



## OFFICE OF THE CORE CURRICULUM

AY 2021-22, TERM 1

<b>COURSE CODE:</b>	COR2217
<b>COURSE TITLE:</b>	Situating the Machine: Technology, Politics, and Societies
<b>VENUE:</b>	[REDACTED]
<b>TIME:</b>	[REDACTED]
<b>INSTRUCTOR:</b>	Dr Patrick Luiz Sullivan DE OLIVEIRA
<b>EMAIL:</b>	[REDACTED]
<b>OFFICE:</b>	[REDACTED]
<b>OFFICE HOURS:</b>	[REDACTED]
<b>WALKING HOURS:</b>	[REDACTED]
<b>TA:</b>	[REDACTED]
<b>EMAIL:</b>	[REDACTED]

## PRE-REQUISITE/ CO-REQUISITE/ MUTUALLY EXCLUSIVE COURSE(S)

There are no prerequisites for this course.

## ELIGIBILITY

1. This course is open to **all** undergraduates from SMU.
2. For cohorts enrolled from AY2019/2020, this course falls under the Communities Pillar of the Core Curriculum, under the Technology and Society basket of modules.

## COURSE DESCRIPTION

Take your smartphone out and study it. Its shape and functions—do you wonder how they were influenced by social, economic, political, and cultural forces? Do you think it changed the way people interact with one another? In this class, we will explore how technological artifacts and systems— from early factories to the internet—have shaped (and are shaped by) social, cultural, economic, and political factors. The course’s underlying premise is that “technology”—a concept that carries a multifaceted ideological baggage—only makes sense when understood as being embedded in specific social, material, and ideological configurations. That is to say, there are *histories* of *technologies*. Instead of a comprehensive survey, the course will unfold through chronologically arranged topics that include the emergence of industrial society, imperial mobility, urban spectacles, systems of mass production, gendered consumption, digital cultures, and risk in the Anthropocene. The unifying theme weaving all these topics together will be that far from being deterministic, technology is instead better understood as a site of contestation and negotiation for different visions of society. So that students can dig deeper into those tensions, each week will feature scholarly readings and two primary source-driven case studies in which groups will explore the complex intersection between technology and society—including Singaporean rickshaws, the Magnitogorsk Soviet industrial city, the contraceptive pill, and the Fukushima Daiichi nuclear disaster. For their final project, students will select a technological artifact and write a historical essay about its relationship to society.

## COURSE GOALS

Through the in-class lectures and face-to-face discussions, this course invites students to:

1. Develop a sophisticated understanding of the complex relationship between society and technology through specific historical case studies;
2. Approach technology in ways that avoid falling into deterministic traps;
3. Critically analyse the our modern-day challenges in light of historical precedent;
4. Unpack the different ways people have understood technology throughout history from a diverse range of perspectives;

## LEARNING OBJECTIVES

At the end of the course, students should fulfil the following learning outcomes:

1. **Disciplinary and Multidisciplinary Knowledge:**
  - a. Students will be able to critically engage with primary sources, confidently interpreting and contextualizing them;
  - b. Students will have a firm grasp of some of the main methods historians have used to approach the study of technology.
2. **Global Citizenship:**
  - a. Students will be able to provide insights into how technology is shaped (and can shape) the social, the material, and the ideological across different cultures;
  - b. Students will be able to articulate how technological artifacts serve as sites of contestation and negotiation of larger societal issues;
3. **Intellectual and Creative Skills:**
  - a. Students will be able to work individually and collaboratively to construct nuanced historical narratives from fragmented primary sources and other scholarly arguments;
  - b. Students will be able to think of ways in which the past can inform or limit our understanding of present challenges.

