HISC 130: Technology in the Twentieth Century
MWF 1-1:50, Pepper Canyon Hall 120

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Office Hours: Wednesday 11:30-12:30, 2:30-3:30 HSS 2302

Course Description:
This course explores the history of twentieth century technology, primarily in the United States. We will critically analyze examples of different kinds of public and personal technologies, including: transportation, communication, domestic technologies, and computer technologies. We will study how these technologies came to be created, how they were used, and the social impact of their development. We will focus on the relationship between consumer technologies and the larger technological infrastructure they are a part of. Do we, as a society, have full control over the technologies we create? Do technologies lead to consequences beyond our control? Why do certain technologies succeed and others fail?

Required Books:
Claude S. Fischer. *America Calling: A Social History of the Telephone to 1940*. (Berkeley, CA: University of California Press), 1992. [Available through bookstore or online through the library]

Stephen B. Goddard. *Getting There: The Epic Struggle between Road and Rail in the American Century*. 1994. [Available through bookstore]

Articles and Chapters: [Available through e-reserves, password: ep130]
Janet Abbate. *Inventing the Internet*. (Cambridge, MA: MIT Press) 1999, chapter 6. pgs 181-220.

Janet R. Daly Bednarek. "The Flying Machine in the Garden: Parks and Airports, 1918-1938," *Technology and Culture*, V.46, n.2, April 2005, pgs 350-373.

Paul Ceruzzi. "From Scientific Instrument to Everyday Appliance: The Emergence of Personal Computers, 1970-77," *History and Technology*. V.13, 1996, pgs 1-31.

Ruth Swartz Cowan. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. (Basic Books) 1983, chapters 4 and 7. pgs 69-101 and 192-216.

Thomas P. Hughes. "The Evolution of Large Technological Systems," in W. E. Bijker, T. P. Hughes, T. Pinch, eds. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. (Cambridge, MA: MIT Press) 1987. pgs 51-82.

E. Stratford Smith. "The Emergence of CATV: A Look at the Evolution of a Revolution," *Proceedings of the IEEE*, V.58, n.7, 1970, pgs 967-982.

Thomas A. Wikle. "Cellular Tower Proliferation in the United States," *Geographical Review*, V.92, n.1, January 2002, pgs 45-62.

Susan K. Wilbur. "The History of Television in Los Angeles, 1931-1952: Part I: The Infant Years," *Southern California Quarterly*, V.60, n.1, Spring 1978, pgs. 59-76.

Course Requirements:
Paper: [6-7 pages] 35%
    This research paper asks you to write about the history of a technology of your choice. Choose any technology created during the twentieth century. Describe the development and use of the technology. Apply at least one of the concepts from class in analyzing its history. You must cite the sources you use (at least 2 secondary sources and 1 primary source, no encyclopedias). Paper topics (with potential sources) must be submitted to me and approved by the end of week 7. Possible class concepts to utilize:
        The relationship between infrastructure and consumer technology
        The interaction of components in a technological system
        The use of a technology
        Unintended consequences
        Technological failures

2 Reading Responses: [2 pages each] 5% each
    Choose a reading from the class schedule and write a two page response of your reaction to the reading and questions you have on it. Make sure to briefly summarize the reading (1 paragraph). Questions could be on parts of the reading that you found confusing or particularly interesting. I will incorporate student responses in lectures. Submit your response via email by the Sunday evening before the week for that reading. The first reading response is for readings prior to the midterm and the second is for readings after the midterm.

Midterm: 25%

Final Exam: 30%

Class Schedule:

Week 0: Introduction
    F: What Is Technology?

Week 1: Core Concepts
Fischer. *America Calling*. Chapter 1 (pages 1-28)
Hughes. "The Evolution of Large Technological Systems," (pages 51-82)
    M: Technological Systems / Technology and Infrastructure
    W: Use of Technology / Unintended Consequences / Technological Failures
    F: Crossing the Nation

Week 2: The Decline of the Railroad
Goddard. *Getting There*. Preface, Prologue, Chapters 1 and 2 (pages ix-42)
Film: *The American Road* (3 parts, online, search at http://archive.org/details/prelinger)
    M: The Machine in the Garden

      W: Government Regulation
      F: *The American Road*

Week 3: The Rise of the Highway
Goddard. *Getting There*. Chapters 3, 6, 12, 13 (pages 43-64, 102-119, 195-225)
      M: Ford's Model T
      W: Building the Highways
      F: Freeways vs Cities

Week 4: Alternative Means of Transportation
Goddard. *Getting There*. Chapters 4 and 7 (pages 65-83, 120-137)
Bednarek. "The Flying Machine in the Garden: Parks and Airports, 1918-1938." (pages 350-373)
Film: *Who Framed Roger Rabbit?*
      M: GM's Conspiracy against Trolleys
      W: *Who Framed Roger Rabbit?*
      F: Airplanes

Week 5: Communication Technologies: The Telephone Finds Use
Fischer. *America Calling*. Chapters 2 and 3 (pages 33-85)
      M: Invention of the Telephone
      W: Diffusion and Use before WWI
      F: Diffusion and Use between the Wars

Week 6: Telephone cont.
Fischer. *America Calling*. Chapters 6, 8, 9 (pages 182-192, 222-247, 255-272)
      M: Telephone Etiquette and Social Meanings
      W: Post-WWII Automobiles and Telephones
      F: Midterm Exam

Week 7: Household Technology
Cowan. *More Work for Mother*. Chapters 4 and 7 (pages 69-101, 192-216)
      W: Utilities
      F: Appliances and Housework
Paper topics must be submitted by Friday, 11/15.

Week 8: Other Communication Infrastructure
Wilbur. "The History of Television in Los Angeles, 1931-1952: Part I." (pages 59-76)
Smith. "The Emergence of CATV: A Look at the Evolution of a Revolution." (pages 967-982)
Wikle. "Cellular Tower Proliferation in the United States." (pages 45-62)
      M: Broadcast Television
      W: Cable Television
      F: Cellular Phones

Week 9: Personal Computers and the Internet
Ceruzzi. "From Scientific Instrument to Everyday Appliance." (pages 1-31)
Abbate. *Inventing the Internet*. Chapter 6 (pages 181-220)

    M: The Personal Computer
    W: The Internet

Week 10: Infrastructure Wrap-up
Goddard. *Getting There.* Chapters 14 and 15 (pages 226-245)
Film: *Revenge of the Electric Car*
    M: Resurgence of Public and Alternative Transportation
    W: *Revenge of the Electric Car*
    F: recap
Take-home final handed out.
Research paper due by Friday.

Final Exam: Monday 12/9