

The Information Society



We are often told that we are living in an “Information Society,” and indeed, this is a truth that seems self-evident: communications and information technologies increasingly pervade our homes, our workplaces, our schools, even our own bodies. But what exactly do we mean when we talk about the “Information Society”? If we are living in an Information Society, when did it come into being? What developments — social, economic, political, or technological — made it possible? How does it differ from earlier eras? And finally, and most significantly: what does it all mean?

This course will explore the ways in which Western industrialized societies, over the course of the previous two centuries, came to see information as a crucial commercial, scientific, organizational, political, and commercial asset. Although at the center of our story will be the development of new information technologies — from printing press to telephone to computer to Internet — our focus will not be on machines, but on people, and on the ways in which average individuals contributed to, made sense of, and come to terms with, the many social, technological, and political developments that have shaped the contours of our modern Information Society. Our goal is to use these historical perspectives to inform our discussions about issues of contemporary concern about information technology.

I222: The Information Society

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Office Hours: Tuesday 10-11 E226; online at <https://iu.zoom.us/j/3721147179>

Course Goals:

The goal of the course is to provide you with the tools for critically evaluating claims made about the role and influence of information technology in modern society. Our primary methodology will be historical. This might at first seem unusual, since so much of the rhetoric of the Information Society asserts that there is no relevant history, and that we are living in an era in which the old rules and modes of thinking no longer apply. But we are not the first society to believe itself to be living through an unprecedented technological revolution, and so in this course, we will learn to apply the time-honored perspectives of the humanistic disciplines to the study of contemporary technological developments.

Students will learn to think historically about information technologies, to broaden their perspective on the relationship between technology and society to include insights from the humanities and social sciences, and to master the very best available relevant scholarly literature.

Course Format:

The Information Society course meets twice weekly. To the degree possible with such a large course, our meetings will be a mixed lecture-discussion format. Our first session each week will typically introduce our week's topic; the second provides further development, as well as an opportunity to talk about the readings and answer any questions that you might have.

Readings:

The readings in the course draw on the very best literature from history, sociology, anthropology, and the emerging field of Internet studies. You need to prepare each week's readings *in advance* of the first lecture of that week.

There are no required books for the course. All of the readings will be made available electronically via the Canvas site.

Course Schedule

I Introduction

Introducing the Information Revolution!

Gutenberg, Galileo, Google

Reading(s):

Cook, Scott D.N. "Technological Revolutions and the Gutenberg Myth." In *Internet Dreams: Archetypes, Myths, and Metaphors*, edited by Mark Stefik (MIT Press, 1997)

Kline, Ronald. "Inventing an Information Age," *The Cybernetics Moment, Or, Why We Call Our Age the Information Age* (Johns Hopkins University, 2017)

Assignment: Medieval Management Consultant

II The Age of Information

The Politics of the Post-Office

The Annihilation of Space & Time

Reading(s):

Henkin, David. "Embracing Opportunities: The Construction of the Personal Letter." *The Postal Age: The Emergence of Modern Communications in Nineteenth-Century America* (University of Chicago, 2006)

John, Richard. "Professor Morse's Lightning," *Network nation: inventing American telecommunications* (Harvard University Press, 2010)

Assignment: Digital Diary: the social norms of text messages

III Industrializing Information

Information Factories

When Computers were Human

Reading(s):

Campbell-Kelly, Martin. *The Railway Clearing House and Victorian Data Processing*, 1994

Davies, Margery "Women Enter the Office," *Woman's Place Is at the Typewriter: Office Work and Office Workers, 1870-1930* (Temple University Press, 1982)

Assignment: Tracking Packages in the 19th Century

IV When Information is Power

Democracy & Data

From Mad Men to Big Brother

Reading(s):

Heide, Lars. "Keeping Tabs on Society with Punched Cards," *Punched-card systems and the early information explosion, 1880-1945* (Johns Hopkins University Press, 2009)

Pratt Guterl, Matthew. "Frederick Douglass's Faith in Photography: How the former slave and abolitionist became the most photographed man in America," *The New Republic* (Nov 2, 2015)

Ahern, Joseph. "A (short) history of the race question on the decennial census," *Center for Community Solutions* (Mar 20, 2020)

Bivens, Rena. "The Gender Binary Will Not Be Deprogrammed: Ten Years of Coding Gender on Facebook." *New Media & Society* 19:6 (2017): 880–98.

