IS 103

HISTORY OF INFORMATION
PROFESSORS DUGUID & NUNBERG

Why HOFI?

Paul Duguid/Geoff Nunberg

School of Information, UC Berkeley

INFO 103, COG SCI103, HIST C192, MSC 104C
History of Information
Jan. 21, 2014

Itinerary, 1/21

The history of "information": Why now?

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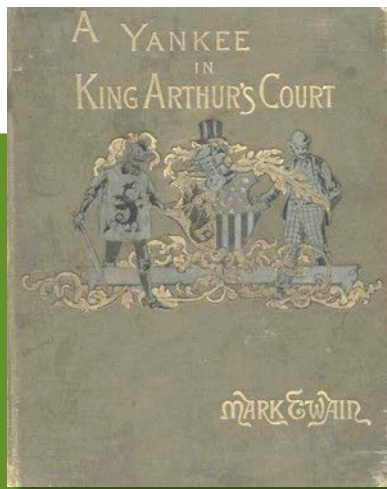
- Novelty: "Never before…."
- The determinant role of "information technology"

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?

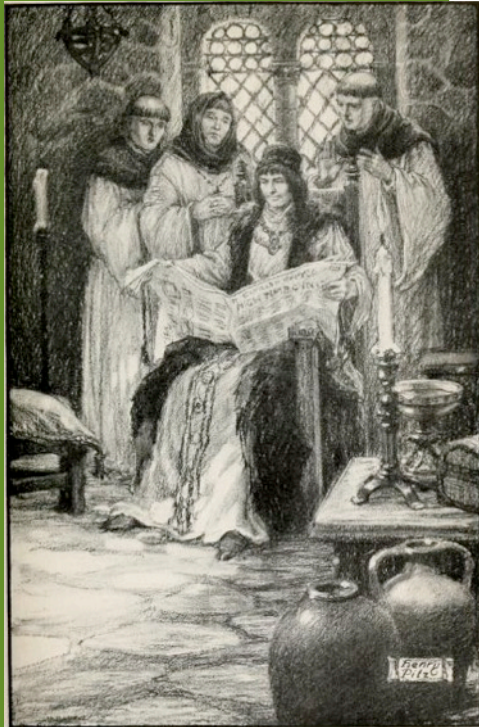## Every age gets the history it needs: Gutenberg in the machine age

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

"It is a public journal...The lines on it are 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...

