Why HOFI?

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IS 103
History of Information
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The history of "information": Why now?
  What makes this the "Information Age"?

What historical assumptions does the "information age" usually imply?
  Novelty: "Never before….
  The determinant role of "information technology"

Why does it matter that we get HofI right?
  Looking forward: How does history help us to understand the present & predict the future?
  Looking backward: How useful is "information" as a principle for organizing & understanding the past?

Outline of course structure, requirements, grades (Paul)
The history of "information": Why now?

Every age gets the history it needs: Gutenberg in the machine age

The monks around me besieged me so with eager questions: What is this curious thing? What is it for?...

"It is a public journal; I will explain what that is, another time. It is not cloth, it is made of paper; some time I will explain what paper is. The lines on it are reading matter; and not written by hand, but printed; by and by I will explain what printing is. A thousand of these sheets have been made, all exactly like this, in every minute detail—they can't be told apart."

Then they all broke out with exclamations of surprise and admiration: "A thousand! Verily a mighty work—a year's work for many men. "No—merely a day's work for a man and a boy." They crossed themselves...

Mark Twain, *A Connecticut Yankee In King Arthur's Court*, 1889
The history of "information": Why now?

Article on "printing" in the Encyclopedia Britannica 11th ed., 1911
The history of "information": Why now?


- Oral tribe culture
- Manuscript culture
- Gutenberg galaxy
- Electronic age ("the Galaxy reconfigured")

"societies have been shaped more by the nature of the media by which men communicate than by the content of the communication."
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"I don't pretend to understand it. After all, my stuff is very difficult." M. McLuhan
You, the American people, have made our passage into the global information age an era of great American renewal.

Bill Clinton, Farewell Address, Jan 19, 2001

The information age is opening up new possibilities for all of us, for our children and for the entire nation. . . ."

Bill Gates

Our Information Age is still in its infancy. We're only at Web 2.0. Now our virtual world is going viral. And we've only just begun to explore the next generation of technologies that will transform our lives in ways we can't even begin to imagine.

Barack Obama, May 29, 2009
The coming of the information age

Relative frequency of *machine age*, *atomic age*, *space age* and *information age* in Google Books, 1920-2000
Defining the "Information Age"

Information age The period beginning around 1970 and noted for the abundant publication, consumption, and manipulation of information, especially by computers and computer networks. *American Heritage Dict.*, 4th ed.

Information Age is a term that has been used to refer to the present era, generally beginning within ten years of 1990. The term alludes to the global economy's shift in focus away from the production of physical goods and towards the manipulation of information. Wikipedia
The First Information-Age President?

It's the result of Clinton being the first information age president. *Washington Post*, 1/22/99
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George W. Bush is the first Information Age president. *Seattle Times*, 8/27/06
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“I like the fact that we have a president who uses information technology to his benefit. It means we actually have the first information-age president,” said Bruce Schneier, a security technologist and author. —*Fox Bus News*, Feb. 6, 2009
Implicit historical assumptions about the "Information Age"

The unprecedented present
The determinative role of technology
The Unprecedented Present

The Shock of the New: "Never Before"

The advent of the Information Age entails fundamental changes in the nature of commerce, organizational structure, education, politics & public discourse, national identity, news and entertainment, community and personal relations – and in the nature of change itself.
The Unprecedented Present

Novelty: "Never Before"

"The Web seems to be growing at an a rate of sheer numbers that is unprecedented in world history."

"I.T. has triggered complex social, political, economic and ethical issues that need urgent action if we are to survive the coming decades of unprecedented technological change."

“The promise of the Information Age is the unleashing of unprecedented productive capacity by the power of the mind. . . . The dream of the Enlightenment, that reason and science would solve the problems of humankind, is within reach.” Manuel Castells
"Been there, done that"

But many of the "upprecedented" features of the Information Age have instructive historical antecedents…
"Been there, done that"

But many of the "uprecedented" features of the Information Age have historical antecedents
...starting with the idea that the current age is unprecedented.
"Been there, done that"

History provides antecedents for:

- The digital generation gap – immigrants and "digital natives"
- "The death of distance" the "annihilation of space and time"
- "The end of the book"; "The death of the newspaper"; economic models for the new media
- How to organize and make accessible an unprecedented mass of information?
- Piracy and IP in the information age – "information wants to be free"
- Problems of reliability; who can you trust online?
- Threats to individual privacy
- What role for the government in building infrastructure, monitoring use?

