

Spring 2023. Sociology 166: **SOCIETY & TECHNOLOGY**

CLASS HOURS Mondays, Wednesdays, and Fridays 11am-12pm
LOCATION Dwinelle 145

INSTRUCTOR Joseph Klett
EMAIL jklett@berkeley.edu (Read [this](#), and include “SOC166” in subject line)
OFFICE HOURS Tuesdays 10a-12p (by [Zoom](#))
Wednesdays 2p-3p (in Social Sciences Building 496)

COURSE DESCRIPTION

What is the relationship between society and the stuff we call technology? Rather than accept that technology develops through some set of natural laws around which society can only react – an idea we call *technological determinism* – a sociological perspective reveals that society and technology are mutually constituted through a history of emerging constructions, conflicts, and coincidences. We will study a variety of cases about the social nature of technology in areas ranging from the factory to the home, the hospital to the ocean, and the desert to the internet. Through these cases we will consider questions of culture, politics, and ethics. Our goal is to discover the dynamic role of technology used in society, and the role of society in making those technologies. Remember the slogan: *it could always be otherwise*.

We begin by exploring the social aspects of the technological world at various scales (Part I). At the human level, there is the work of engineers who must negotiate the wants of machinery to ensure the technology “works.” Engineers enjoy a special authority and access – as well as responsibility – to design the gadgets and gizmos that shape the lives of consumers. The products of engineering are always found in large technological systems, where the smallest change in one area will inadvertently change the conditions for all other elements in the system. This interdependence in turn generates unique cultural artifacts, for example, when rail travel and the industrial extraction of gold alter the language of film-making at the turn of the 20th century. The volatility of systems means that technology always entails some degree of risk. Accidents are a regular feature of the technological world, and society must negotiate its desire for technological advancement with its aversion to catastrophic failure – especially when the stakes are nuclear.

Following this overview at scale, we adjust focus to the social roles that technology produces (Part II). We may assume that technology is meant to serve the people who use it. But closer inspection reveals how technology produces its users through equal parts seduction and entrapment. This fact is vivid in the construction of interfaces, particularly those used in

exploring outer and inner spaces otherwise hostile to human bodies. But we needn't look to the vacuum of space to appreciate how technologies enforce certain identities on its users and non-users: as feminist theorists have argued, technologies carry a long history of inclusion and exclusion which provide certain frontiers while blocking many others. Design ideals like modernism have notoriously created a technology indifferent toward the embodiment of its users. Such oversight has created categories of disability by demanding an impossible standard for what a human should be. For instance, we will consider the conflict inherent in hearing technologies which frame deafness as a disability, and counter-narratives from deaf culture which reject those technologies as solutions without a problem.

Once we have accounted for the scope of technologies and the social relationships they create, we turn our attention to the immediate technological situation that we find ourselves in today (Part III). Digital devices shape much of social interaction today. While often empowering, these technologies also require a new kind of presence in society which clashes with historical states of being in the world. That we have fully entered a period of machine learning, where algorithms evolve to guide our thoughts and dreams, is not merely a new mode for delivering old information. Algorithmic behavior now shapes our political and economic horizons. Dreams of rationality built from perfect information have been rekindled by talk of "big data." Yet data collection and processing cannot outrun the limits of the humans who facilitate these processes, and this means digital technologies will continue to reproduce the biases of people. Ironically, pursuing broad sets of data to teach machines has led to an even broader forgetting of so much pre-digital information deemed irrelevant by the narrow purview of engineers.

And who are these engineers? Not to ascribe too much power to individuals, but the industrial leaders and cultural icons of Silicon Valley have done much to authorize our digital age. This includes an emphasis on society as a network made to resemble the technological systems which power and link our many devices. Yet elevating networks creates higher stakes for those who get left out, for example, by a digital divide which empowers a stratum of technological 'haves' over an already impoverished underclass of technological 'have-nots'. This economic inequality is made even more volatile by the precarious role of digital infrastructure, a widely-neglected yet essential aspect of life in today's large technological systems.

In our final week of instruction we consider the future (Part IV). The more we understand about the relationship between society and technology, the better we can appreciate that there is not one future, but many possible *futures*. By reflecting on historical actions and alternative stories of technology, you will leave this course more knowledgeable about the future of our technological world and how life inside survives.

()

COURSE REQUIREMENTS (% of final grade; all work submitted after the deadline will receive a 5% deduction per 24 hours unless excused)

- A) **Participation** (34%): You are expected to attend lectures well-read and prepared to discuss the material assigned for that day. Your undivided attention is expected. *To receive attendance credit, you must submit one question by the end of each day of lecture.*

- B) **Reading responses** (36%): You will complete three reading responses (2-3 pages each) that illustrate class material with an example of your choosing. These are due at the end of weeks 4, 7, and 13. Complete instructions will be provided in week 2.