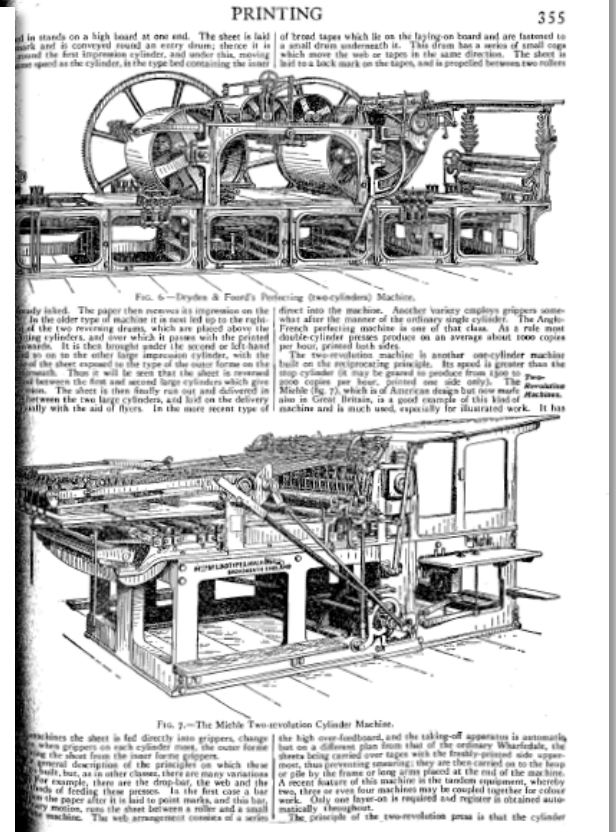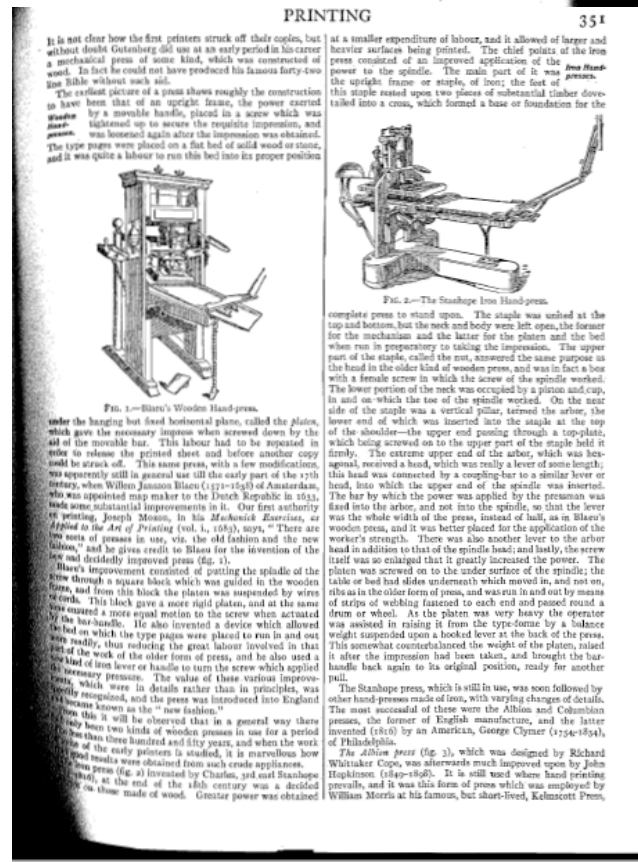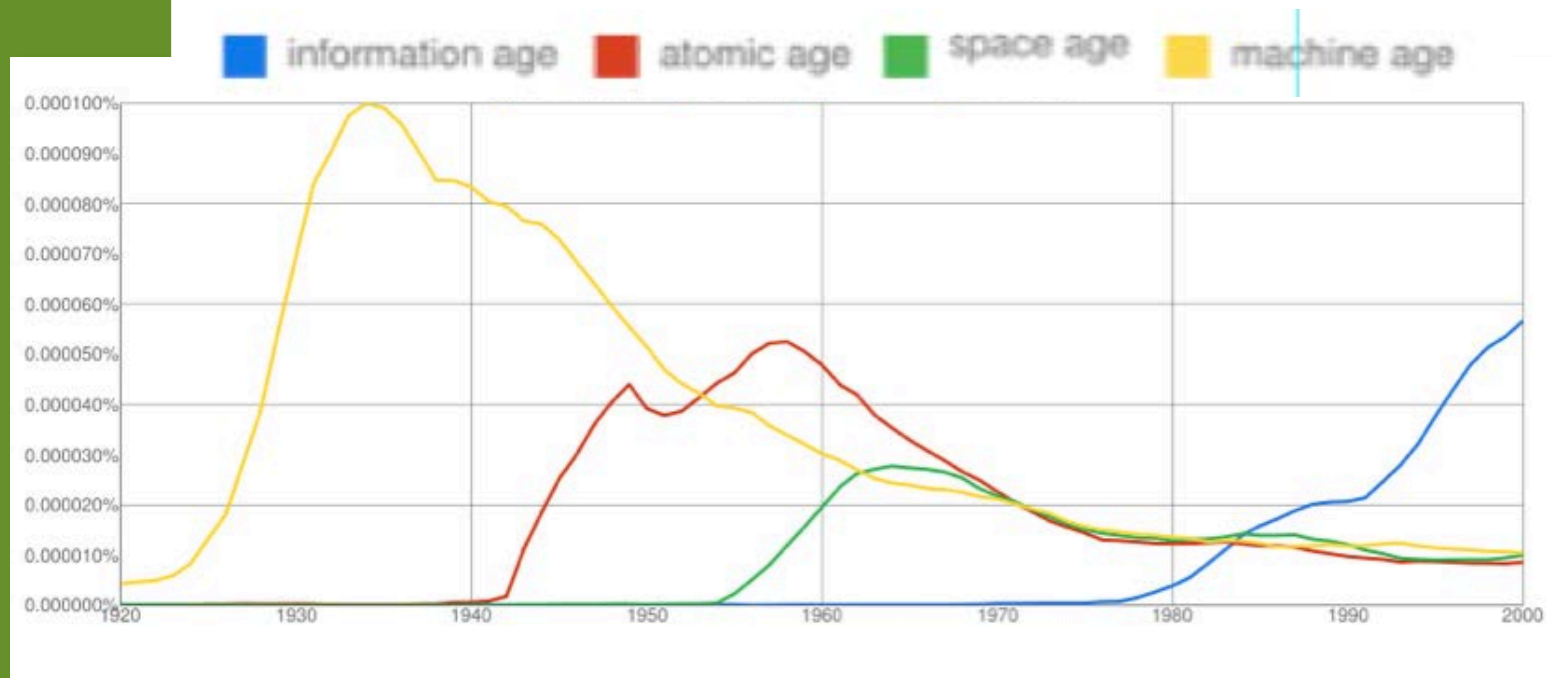Mark Twain, *A Connecticut Yankee In King Arthur's Court*, 1889

