

STS.004 Intersections: Science, Technology, & the World

Dr. David Singerman

Course syllabus updated 2015/09/10

STS.004 Intersections: Science, Technology, and the World

Fall 2015

Tuesdays and Thursdays 11am-12:30pm

Room 1-273

MIT



Instructor: Dr. David Singerman

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Office hours: Email me to schedule a time and place

This course is meant to be an introduction to the field of STS—science, technology, and society—and will be built around several case studies of contemporary as well as historical issues. We'll start with what's around us, as the Institute, along with Google, Microsoft, Novartis, and other institutions, are transforming the city we all live in. Those transformations are new, but they aren't separate from the history and politics of MIT. Next, we'll look at where our food comes from: who controls how nature becomes nutrition? Third, we'll ask about doping—its consequences for athletes and sport as a whole, and what lessons we should draw for the present and future of pharmaceutical and physical enhancement in all areas of life. The last of the four units is up to you—students will collaborate on picking topics, selecting readings, and leading discussions of contemporary issues.

Policies

Required readings and materials

All readings will be posted as PDFs to Stellar, or otherwise easily available online. You are not required to purchase any books. Hopefully, you'll have enjoyed some of the authors and books excerpted in the class enough to pursue them further.

Participation

This course depends on you. You are required to attend every class and to participate in class discussions. For an absence to count as "excused" you must produce, within one week, a note from a dean, doctor, coach, etc., explaining why you could not attend. Each unexcused absence after the first will result in a deduction (2% per class missed) from your final grade.

Being excused from that day's class does *not* excuse you from the work your classmates did. You are still responsible for completing the assigned readings and producing a response paper. You are also responsible for any material covered in the class you miss (this means finding a classmate who will lend you their notes, not asking me for mine).

Electronic devices

Unless stated otherwise, laptops, tablets, phablets, Kindles, e-readers, and phones are *not allowed* in class. If there is a medical reason you are unable to take notes on paper, and need to use an electronic device, get in touch with me. (In other words, "attendance" doesn't only include showing up, but also bringing the readings *in hard copy* to class.)

Academic Integrity

You are responsible for understanding MIT's policies on academic integrity (<https://integrity.mit.edu>) and I strongly encourage all of you to read it. There is no alternative to adhering to strict standards of academic integrity. This means properly acknowledging what work and words are yours, and what is the work of others. If you have *any* doubts as to whether something counts as plagiarism, *please ask me.*

Disability policy

If you may require some type of instructional and/or examination accommodation, please contact me the first week of the semester so that I can work with MIT's Student Disabilities Services to provide, or facilitate in providing, whatever accommodations you may need.

Conflicts

Once you have your schedule for the semester, have a look at the syllabus for each of your other classes. If you see any conflicts with another class's exams, projects, etc., let me know as soon as possible, and I'll try to make an accommodation. The sooner you let me know, the better.

Grade breakdown

30% Participation

20% Reading responses

15% Op-ed

20% Follow your food paper

15% STS topic choice

Assignments

1. Weekly reading responses posted to the Forum

To facilitate our class discussion, you are responsible for posting a response to the readings to the Forum section of Stellar by Monday at 5pm. There's no word minimum or maximum; the goal is at least two well-developed paragraphs. They should represent your thoughtful, reasoned engagement with the assigned reading for that week. You may consider a single reading in depth, weigh multiple readings against each other, identify a contradiction, or expand upon a point—these are just some of the approaches you may take, and you should experiment over the course of the semester.

The purpose of posting these to the Forum is to allow you to read your classmates' responses. If someone says something you agree with, disagree with, or think needs to be reinforced or qualified, feel free to use your post to respond to theirs.

2. Op-ed (800 words), due October 8

This assignment asks you to write an 800-word essay in the style of an editorial opinion piece, bringing an STS perspective to a contemporary issue relating to MIT or the Boston area.

3. "Follow your food" paper (~1200 words), due November 24

You will be responsible for an original research paper of approximately 1200 words. This paper assignment will ask you to take some item of food that you find in the MIT or Cambridge area and follow it back to its origin, discovering and describing what kinds of scientific knowledge, technologies, and expertise turn "nature" into "food."