## COURSE POLICIES

### COURSE FORMAT

- **Asynchronous lectures:** Lectures provide you with the necessary context and information regarding the week's topic. Per SMU policy, up to one-third of the module can be dedicated to asynchronous learning, which averages to 1 hour per week. Because we are dealing with complex phenomena, the lectures tend to be longer than that. But when averaged across the semester they come to about 1 hour per class session (since not all sessions feature lectures). To facilitate learning, lectures have been recorded and divided into shorter sections, and you can watch them at your own pace and as many times as you want (another advantage of having them be asynchronous). You can submit questions you have during lecture to the discussion board on eLearn and I will address them during the in-person discussion. *The asynchronous lectures promote the learning of foundational knowledge.*
- **In-person discussions:** In-person discussions feature 2 components: group presentations and spirited discussion of the lectures and readings. As such, it is critical you take notes while watching the lecture and reading the assigned texts. Look for connections, identify points of tension, and search for underexplored paths. This kind of preparation will make it easier for you to be an engaged participant in class and earn those participation points. In-person discussions will also occasionally feature breakout groups and other interactive activities. *The in-person discussions promote learning through constructive dialogue.*
- **Group presentations:** Each group will be assigned a case study that they will *teach* to the class. I have curated the materials for these case studies, which include evidence (primary sources) and scholarly literature on the topic (secondary sources). You are to sift through the material and develop a presentation that answers the assigned challenge questions. Answers to the challenge questions should be developed by analyzing the evidence and using the scholarly literature to help with framing. As you work on your presentation you will likely get confused and overwhelmed. That's the goal. In the "real world" we constantly need to solve complex problems with an overload of information, and one of the most important skills you can develop is the ability to make informed decisions about what is important and what is marginal. The case studies are designed to help you develop those skills. Also, I am more than happy to meet with the group to discuss the presentation. *The group presentations promote learning through collaborative analysis and synthesis and encourages reciprocal teaching.*
- **Midterm Exam:** The exam features various ID questions, where you are expected to identify, contextualize, and explain the significance of a key term, and an essay question, where you write an argumentative essay that engages with material from class in an analytical and synthetic manner to support a focused and interesting thesis. *The exam promotes learning through critical evaluation of the material and integrative thinking.*
- **Final Paper:** In lieu of a final exam, in this course you will write an original research paper (specific requirements will be provided later in the semester). It will be challenging. Producing original research requires you to identify primary sources to analyze, survey what other scholars have said about the topic you are tackling, engage in a scholarly conversation with these different arguments, and make the case that your new interpretation is important enough to be taken seriously by people in the field. To help you with all that, the last three weeks are dedicated to working on the final essay. While this is an independent project, you should take advantage of SMU's full array of resources (including those offered by the library and consulting with your instructor). *The final paper promotes learning through independent research and the production of new knowledge.*

## ASSESSMENT MODE

- The course is assessed on the standard SMU grading scheme.
- The grading for this course is divided into **60% from Continual Assessment**, and **40% from an essay** submitted at the end of term.
- The **60% Continual Assessment** is apportioned in the following manner:
  - a. **Mid-term exam (30%)**
    - Several ID questions and one essay. **In-class, Week 10, 3:30pm – 5:45pm.**
  - b. **Class Participation (15%)**
    - You are encouraged to prepare for and actively participate in class discussions and activities. Good class participation involves actively listening to your instructor and other students during class, joining class discussions, asking questions which are thoughtful and helpful, and being a good team member during classroom group work. Merely speaking in class will not earn you full marks for class participation. Moreover, using a smart device in class for non-class related activities is a distraction for you and everyone else; this will negatively affect your class participation.
  - c. **Collaborative Case Study (15%)**
    - Starting on week 3, students will lead class discussion each week with a group presentation on that week's special topic. Presentations should be 20 minutes long with an additional 10 minutes for discussion, feature a PowerPoint and script (uploaded to E-learn on the day of the presentation), and incorporate primary sources and scholarly arguments.
- **Situating the Machine Essay (40%)** – For the final essay, you will write a scholarly historical essay of a technological artifact of your choice. The study should stem from a careful analysis of primary sources and engage with arguments developed by secondary sources in the field. It should be no more than 2,000 words (not including references). **Essay should be submitted via eLearn by 5pm on Monday, November 15 (Week 14).**

## OFFICE HOURS AND WALKING HOURS

**Office Hours:** Held on Tuesdays from 1:30pm to 2:30pm. Sign up for a 15-minute slot at [REDACTED]. If you don't sign up, you can drop by, but you might have to wait in line. If you have class during this period, we can schedule some other time.