The history of "information": Why now?

Article on "printing" in the Encyclopedia Britannica 11th ed., 1911

Relative frequency of *machine age, atomic age, space age* and *information age* in Google Books, 1920-2000

Carving up the past

The Four Ages of Man (Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man, 1962*):

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."
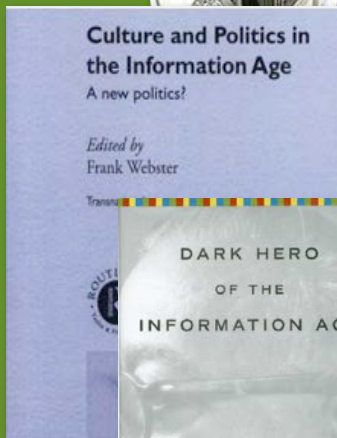
Defining the "Information Age"

1960   R. S. Leghorn: Present and anticipated spectacular informational achievements will usher in public recognition of the 'information age', probably under a more symbolic title.

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

The First Information-Age President?

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George W. Bush is the first Information Age president. *Seattle Times,* 8/27/06

The First Information-Age President?

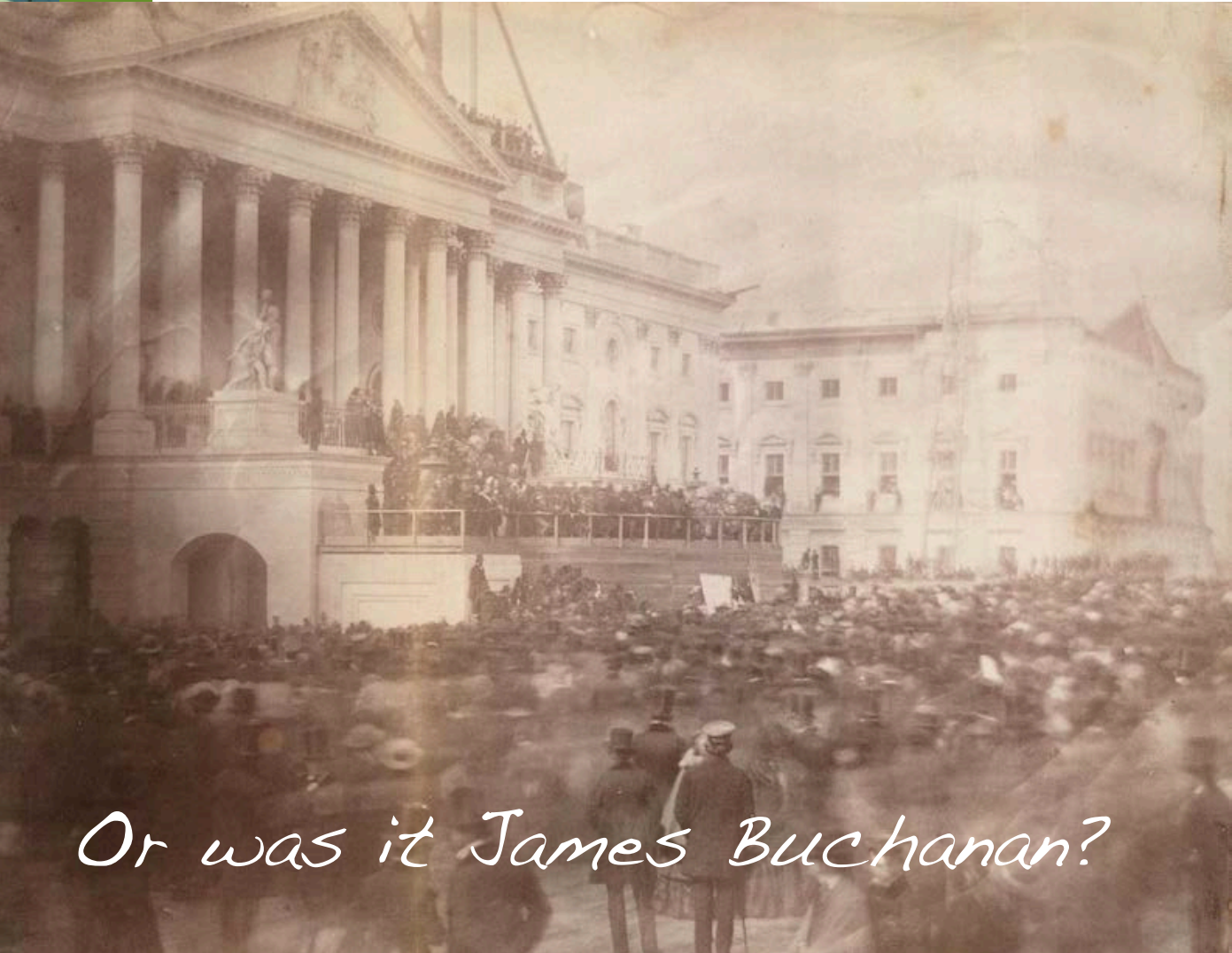It's the result of Clinton being the first information age president. *Washington Post,* 1/22/99
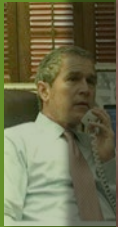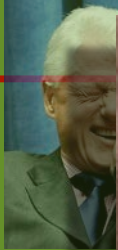
George W. Bush is the first Information Age president. *Seattle Times*, 8/27/06