But does that mean there's nothing new under the sun?
Implicit historical assumptions in "The Information Age," 2

The historical role of Technology

However you date the "dawn" of the IA, presumed to be tied to new technologies (Jacquard loom, Babbage's "difference engine," punch cards, Eniac, Internet, etc.)
The historical role of technology

The role of Technology

Does the history of information" = "history of information technology"?

History 3493 (Oklahoma U.) The Cultural History of Information. An introduction to the history of information technologies and communications media from the printing press to the internet. Topics will include the print revolution, the advent of electronic communications, the growth of broadcast media, the development of the digital computer, and the internet boom.
Why HOFI is not a history of information technology
Problem 1: Tracing Technological "Antecedents"
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1. Hollerith tabulating machine 1890
2. Babbage's difference engine 1820's
3. Jaquard loom 1801
4. Schickard's calculator 1623
5. Apple II 1977
6. DEC PDP11 1965
7. Eniac I 1946
8. DEC PDP11 1965
"What was the first computer"?

- Antikythera mechanism, ca. 150 B.C.
- Abacus 2400, B.C.
- Stonehenge, 3100 B.C.
- Pascal's calculator, 1624
- Ishango bone, 20,000 B.C.
History as a Whiggish Progression leading to…. us

Whig theory of history = history is a triumphant (and, often, inevitable) progress toward the present state…

… the history of our country during the last hundred and sixty years is eminently the history of physical, of moral, and of intellectual improvement.

Thos. Babington Macaulay, 1848

That great, growling engine of change -- technology.

Alvin Toffler, 1970.
Problem 2: What are "Information Technologies"

What makes for "Information technology"?
Prototypical instances of modern "IT"
More marginal instances of "information technologies"
What isn't IT?
Rethinking "Information Technologies"
Rethinking "Information Technologies"
Complicating the Story: The Interconnection of Technologies
Complicating the Story: The Interconnection of Technologies
Complicating the Story, 1:
The Interconnection of Technologies
Complicating the Story, 1: The Interconnection of Technologies
Complicating the Story, 1: The Interconnection of Technologies
The Interconnection of Technologies: Managing correspondence

Letterpress and letterpress book, late 19th c.

Wooten desk
The Interconnection of Technologies: Managing correspondence
Complicating the Story, 2:
The Social Setting of Technologies

The 19th c. newspaper required….

Specialization of Skills

Specialization of Commercial Roles
Complicating the Story, 2: The Social Setting of Technologies

What made possible the modern newspaper?

- Mass literacy,
- Availability of capital
- Emergence of professional journalism
- Shifts in political partisanship, relaxation of censorship
- Rise of science & "objectivity"
- Modern advertising
Why Study History, 1: Looking Ahead
Every Age Gets the Future it Thinks It Wants

Norman Bel Geddes, General Motors Futurama, 1939 World's Fair
Technological Utopianism: 1880-1930

Edgar Chambless, "Roadtown," 1910

The determinist fallacy: Whatever can be built, will be built

Milo Hastings, "City of Endless Night" (Berlin, 2041), 1920
Projecting technologies

Westinghouse Electric Home of the Future, 1939

Libbey-Owens-Ford, 1943
"The American of tomorrow, clothed in plastics from head to foot, will live in a plastics house, drive a plastics auto, and fly in a plastics airplane." *Popular Mechanics*, 1940

Monsanto, House of the Future, Disneyland, 1957 -- "Everything is ultra-modern and almost entirely synthetic."
Two Ways of Getting the Future Wrong
Anticipating Change

What would be most surprising to the characters of "Father Knows Best" if they could see the world of 2011?
Anticipating Change
Anticipating Social Change
Anticipating Social Change

What will make our predictions most quaint or ridiculous to our descendants?

Recognizing the historical roots of "news," "information," "intellectual property," "objectivity," etc.

(PD, next time)
Every age writes the history it needs.

How can "information" serve as a lens to organize historical accounts?

(PD, next time)
Pick one of the following and explain how it might be serve as an "information technology." Try to make your answers ingenious without being implausible. Bring your answer to class.

- a bicycle
- a necktie
- a blanket
- a piece of string
- a dishrack