eugenicsarchive.ca/


WEEK 9: OCTOBER 28 & 30

October 28: Disability and Work/Play

*Both are popular pieces and both are required for the discussion post.

David Graeber, "What's the Point if We Can't have Fun." The Baffler, 2014. https://thebaffler.com/salvos/whats-the-point-if-we-cant-have-fun

October 30: Midterm Exam

WEEK 10: NOVEMBER 4 & 6

November 4: Implicit Bias, the Myth of Meritocracy, and A-holes at Work

*Clive Thompson will be beaming in via video for part of the class.


Truth, Lies, Surveillance, Lies in Technology and Journalism

November 6: Surveillance and Privacy: Introduction and the Long View


November 11: Work, Labor, and Surveillance


November 13: AI and Privacy, Guest Lecture with Professor Ignacio Cofone

Ignacio Cofone is an Assistant Professor at McGill University's Faculty of Law, where he teaches Privacy Law, Business Associations, and Artificial Intelligence Law. His research explores how the law should adapt to technological and social change with a focus on privacy and algorithmic decision-making


Sam Corbett-Davies, Eva Pierson, Avi Feller, Sharad, Goel, “A computer program used for bail and sentencing decisions was labeled biased against blacks. it's actually not that clear.” Washington Post, 2016


November 18: Surveillance is not Equally Distributed


WEEK 12: NOVEMBER 18 & 20

November 20: The Trouble with Reality & Journalism/Propaganda/Bias Revisited


OMFG! What is to be Done?
Ending on a Positive, Practical Note (because what’s the point if we don’t?)

November 25: Whistle blowing & Anonymity

Watch video and read written portion:


November 27: Red Teaming, Security, and Hacking

Micah Zenko, Red Teaming, 2015/ [Introduction and other chapters TBD]

Security/Anti security: https://hackcur.io/category/anti-security/ (hactk1vat3) watch and read the videos/entries under this category

December 3: Last class :)

Final Essays Due

Wrap up
Final thoughts