"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," Bruce Schneier, Fox Bus News, Feb. 6, 2009

The First Information-Age President?

ge

nt.

uce

Or was it James Buchanan?

Historical assumptions implicit in "the Information Age"

The determinative role of technology

    The march of progress

The unprecedented present: "Never before…"

The determinative role of technology

The historical role of Technology

However you date the "dawn" of the IA, always tied to new technologies (Jacquard loom, Babbage's "difference engine," punch cards, Eniac, Internet, etc.)
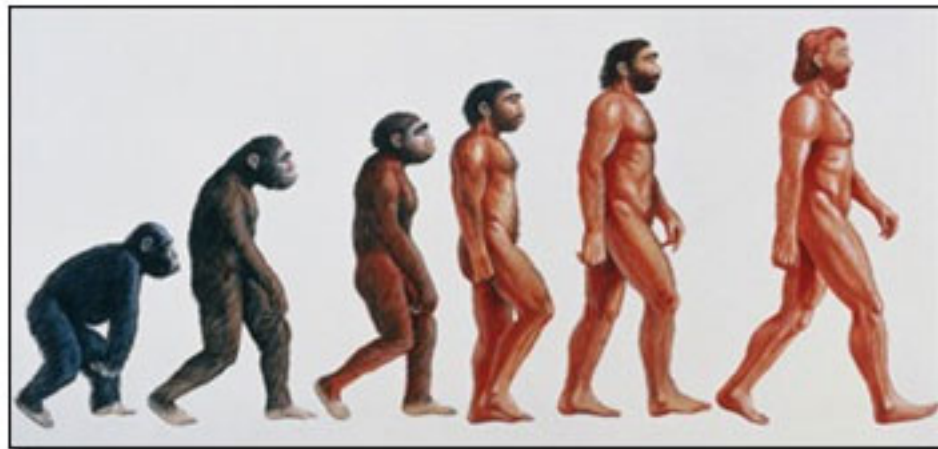
14

History as a Whiggish Progression leading to.... us

Whig theory of history = history is a triumphant (and, usually, 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.