Assignment: Complete the [Discriminator interactive documentary](#)

V Giant Brains; or, Machines that Think

War is technology, technology is war

Build your own Computer!

Reading(s):

Edwards, Paul. "Why Build Computers? The Military Role in Computer Research," *The Closed World: Computers and the Politics of Discourse in Cold War America* (MIT Press, 1996)

Mindell, David. "Cybernetics and Ideas of the Digital," *Between human and machine: feedback, control, and computing before cybernetics* (Johns Hopkins University Press, 2002)

Assignment: Enigma Machine Emulator

VI The Computerization of Society

Software Revolution

Simulations, Simulacra, and the Matrix

Reading(s):

Mahoney, Michael. "Software: The Self-Programming Machine," *Histories of Computing* (Harvard University Press, 2011)

Ensmenger, N. 'Making Programming Masculine,' in Misa, T.J. (ed.) *Gender Codes* (John Wiley & Sons, 2010)

Shetterly, Margot. "Young, Black, and Gifted" and "Degrees of Freedom" *Hidden Figures: The Untold Story of the African American Women Who Helped Win the Space Race* (HarperCollins, 2016)

Alicandry, Jeremy. [IBM Apologizes For Firing Computer Pioneer For Being Transgender...52 Years Later](#) *Forbes* (Nov 18, 2020)

Assignment: The Computer Girls Take Over (primary source exercise)

VII Silicon Valley 1.0

Revolution in Miniature

The Materiality of the Virtual

Reading(s):

Campbell-Kelly, et al. "New Modes of Computing." Chapter 9 in *Computer: A History of the Information Machine* (2013)

Nakamura, Lisa. "Indigenous Circuits: Navajo Women and the Racialization of Early Electronic Manufacture", *American Quarterly* 66:4 (2014)

Lécuyer, C. “From Clean Rooms to Dirty Water: Labor, Semiconductor Firms, and the Struggle over Pollution and Workplace Hazards in Silicon Valley,” *Information & Culture: A Journal of History* (2017).

Assignment: Play the [Game of Life](#)

VIII The Social Construction of the Personal Computer

Visions of Personal Computing

Platforms as Technology

Reading(s):

Rankin, Joy. “When Students Taught the Computer” and “The Promise of Computer Utilities and the Proliferation of Networks” *A People’s History of Computing in the United States* (Harvard University Press, 2018)

Patrick, Elizabeth. “Imagining the Personal Computer: Conceptualizations of the Homebrew Computer Club 1975–1977,” *IEEE Annals of the History of Computing* (2017)

De Lacy, J. “The sexy computer,” in *Computers in the human context: information technology, productivity, and people* (MIT Press, 1989)

Assignment: Primary Source Assignment: The History of The PC, part 1

IX Great Myths in the History of Computing

From Hippies to Hackers

Accidental Billionaires

Reading(s):

Cringely, Robert X. *Accidental Empires: How the Boys of Silicon Valley Make Their Millions, Battle Foreign Competition, and Still Can’t Get a Date.* (1992). Chapters 7-8, pp. 119–181

O’Mara, Margaret. “Risky Business” and “Storytellers,” *The Code: Silicon Valley and the Remaking of America* (Penguin, 2020)

Nooney, Laine. ‘A Pedestal, A Table, A Love Letter: Archaeologies of Gender in Videogame History,’ *Game Studies*, 13:2 (2013)

Edwards, Benj. [The Untold Story Of The Invention Of The Game Cartridge](#) *Fast Company*, Jan 22, 2015

Assignment: Primary Source Assignment: The History of The PC, part 2

X The Networked Society

ARPAnet to Internet

The Architecture of the Internet

Reading(s):

Abbate, Janet. “White Heat and Cold War: The Origins and Meanings of Packet Switching,” *Inventing the Internet* (MIT Press 1999)

Peters, Ben. *How Not to Network a Nation: The Uneasy History of the Soviet Internet* (MIT Press, 2016), selected excerpts.