**Walking Hours:** There is substantial research indicating that walking boosts creativity. As such, I host "Walking Hours" on Thursdays from 10:00am to 11:00am (usually at Fort Canning Park, weather permitting). Sign up for a 20-minute slot at [REDACTED].

## COMMUNICATIONS:

The TA hosts a Telegram group where you can communicate with one another regarding readings and logistical matters. If the TA cannot answer your question, I am reachable by email at [REDACTED] (*not by Telegram*). I check emails between 10am and 6pm on weekdays, so if you send me an email at 5pm on Friday you might not hear back until Monday morning. If I don't reply within 24 hours during the work week, please send me a reminder!

## ASSIGNMENT FORMAT AND ACADEMIC INTEGRITY

All written assignments are to be submitted in double-spaced typing along with a total word count and a written anti-plagiarism declaration (for example "By submitting this assignment, I

confirm that it conforms to the guidelines on plagiarism in SMU”). There is a policy of zero tolerance for late submission (except in exceptional circumstances and in agreement with your instructor) and for non-submission of assignments.

## ACCESSIBILITY AND ACCOMODATIONS

SMU strives to make learning experiences accessible for all. If you anticipate or experience physical or academic barriers due to disability, please let me know immediately. You are also welcome to contact the university's disability support team if you have questions or concerns about academic accommodations: [included@smu.edu.sg](mailto:included@smu.edu.sg). Accessible tables in our seminar room are available for students who require them.

## EMERGENCY PREPAREDNESS FOR TEACHING AND LEARNING (EPTL)

As part of emergency preparedness, instructors may conduct lessons online via Zoom during the term, to prepare students for online learning. During an actual emergency, students will be notified to access the Zoom or WebEx platform for their online lessons. The class schedule will mirror the current face-to-face class timetable unless otherwise stated.

## COPYRIGHT INFRINGEMENT

Please note that only copyright holders are entitled to reproduce their work, publish their work, perform their work in public, communicate their work to the public and make an adaption of their work. Hence, making course materials (owned by the faculty) available for sale or posting such works on websites for gain, is strictly prohibited. Disciplinary action will be taken against those found infringing copyright.

## SMU LIBRARIES

- **Website:**
  - <http://library.smu.edu.sg>
- **Know your librarians**
  - The Social Sciences research librarian is [REDACTED]. She can offer guidance and research consultations on how to find credible resources, do proper citations, and many other helpful topics.
  - Quick responses can be obtained by using the “Ask Library” chat service.
  - Additional resources can be found at <https://library.smu.edu.sg/services/services-undergraduate-students>.
- **History of Science Research Guide:**
  - <https://researchguides.smu.edu.sg/historyofscience>
  - Offers some basic resources for research on the History of Science and Technology. The “Primary Sources” tab is especially helpful if you are searching for ideas and materials for a new topic.

## SEMESTER SCHEDULE AND READINGS

*Please note that this syllabus may change slightly over the course of the term; when in doubt, please refer to the online version of this document for the most updated version.*

### WEEK 1. What Is Technology?

#### Course Introduction

##### Questions to consider:

1. So, do artifacts have politics? What does it mean to ask that question?
2. How does a SCOT approach to technology change the kinds of stories we tell about technological change?
3. What are some of the biases in the history of technology that Edgerton seeks to address through his “eclectic theses”?

#### Class Readings

- **Online lecture: “Course Introduction” (eLearn).**
- Langdon Winner, “Do Artefacts Have Politics?,” *Daedalus* 109 (1980): 121-136.
- David Edgerton, “From Innovation to Use: Ten Eclectic Theses on the Historiography of Technology,” *History and Technology* 16, no. 2 (1999): 111-136.