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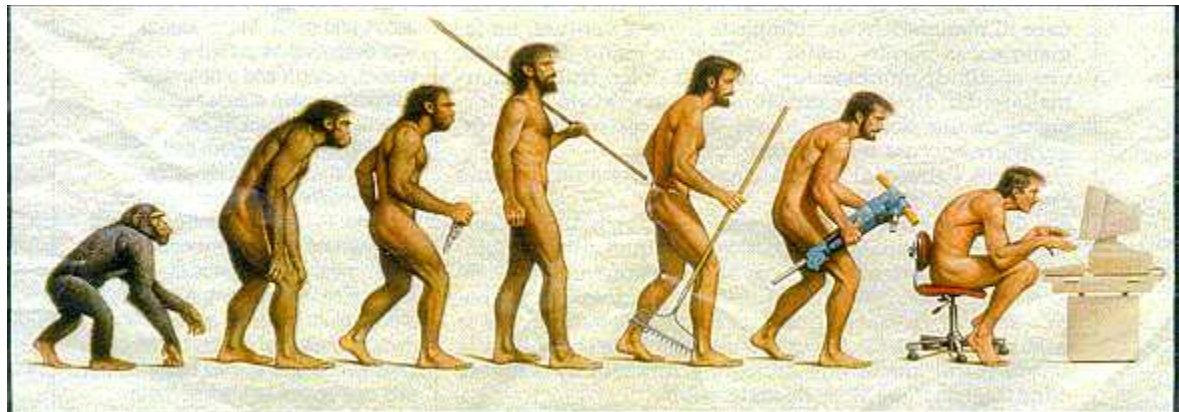That great, growling engine of change -- technology. Alvin Toffler, 1970.

Why the history of information ≠ the history of information technology

Why the history of information ≠ the history of information technology

STANFORD UNIVERSITY | *Stanford Bulletin* **EXPLORE COURSES**

2009-2010 2010-2011 2011-2012 2012-2013 **2013-2014**

HISTORY 305A: The History of Information | **go** | **Browse** by subject... | **Schedule** view...

1 - 1 of 1 results for: **HISTORY 305A: The History of Information**

HISTORY 305A: The History of Information
Examines the history of information from multiple perspectives such as the changing conceptions of facticity and evidence cross-culturally as well as a range of information technologies, from moveable type printing and telegraphy to text messaging and Twitter. Other topics include the ways in which information is shaped by the languages in which it is recorded, stored, and transmitted, and also the ways in which information infrastructures influence what is forgotten and lost.
Terms: not given this year | Units: 4-5 | Grading: Letter (ABCD/NP)
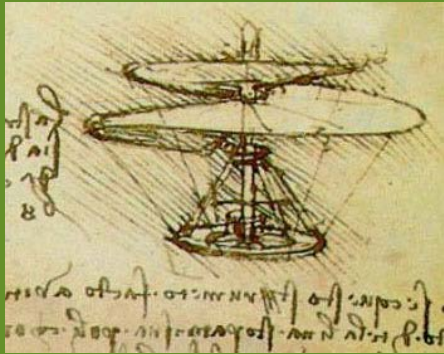
Lonely no more…
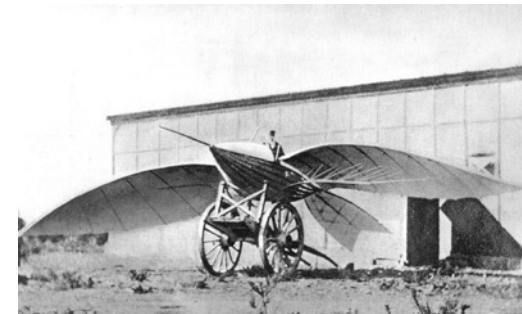
Tracing Technological "Antecedents"
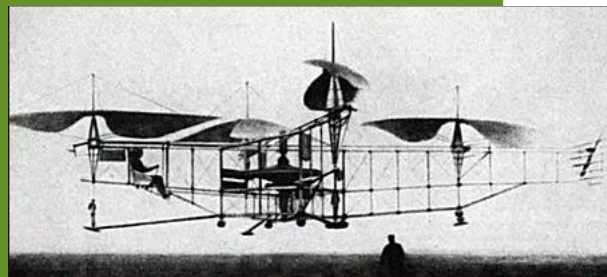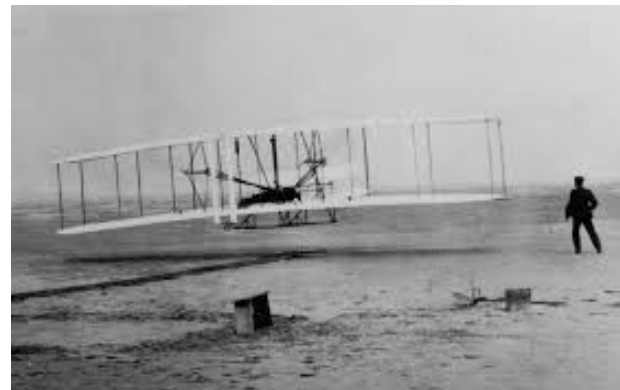