4. STS topic choice

As you can see, Unit 4 of the semester is "to be determined." You'll determine it, working in small groups to pick topics and plan readings for a class session. The number of groups isn't fixed—if there's one topic that attracts the attention of a larger portion of the class, we can spend more than one session on it. The last few weeks of the class, in other words, are yours to shape.

Schedule

DATE READINGS, FILMS, ETC.

Sept 10 Introductions

Introduction: What is STS?

Sept 15 Janet Vertesi, "Mind the Gap: The London Underground Map and Users' Representations of Urban Space" (*Social Studies of Science*, 2008)

Sept 17 Stefan Helmreich, "Human Nature at Sea" (*Anthropology Now*, 2010)
Bruno Latour, "Mixing Humans with Nonhumans: The Sociology of a Door Closer" (*Social Problems*, 1988)

Sept 22 Watch: "Mechanical Marvels: Clockwork Dreams" (BBC, 2013)
Heinz Otto Sibum, "Reworking the mechanical value of heat: Instruments of precision and gestures of accuracy in early Victorian England" (*Studies in History and Philosophy of Science Part A*, 1995)

Unit 1: MIT and Cambridge

Sept 24 Katie Johnson, "'Area Four' residents live in the shadow of the future," *Boston Globe*, November 23, 2014.

Sept 29 Vannevar Bush, "Science, the Endless Frontier: A Report to the President" (July 1945), selections.

Oct 1 Stuart Leslie, "'Time of Troubles' for the Special Laboratories," and John Durant, "'Refrain from Using the Alphabet: How Community Outreach Catalyzed the Life Sciences at MIT" in David Kaiser, ed., *Becoming MIT: Moments of Decision* (MIT Press, 2010)

Oct 6 Peter J. Westwick, "The Jet Propulsion Laboratory and Southern California," in *The Societal Impact of Spaceflight* (2007)

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David Kaiser, "The Postwar Suburbanization of American Physics,"
American Scholar (2004)

Oct 8 No readings — walking tour of Cambridge *Op-ed due*

Oct 13 No class — Monday schedule

Unit 2: Food networks

Oct 15 Shane Hamilton, *Trucking Country: The Road to America's Wal-Mart Economy* (2008), excerpts

Oct 20 Steve Ettlinger, *Twinkie, Deconstructed: My Journey to Discover How the Ingredients Found in Processed Foods Are Grown, Mined (Yes, Mined), and Manipulated into What America Eats* (2008)

Oct 22 *Twinkie, Deconstructed* (cont.)

Oct 27 Heather Paxson, *The Life of Cheese: Crafting Food and Value in America* (2012)

Oct 29 John McPhee, *Oranges* (1967)

Unit 3: Doping in professional sports

Nov 3 Michael Lynch, "The Discursive Production of Uncertainty: The OJ Simpson 'Dream Team' and the Sociology of Knowledge Machine"

Nov 5 Reed Albergotti and Vanessa O'Connell, *Wheelmen: Lance Armstrong, the Tour de France, and the Greatest Sports Conspiracy Ever* (2013), excerpts
United States Anti-Doping Agency, "Reasoned Decision" in the Lance Armstrong Case (2012), excerpts

Nov 10 Andi Johnson "The Athlete as Model Organism: The Everyday Practice of the Science of Human Performance." (*Social Studies of Science* 2013)

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Nov 12 Harry Collins and Trevor Pinch, "ACTing UP: AIDS cures and lay expertise," in *The Golem at Large: What You Should Know about Technology* (2002)

Nov 17 Watch: "Catch me if you can" (BBC Panorama Documentary on Alberto Salazar, 2015)

Unit 4: Class-developed unit

Nov 19 Group 1

Nov 24 Group 2 *Follow-your-food paper due*

Nov 26 No class — *Thanksgiving*

Dec 1 Group 3

Dec 3 Group 4

Dec 8 Group 5

Dec 10 Group 6