## WEEK 2. Nineteenth-Century Industrialization and the Factory System

### Lowell Factory / Phalanstery

#### Questions to consider:

1. How does industry change people's relationship to time? What role does technology play in this?
2. Does the distinction between organic and artificial make sense when it comes to technology?

#### Class Readings

- Online Lecture: "Nineteenth-Century Industrialization & the Factory System" (eLearn).
- Online Lecture: "The Phalanstery" (eLearn).
- E. P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past & Present*, no. 38 (1967): 56-97.
- Thomas Dublin, "Women, Work, and Protest in the Early Lowell Mills: 'The Oppressing Hand of Avarice Would Enslave Us,'" *Labor History* 16, no. 1 (1975), 99-116.

#### Lowell Factory Case Study (Work in Class)

#### Challenge Questions:

1. What do the sources reveal about the place of discipline and morality in emerging industries?
2. How does gender factor in (both from the perspective of the administrators and the employees)?

#### Sources:

*\* We will be working with these in class, so just do a very cursory skim before class.*

- *Hand-Book for the Visitor to Lowell* (Lowell: D. Bixby and Company, 1848), 28-46.
- Benita Eisler, ed., *The Lowell Offering: Writings by New England Mill Women (1840-1845)* (New York: W.W. Norton, 1998), 63-65, 75-82, 136-140, 160-162, 203-208.

#### Phalanstery Case Study (Sample created by Dr. De Oliveira)

#### Challenge Questions:

1. How are Fourier's ideas and the Phalanstery responses to issues that come with industrialization?
2. What kind of parallels do you find between the Phalanstery and newly emerging factories?

#### Sources:

*\* Feel free to skim, but not necessary to read (we won't be working with them in class).*

- Pamela Pilbeam, *French Socialists Before Marx: Workers, Women and the Social Question* (Montreal: McGill-Queen's University Press, 2000), 107-123, 128-134.
- Charles Fourier, *The Utopian Vision of Charles Fourier: Selected Texts on Work, Love, and Passionate Attraction*, eds. Jonathan Beecher and Richard Bienvenu (Boston: Beacon Press, 1971), 122-130, 148-149, 235-241, 246-252, 256, 274-283, 297-299.

## WEEK 3. Empire, Technologies, Mobilities

### Singaporean Rickshaw / 1924 Empire Cruise

#### Questions to consider:

1. What are some of the specificities of mobility in the imperial context in East and Southeast Asia?
2. How does the Singapore port shed light on the relationship between mobility and infrastructure?

#### Class Readings

- **Online Lecture: “Empire, Technologies, Mobilities” (eLearn).**
- Kate McDonald, “Imperial Mobility: Circulation as History in East Asia under Empire,” *Transfers* 4, no. 3 (2014): 68-87.
- Goh Chor Boon, *Technology and Entrepôt Colonialism in Singapore, 1819-1940* (ISEAS Publishing, 2013), 64-92.

#### Case Study 1. Singaporean Rickshaw

##### Challenge Questions:

1. What can we learn about the imperial order in Singaporean society if we think of the rickshaw as a mediating technology?
2. What are the difficulties in writing the history of a technology like the rickshaw when compared to more celebrated inventions?

##### Sources:

- Jim Francis Warren, *Rickshaw Coolie: A People’s History of Singapore 1880-1940* (Singapore University Press, 2003), 60-81.
- G. G. D., “The Rickshaw Puller,” *The Straits Times Annual*, 1938. (In Warren, *Rickshaw Coolie*, xxv)
- Louise Jordan Miln, *When We Were Strolling Players in the East* (New York: Charles Scribner’s Sons, 1894), 26-29.
- Johannes V. Jensen, “Hwang Tchin Fo,” *Transatlantic Tales* 33, no. 4 (January, 1907), 90-97.
- Oral history selections from the National Archives of Singapore (*the audio features timestamps for when there are references to rickshaws, and you can do word searches in the transcripts*).
  - Interview with KOH Teong Koh, [Part 1](#) and [Part 2](#).
  - [Interview](#) with HALE Treveylan James Ruthven.
  - [Interview](#) with CHAN Chon Hoe.
- Images from National Archives of Singapore: [1](#), [2](#), [3](#), [4](#), [5](#), [6](#), [7](#), [8](#).