Goldsmith, Jack and Wu, Timothy. “How Governments Rule the Net,” *Who Controls the Internet?: Illusions of a Borderless World* (Oxford University Press, 2006).

Assignment: Packet Analysis Assignment

XI Cyberspace(s)

From MOOS and MUDs to Social Media Is that a computer in your pocket?

Reading(s):

- Fred Turner, "Where the counterculture met the new economy: The WELL and the origins of virtual community," *Technology and Culture* (2005)
- boyd, danah. "White flight in networked publics: how race and class shaped American teen adoption of MySpace and Facebook," in L. Nakamura (ed) *Race after the Internet* (2012)
- Takhteyev, Yuri, "The Global Tongue" and "Software Basiliero" *Coding Places: Software Practice in a South American City* (MIT Press, 2012).

Assignment: Digital persona self-assessment

XII Convergence

There's a human in your algorithm Intelligent Machines, Autonomous Vehicles

Reading(s):

- Irani, Lily. 'Difference and Dependence among Digital Workers: The Case of Amazon Mechanical Turk,' *The South Atlantic Quarterly*, 114:1 (2015)
- McIlwain, Charlton. Black software: *The Internet and racial justice, from the AfroNet to Black Lives Matter* (2012), selected excerpts
- Roland, Alex. "Putting SC to Work: The Autonomous Land Vehicle," *Strategic computing: DARPA and the quest for machine intelligence, 1983-1993* (MIT Press, 2002).

Assignment: Lifecycle assessment of a digital artifact

XIII Post-Modern, Post-Industrial, Post-Information?

Internet Everywhere Information Revolution Revisited

Reading(s):

- Mullaney, Thomas. 'QWERTY in China: Chinese Computing and the Radical Alphabet,' *Technology and Culture* 59:4S (2018), pp. S34-S65
- Philip, Kavita, Irani, Lily, and Dourish, Paul. 'Postcolonial Computing: A Tactical Survey,' *Science, technology & human values*, 37:1 (2012)
- Winner, Langdon. "Mythinformation," *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (1986)

XIV Course Policies

Religious and Civic Observations

In accordance with the Office of the Dean of the Faculties, any student who wishes to receive an excused absence from class must submit a request form available from the Dean of the Faculties for each day to be absent. This form must be presented to a course instructor by the end of the second week of this semester. A separate form must be submitted for each day of class you will be missing. The form must be signed by an instructor, a copy made, and the original returned to the student. Information about the policy on religious observation can be found at the following web site: www.iub.edu/~vpfaa/welcome/forms.shtml#religious.

Students with Special Needs

Please discuss any accommodations you may need with the instructor. Please visit studentaffairs.iub.edu/dss/ and fill out the forms, requesting that memos be sent to one of the instructors from the Office of Disability Services for Students regarding your testing/classroom modifications. You may also contact the office by telephone (812.855.7578) or visit in person in the Herman B. Wells Library, room W302.

Classroom Behavior

Everyone is expected to conduct themselves professionally during class. This includes arriving on time. Arriving late or using laptops or other devices for entertainment distracts everyone. Students who arrive at class more than ten minutes late, leave early without advance permission of an instructor, or use electronic devices may not receive attendance and/or participation credit for the day, at the discretion of the instructors. Professional behavior also entails being respectful of others and their opinions—even and especially when you do not agree with them.

Sexual Misconduct and Title IX

As your instructor, one of my responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, you can make an appointment with: Sexual Assault Crisis Services (SACS) at (812) 855-8900 (counseling services); Confidential Victim Advocates (CVA) at (812) 856-2469 (advocacy and advice services); IU Health Center at (812) 855-4011 (health and medical services).

It is also important that you know that Title IX and University policy require me to share any information brought to my attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University

can respond and assist. I encourage you to visit stopsexualviolence.iu.edu to learn more about the resources available to victims of sexual assault or harrassment.