Japanese taketombo

Leonardo's aerial screw

Leonardo's flying machine, 1505

Le Brie glider, 1868

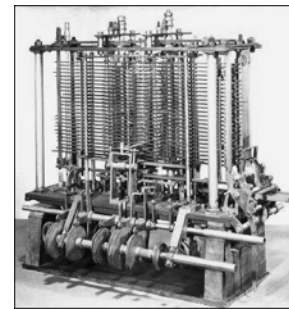Oemichen helicopter 1923

Wright Bros. flyer, 1903

Tracing Technological "Antecedents"

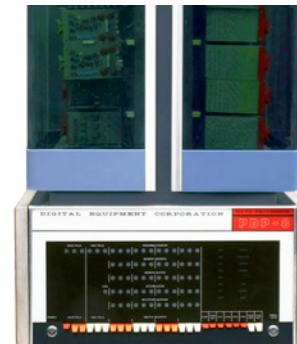Jaquard loom 1801

Babbage's difference engine 1820's

Hollerith tabulating machine 1890
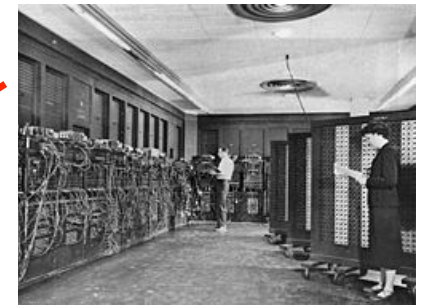
Schickard's calculator 1623

Apple II 1977

DEC PDP11 1965

Eniac I 1946

"What was the first computer"?

Napier's bones 1617

Abacus 2400, B.C.

Stonehenge, 3100 B.C.

Antikythera mechanism, ca. 150 B.C.

Ishango bone, 20,000 B.C.

Problem 2: What are "Information Technologies"

What makes for "Information technology"?

Prototypical instances of modern "IT"

More peripheral instances of "information technologies"

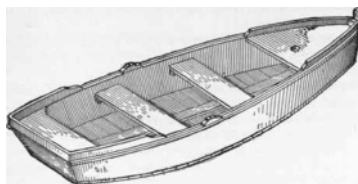What isn't IT?

Rethinking "Information Technologies"

Rethinking "Information Technologies"

The Interconnection of Technologies: Managing correspondence

James Watt 1780

Analine dyes (1856)
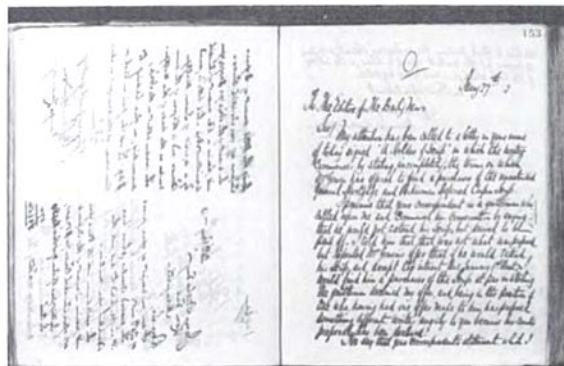

2.1 A letter press in action. (Catalogue for Yawman and Erbe, 1905. Hagley Museum and Library.)

2.2 An open letter press book. (Pennsylvania Railroad Collection, Hagley Museum and Library.)

Wooten desk

Genuine Shannon Sectional Cabinets

Mercantile Office, 1876

Sholes & Gidden type-writer 1873

Globe-Wernicke Vertical File.

IN UP-RIGHT UNITS.