- C) **Midterm** (15%): You will complete a take-home midterm consisting of three short-answer (1-2 page) prompts covering the first half of class. Due Sunday, March 12.

- D) **Final** (15%): You will complete a take-home final consisting of three short-answer (1-2 page) prompts covering the second half of class. Due Monday, May 8.

ACADEMIC HONESTY

You are expected to follow the [University guidelines for academic honesty](#). Violations include cheating and plagiarism, as well as self-plagiarism (submitting your own work from a different assignment). Attribution and proper citations are expected for all ideas that are not your own. If you have any doubts, please speak to me or your TA *before* your work is due.

SPECIAL NEEDS AND ACCOMMODATIONS

All students should be able to participate in this course. Please address any special needs you may have with me at the beginning of the semester, or when a challenge arises. If you qualify for accommodations because of a disability, please submit your accommodation plan from the Disabled Students' Program (DSP) to me by email, preferably within the first two weeks of the semester. Contact the DSP by phone (510) 642-0518 or by email to dsp@berkeley.edu.

COURSE OUTLINE

Readings should be completed prior to the class meeting to which they are assigned. All readings can be found on [bCourses](#).

WEEK.DAY DATE: Topic

1.1 **Wednesday 1/18:** Introduction

1.2 **Friday 1/20:** The Social Construction of Technology

1. Langdon Winner. 1985. "Do Artifacts Have Politics?"

PART I: The Technological World

2.1-2.2 **Monday 1/23 & Wednesday 1/25:** Engineering

1. Jim Johnson (Bruno Latour). 1988. "Mixing Humans and Non-humans Together."
2. Lucy Suchman et al. 1999. "Reconstructing Technologies as Social Practice."

2.3 **Friday 1/27:** Shaping Things

1. Bruce Sterling. 2005. Excerpts from *Shaping Things*.
2. WATCH: *Objectified* (2009, dir. Gary Hustwit)

3.1-3.2 **Monday 1/30 & Wednesday 2/1:** Systems

1. Thomas Hughes. 1986. "The Evolution of Large Technological Systems."

3.3 **Friday 2/3:** Cultural Artifacts

1. WATCH: *Dawson City/Frozen Time* (2016, dir. Bill Morrison)

4.1-4.2 **Monday 2/6 & Wednesday 2/8:** Accidents

1. Charles Perrow. 1984. "Introduction" in *Normal Accidents*.
2. Jessica Murphy. 2018. "[Lac-Mégantic: The runaway train that destroyed a town.](#)"
[Links to an external site.](#)

4.3 **Friday 2/10:** (Nuclear) Power

1. Gabrielle Hecht. 2014. "Invisible Production and the Production of Invisibility."
2. WATCH: *Chernobyl* (2019, dir. Johan Renck)

Sunday 2/12: Reading response #1 due

PART II: The Sociality of Machines

5.1-5.2 Monday 2/13 & Wednesday 2/15: Users

1. Claude Fischer. 1988. "Gender and the Residential Telephone, 1890-1940."
2. Nelly Oudshoorn and Trevor Pinch. 2003. "How Users and Non-Users Matter."

5.3 Friday 2/17: Interfaces

1. Stefan Helmreich. 2007. "An Anthropologist Underwater."
2. Janet Vertesi. 2015. "Seeing Mars and Drawing Mars" in *Seeing Like a Rover*.

Monday 2/20: NO CLASS

6.1 Wednesday 2/22: Feminist Technoscience

1. Sahil Chinoy and Chloe Weiner. 2016. "[What Does a Hacker Look Like?](#)"
1. [Links to an external site.](#)
2. Susan Leigh Star. 1991. "Power, Technology and the Phenomenology of Conventions."