#### Case Study 2. 1924 Empire Cruise

##### Challenge Questions:

1. What kind of message do the images, videos, and texts produced for The Empire Cruise expressed regarding the role of ocean technology in Britain’s empire?
2. What kind of effects did mobility have on imperial order at that time?

##### Sources:

- John C. Mitcham, “The 1924 Empire Cruise and the Imagining of an Imperial Community,” *Britain and the World* 12, no. 1 (2019): 67-88.
- V. S. Scott O’Conner, *The Empire Cruise* (London: Riddle, Smith and Duffus, 1925), 13-20, 97-122, 275, 302.
- “Our Naval Visitors,” *The Straits Times*, February 11, 1924.
- “The Empire Cruise,” *The Times*, September 27, 1924.
- S. M. Ghani, “My Visit to the British Battle-Cruisers H.M.S. Hood and Repulse,” 1924.
- British Instructional Films, *Britain’s Birthright* (1924), [Part 1](#), [Part 3](#).
- Browse images [here](#) and [here](#).



## WEEK 4. Chemical Industries, Systems, Technological Spectacles

### Electric Light / 1900 Exposition Universelle

#### Questions to consider:

1. How does our understanding of technology change when we shift the focus from individual inventors and artifacts and toward systems?
2. What does the “Franco-American Battle of Beams” reveal about the relationship between electricity and visions of modernity at the turn of the twentieth century?

#### Class Readings

- **Online Lecture: “Engineering, Systems, Technological Spectacles” (eLearn).**
- Thomas P. Hughes, “The Electrification of America: The Systems Builders,” *Technology and Culture* 20, no. 1 (1979): 124-161.
- Shelley Wood Cordulack, “A Franco-American Battle of Beams: Electricity and the Selling of Modernity,” *Journal of Design History* (2005): 147-166.

#### Case Study 1. Electric Light

##### Challenge Questions:

1. How did promoters of electric streetlight mobilize the discourse of civic pride?
2. How does the rise of consumer capitalism affect discourses and practices of electric illumination?

##### Sources:

- David E. Nye, *American Technological Sublime* (Cambridge, MA: The MIT Press, 1994), 173-198.
- Selections from *The American City* periodical.
  - M. G. Marony, “Decorative Street Lighting,” (1912), 423-425.
  - C. L. Eshleman, “Modern Street Lighting,” (1912), 510-517.
  - Alan Bright, “How Women’s Organizations May Improve Methods of Street Lighting,” (1912), 893-895.
- Matthew Luckiesh, *Light and Color in Advertising and Merchandising* (New York: D. Van Nostrand Company, 1923), 1-10, 239-256.
- General Electric Company, *Architecture of the Night: A Series of Articles Published by the General Electric Company to Suggest the Possibilities of Architectural Illumination* (1930), 7-10.

#### Case Study 2. 1900 Exposition Universelle

##### Challenge Questions:

1. What does Adams’s account of his encounter with the dynamo reveal about people’s relationship with technology at the turn of the twentieth century?
2. What kind of message was articulated by the spatial transformation of Paris during the 1900 fair?

##### Sources:

- Rosalind H. Williams, *Dream World: Mass Consumption in Late Nineteenth-Century France* (University of California Press, 1982), 58-66, 73-90, 95-106.
- *Harper’s Guide to Paris and the Exposition of 1900* (New York: Harper & Brothers, 1900), 139-149.
- James P. Boyd, *The Paris Exposition of 1900: A Vivid Descriptive View and Elaborate Scenic Presentation of the Site, Plan and Exhibits* (Philadelphia: P. W. Ziegler and Co., 1900), 223-275.
- Henry Adams, “The Dynamo and the Virgin (1900),” in *The Education of Henry Adams: An Autobiography* (Boston: Houghton Mifflin Company, 1918), 379-390.
- Thomas Edison 1900 Exposition Universelle films.
  - [Panorama from the Moving Boardwalk.](#)
  - [Panorama of Eiffel Tower.](#)
  - [Scene from the Elevator Ascending Eiffel Tower.](#)

## WEEK 5. The Science of Work, Taylorism, Fordism, Planning Model T / Magnitogorsk

### Questions to consider:

1. Why did Fordism exert such a powerful draw in places with such distinct ideologies (USA & USSR)?
2. How do the different ways of thinking about labour and industrial production (so, the Science of Work, Taylorism, Fordism, and Planning) resemble one another? How do they differ?

### Class Readings

- **Online Lecture: “The Science of Work, Taylorism, Fordism, Planning” (eLearn).**
- David E. Greenstein, “Assembling *Fordizm*: The Production of Automobiles, Americans, and Bolsheviks in Detroit and Early Soviet Russia,” *Comparative Studies in Society and History* 56, no. 2 (2014): 259-289.

### Case Study 1. Model T

#### Challenge Questions:

1. How does Fordism understand the relationship between production and consumption for its success?
2. Compare and contrast the consumer and manufacturer experience under Fordism.

#### Sources:

- David E. Nye, *America’s Assembly Line* (Cambridge, MA: The MIT Press, 2013), 13-38, 97-114.
- “Price List of Parts—Ford Model T,” 1911
- *Ford Manual* (Detroit: Ford Motor Company, 1915), 2, 13-14.
- *Ford Factory Facts* (Detroit: Ford Motor Company, 1915), 5-8, 14-15, 43-53.
- Horace Lucien Arnold and Fay Leone Faurote, *Ford Methods and the Ford Shops* (New York: The Engineering Magazine Company, 1919), 135-150.
- Henry Ford, “Mass Production,” in *Encyclopædia Britannica*, 13th ed., vol. 30 (New York: The Encyclopædia Britannica, 1926), 821-823.
- Louis Burcar, “Auto Slaves” [1933], in *Rebel Voices: An IWW Anthology*, ed. Joyce L. Kornbluh (Ann Arbor: The University of Michigan Press, 1964), 374.
- E. B. White, “Farewell, My Lovely!,” *The New Yorker*, May 16, 1936.

### Case Study 2. Magnitogorsk

#### Challenge Questions:

1. What vision of the Soviet worker did experiments like Magnitogorsk try to produce?
2. In what ways were these efforts successful? In what ways did they fail? Why?

#### Sources:

- Stephen Kotkin, *Magnetic Mountain: Stalinism as Civilization* (University of California Press, 1995), 18-21, 37-73.
- John Scott, *Behind the Urals: An American Worker in Russia’s City of Steel* (Bloomington: Indiana University Press, 1989 [1942]), 9-51.
- Joseph Stalin texts published in *Pravda*.
  - “Industrialization of Country and the Right Deviation in the C.P.S.U.(B.),” Nov. 24, 1928.
  - “To the First Graduates of the Industrial Academy,” April 26, 1930.
  - “Magnitogorsk Iron and Steel Works Project,” March 30, 1932.
  - “Kuznetsk Iron and Steel Works Project,” May 24, 1932.
  - “The Results of the First Five-Year Plan,” *Pravda*, January 10 and 17, 1933.

## WEEK 6: Gender, Empowerment, Control

### American Kitchen / Contraceptive Pill

#### Questions to consider:

1. How does our approach to the history of technology impact the kinds of stories that get told (think especially in terms of production vs. consumption)?
2. How do technologies of contraception become sites for negotiation and struggle between individual agency and governmental power?

#### Class Readings

- **Online Lecture: “Gender, Empowerment, Control” (eLearn).**
- Steven Lubar, “Men/Women/Production/Consumption,” in *His and Hers: Gender, Consumption, and Technology*, eds. Roger Horowitz and Arwen Mohun (University Press of Virginia, 1998), 7-38.
- Susan Greenhalgh, “Controlling Births and Bodies in Village China,” *American Ethnologist* 21, no. 1 (1994): 3-30.