6.2 Friday 2/24: Inconvenient Bodies

1. Ben Goldfarb. 2015. "[Look Down at Your Body. You Have Become a Coral.](#)"
- 🔗 [Links to an external site.](#)
- 🔗 Amanda Morris. 2022. "[What Flying Is Like for Passengers Who Use Wheelchairs.](#)"
2. [Links to an external site.](#)

7.1-7.2 Monday 2/27 & Wednesday 3/1: Disability

1. Jonathan Sterne. 2015. "Hearing."
2. Mara Mills. 2015. "Deafness."
3. WATCH: *Touch the Sound* (2004, dir. Thomas Riedelsheimer)

7.3 Friday 3/3: The Electronic Ear

1. David Polansky. 2019. "[Digital Hearing Aids Turn the World into a Giant MP3 File.](#)"
- 🔗 [Links to an external site.](#)
- 🔗 Christina Jewett. 2022. "[FDA Clears Path for Hearing Aids to be Sold Over the Counter.](#)"
2. [Links to an external site.](#)
3. WATCH: *The Sound of Metal* (2019, dir. Darius Marder)

Sunday 3/5: Reading response #2 due

8.1 Monday 3/6: Midterm Review I (online)

8.2 Wednesday 3/8: Midterm Review II (in class)

Friday 3/10: TAKE-HOME MIDTERM (due Sunday 3/12)

PART III: The Digital Age

9.1-9.2 Monday 3/13 & Wednesday 3/15: Gadgetry

1. Matt Ratto. 2007. "Ethics of Seamless infrastructures."
2. Douglas Rushkoff. 2013. "Preface" and "Narrative Collapse" in *Present Shock*.

9.3 Friday 3/17: Attention Deficits

1. WATCH: *Black Mirror*, "The Entire History of You" (2011, dir. Brian Welsh)

10.1-10.2 Monday 3/20 & Wednesday 3/22: Algorithms

1. Malte Ziewitz. 2017. "A not quite random walk."
2. Kashmir Hill. 2014. "[You Can Hide Your Pregnancy Online But You'll Feel Like a Criminal.](#)"

🔗 [Links to an external site.](#)

🔗 WATCH: "[How Algorithms Shape Our World](#)

3. [Links to an external site.](#)" (2011, Kevin Slavin, TED Global)

10.3 Friday 3/24: Terminal Velocity

1. Alexis Madrigal. 2010. "[Market Data Firm Spots the Tracks of Bizarre Robot Traders](#)
1. [Links to an external site.](#)"
2. WATCH: *Money & Speed* (2011, dir. Marije Meerman)

Monday 3/27, Wednesday 3/29 & Friday 3/31: NO CLASS

11.1-11.2 Monday 4/3 & Wednesday 4/5: Big Data

1. danah boyd & Kate Crawford. 2012. "Critical Questions for Big Data."

11.3 Friday 4/7: Digital Amnesia

1. Tripp Mickle. 2022. "[Who Gets the Last Word on Steve Jobs? He Might.](#)
1. [Links to an external site.](#)"
2. WATCH: *Digital Amnesia* (2014, dir. Bregtje van der Haak)

12.1-12.2 Monday 4/10 & Wednesday 4/12: Silicon Valley

1. Fred Turner. 2009. "Burning Man at Google."
2. Charles Duhigg. 2016. "What Google Learned from Its Quest to Build the Perfect Team."
3. Lilly Irani. 2015. "Hackathons and the Making of Entrepreneurial Citizenship."

12.3 Friday 4/14: Infrastructure

1. Nicole Starosielski. 2015. "Against Flow."
2. Sally Adee. 2019. "The Global Internet is Disintegrating. What Comes Next?"

13.1-13.2 Monday 4/17 & Wednesday 4/19: Networks

1. Kevin Hampton. 2010. "Internet Use and the Concentration of Disadvantage."
2. Peter Singer and Emerson Brooking. 2018. "In the Social Media Age, What You Share is Deciding What Happens on the Battlefield."
3. Forrest Stuart. 2020. "Code of the Tweet."

13.3 Friday 4/21: The Digital Divide

1. Andrew Spaulding. 2015. "I used a 56K modem for a week and it was Hell on Earth."
2. Cecilia Kang. 2016. "Bridging a Digital Divide That Keeps Schoolchildren Behind."
3. WATCH: *The Internet's Own Boy* (2014, dir. Brian Knappenberger)

Sunday 4/23: Reading response #3 due

PART IV: The Future

14.1-14.2 Monday 4/24 & Wednesday 4/26: Futures

1. Vincanne Adams et al. 2009. "Anticipation."
2. Kodwo Eshun. 2003. "Further Considerations of Afrofuturism."
3. Jameson Wetmore. 2007. "Amish Technology."
4. WATCH: *Manufactured Landscapes* (2006, dir. Jennifer Baichwal)

14.3 Friday 4/28: Life in the Future

1. Michelle Bastian. 2012. "Fatally Confused."

15.1 Monday 5/1: Final review I (online)

15.2 Wednesday 5/3: Final review II (in class)

Friday 5/5: TAKE-HOME FINAL (due Monday, 5/8)