#### Case Study 1. American Kitchen

#### Challenge Questions:

1. Why do the hours devoted to household work remain relatively unchanged even with new technology? What kind of effect does that have in the lives of women like Betty Friedan?
2. What kind of image of female engagement with technology do the handbooks articulate?

#### Sources:

- Ruth Schwartz Cowan, “The ‘Industrial Revolution’ in the Home: Household Technology and Social Change in the 20th Century,” *Technology and Culture*, 17, no. 1 (1976): 1-23.
- Betty Friedan, *The Feminine Mystique* (New York: Dell Publishing, 1974 [1963]), 11-27, 227-235.
- *Housewife’s Handbook* (New York: WM. H. Wise & Co., 1953), v-vi, 174-179, 202-228, 301-309.
- *Mrs. America Homemaker’s Guide* (Hartford: Witkower Press, 1954), 9-15, 66-72, 91-92, 108-124, 129-132, 154-160, 266-268, 298-300.
- Youngstown State University Oral History Program, “Appliances of the Past Project,” Personal Experience O. H. 837, Catherine Galko interviewed by Robert Fabian, June 6, 1985.
- Harry W. Von Losecke, “Kitchen Revolution,” *Technology Review*, February 1957, 201-203, 216, 220.

#### Case Study 2. Contraceptive Pill

#### Challenge Questions:

1. Compare the different responses to the Pill. How do they express larger anxieties about the place of women in modern society?
2. What are some of the major issues in communicating knowledge concerning the Pill?

#### Sources:

- Andrea Tone, *Devices and Desires: A History of Contraceptives in America* (Hill & Wang, 2001), 233-260.
- Margaret Sanger, *Motherhood in Bondage* (Columbus: The Ohio State University, 2000 [1928]), 219-245.
- “The Pill: How It Is Affecting U.S. Morals, Family Life,” *U.S. News & World Report*, July 11, 1966
- Pope Paul VI, *Humanae Vitae (On the Regulation of Birth)*, July 25, 1968.
- United States Public Health Service, “The Oral Contraceptives,” 1969.
- Women’s Liberation Press Release (Response to 1970 Senate hearing on the pill).
- Boston Women’s Health Committee, “Women and Their Bodies,” (1975), 3-5, 59-61, 66, 71-78.

## WEEK 7. Computers: A Shortish History

### Software / The Internet

#### Questions to consider:

1. What kinds of hard and soft infrastructure are critical to the digital age? How are they maintained?
2. How do those infrastructures relate to utopian and countercultural visions of social organization?

#### Class Readings

- **Online Lecture: “Computers: A Shortish History” (eLearn).**
- Shannon Mattern, “Scaffolding, Hard and Soft: Infrastructures as Critical and Generative Structures,” *Spheres: Journal for Digital Cultures*, no. 3 (2016): 1-10.
- Fred Turner, “Where the Counterculture Met the New Economy: The WELL and the Origins of Virtual Community,” *Technology and Culture* 46, no. 3 (2005): 485-512.

#### Case Study 1. Software

#### Challenge Questions:

1. How have tensions between labour, leisure, and property shaped ideas of software development?
2. What do those tensions reveal about different conceptions of the programmer ethos?

#### Sources:

- Kevin Driscoll, “Professional Work for Nothing: Software Commercialization and ‘An Open Letter to Hobbyists,’” *Information & Culture* 50, no. 2 (2015): 257-283.
- Selections from Homebrew Computer Club Newsletter
  - Homebrew Computer Club Newsletter, Vol. 1, Issue 1, March 15, 1975.
  - Bill Gates, “Open Letter to Hobbyists,” Vol. 2, Issue 1, January 31, 1976.
  - Mike Hayes Letter in response to Bill Gates, Vol. 2, Issue 2, February 29, 1976.
- Jim. C. Warren, Jr. response to Bill Gates, *SIGPLAN Notices* 11, no. 7 (July, 1976): 1-2.

#### Case Study 2. Internet

#### Challenge Questions:

1. How is the Internet’s infrastructure and network shaped by hierarchies and forms of control?
2. How have people imagined the Internet’s emancipatory potential? What have been the limits to those imaginings?

#### Sources:

- Jack Goldsmith and Tim Wu, *Who Controls the Internet? Illusions of a Borderless World* (Oxford University Press, 2006), 65-86.
- Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler, “Cyberspace and the American Dream: A Magna Carta for the Knowledge Age,” *The Information Society* 12, no. 3 (1996): 295-308.
- Shanthi Kalathil, “Dot.Com for Dictators,” *Foreign Policy*, no. 135 (March-April, 2003), 42-49.
- K. Sabeel Rahman, “The New Octopus,” *Logic*, Issue 4, April 1, 2018.
- Statistics from Internet World Stats ([1](#) and [2](#)) and [Internet Traffic Report](#).

## WEEK 8. No Class (Recess Week)

## WEEK 9. Nature, Risk, Anthropocene

### DDT / Fukushima

#### Questions to consider:

1. Is the Anthropocene a useful concept? Why? Why not?
2. In what ways can our relationship to technology start changing if we embrace the Anthropocene?

#### Class Readings

- VPRO Documentary, *The Anthropocene: The Age of Mankind Epoch*, (2017) (**Watch before class. Available [at this link](#)**).
- Johan Rockström et. al, “A Safe Operating Space for Humanity,” *Nature* 461 (2009): 472-475.
- Simon L. Lewis and Mark A. Maslin, “Defining the Anthropocene,” *Nature* 519 (2015): 171-180.
- Eileen Crist, “On the Poverty of Our Nomenclature,” *Environmental Humanities* 3 (2013): 129-147.

#### Case Study 1. DDT

#### Challenge Questions:

1. How does Carson fit within the longer history of thinking about the human-environment relationship?
2. How are her own views and those of her critics shaped by post-war developments?

#### Sources:

- J.E. de Steiguer, *The Origins of Modern Environmental Thought* (University of Arizona Press, 2006), 1-42.
- “Now It Can Be Told,” Geigy Company Press Release (1944).
- Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin Company, 1962), 1-4, 85-102.
- Thomas R. Dunlap, ed., *DDT, Silent Spring, and the Rise of Environmentalism: Classic Texts* (Seattle: University of Washington Press, 2008), 31-38, 44-50, 65-67; 85-90, 104-108, 115-120.
- “The Desolate Year,” *Monsanto Magazine*, October 1962, 4-9.

#### Case Study 2. Fukushima

#### Challenge Questions:

1. Why do high-risk technologies like the Fukushima power plant present such difficult dilemmas?
2. What are the prospects and limitations of using nuclear energy in tackling global warming?

#### Sources:

- Charles Perrow, *Normal Accidents: Living with High-Risk Technologies* (Princeton University Press, 1999), 3-14, 32-61.
- Robert H. Socolow and Alexander Glaser, “Balancing Risk: Nuclear Energy & Climate Change,” *Daedalus* 138, no. 4 (2009): 31-44.
- Stewart Brand, *Whole Earth Discipline: An Ecopragmatist Manifesto* (Viking, 2009), 75-89, 92-94, 100-104, 114-116.
- “Japanese Rules for Nuclear Plants Relied on Old Science,” *The New York Times*, March 26, 2011.
- National Diet of Japan, “The Official Report of the Fukushima Nuclear Accident Independent Investigation Commission: Executive Summary,” (2012): 9-23.

## WEEK 10. Midterm Exam

### WEEK 11. Writing an Essay / Librarian Visit

- Class meets for the full period (3:30pm to 6:45pm).

#### Class Readings

- TBD.

### WEEK 12. Field Trip

- Visit to National Museum of Singapore.

#### Class Readings

- TBD

### WEEK 13. Writing Workshop

- In-class writing workshop.

#### Class Readings

- TBD

### WEEK 14. Final Essay Due