Vertical filing is simply the filing of letters, papers, bills, etc., on edge in folders, instead of flat in the ordinary letter file. If not acquainted with the system we would like to explain its advantages. If familiar with it, however, we want to show you the best Vertical Filing Cabinet fitted with the most perfect Vertical Files for the system ever made. If you can't call, write us for pamphlet containing valuable information.

THE J. K. GILL CO.
PORTLAND, OREGON

The Pacific Monthly, advertising section, March 1904   scanned by Lincoln Cushing
For more items on Library Culture, see www.docspopuli.org

The Interconnection of Technologies: Managing correspondence

137. READING EXERCISE.

CONSONANTS.

22. All the characters given in this lesson are derived from another elliptical figure; thus

P   B   F   V   CH   J   SH

The curve on the left side of the figure represents P and B, that on the right side, F and V, and the straight line, CH, J, SH. All these characters are written downwards.

23. Should you find any difficulty in memorizing these signs, the following mnemonics may be of assistance:

ALICE in WONDERLAND

Written in GREGG Shorthand

Graphophone 1887

The Social Setting of Technologies: Managing correspondence

The Feminization of the Office Work Force

OFFICE OF R. G. DUN & CO. MERCANTILE AGENCY.
MANHATTAN BUILDING, FIRST FLOOR.

Fig. 1.1. Work in one of many filing areas at Metropolitan Life Insurance Company.

The Unprecedented Present

The Shock of the New: "Never Before"

Assumption:
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.

Why Study HofI?: Looking Back to Look Ahead

"Been there, done that"?: History provides antecedents for:

- The digital generation gap – immigrants and "digital natives"

- "The death of distance" the "annhilation of space and time"

- "The end of the book"; "The death of the newspaper"; economic models for the new media

- "information overload" Organizing an unprecedented mass of information?

- Piracy and IP in the information age

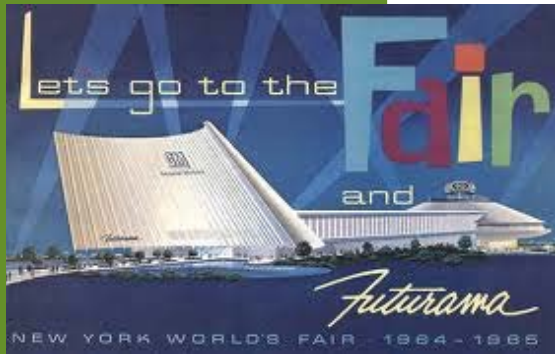- Problems of reliability; who can you trust online?

- Threats to individual privacy

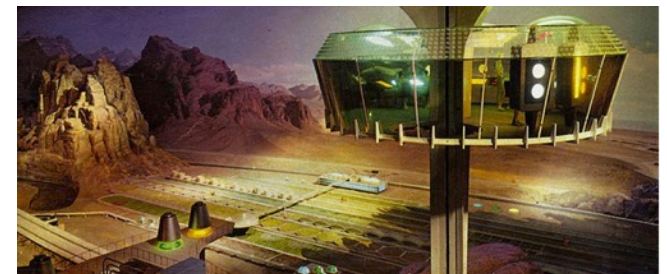- What role for the government in building infrastructure, monitoring use?

But does that mean there's nothing new under the sun?

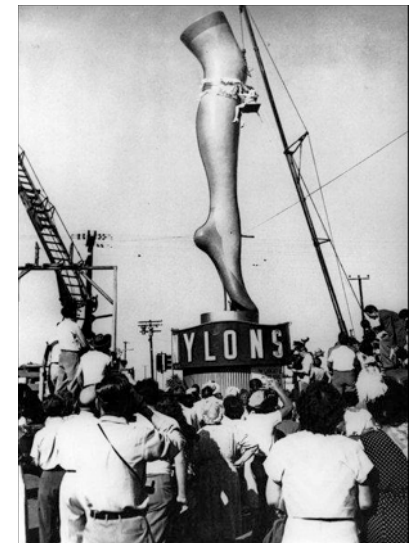General Motors Futurama, 1964 World's Fair

Plastics!

Figure 3
Industrial designer Carl W. Sundberg tantalized Americans with this vision of an all-plastic auto trailer/camper/motorboat shell. *Modern Plastics* 22 (May 1945), p. 106.

"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
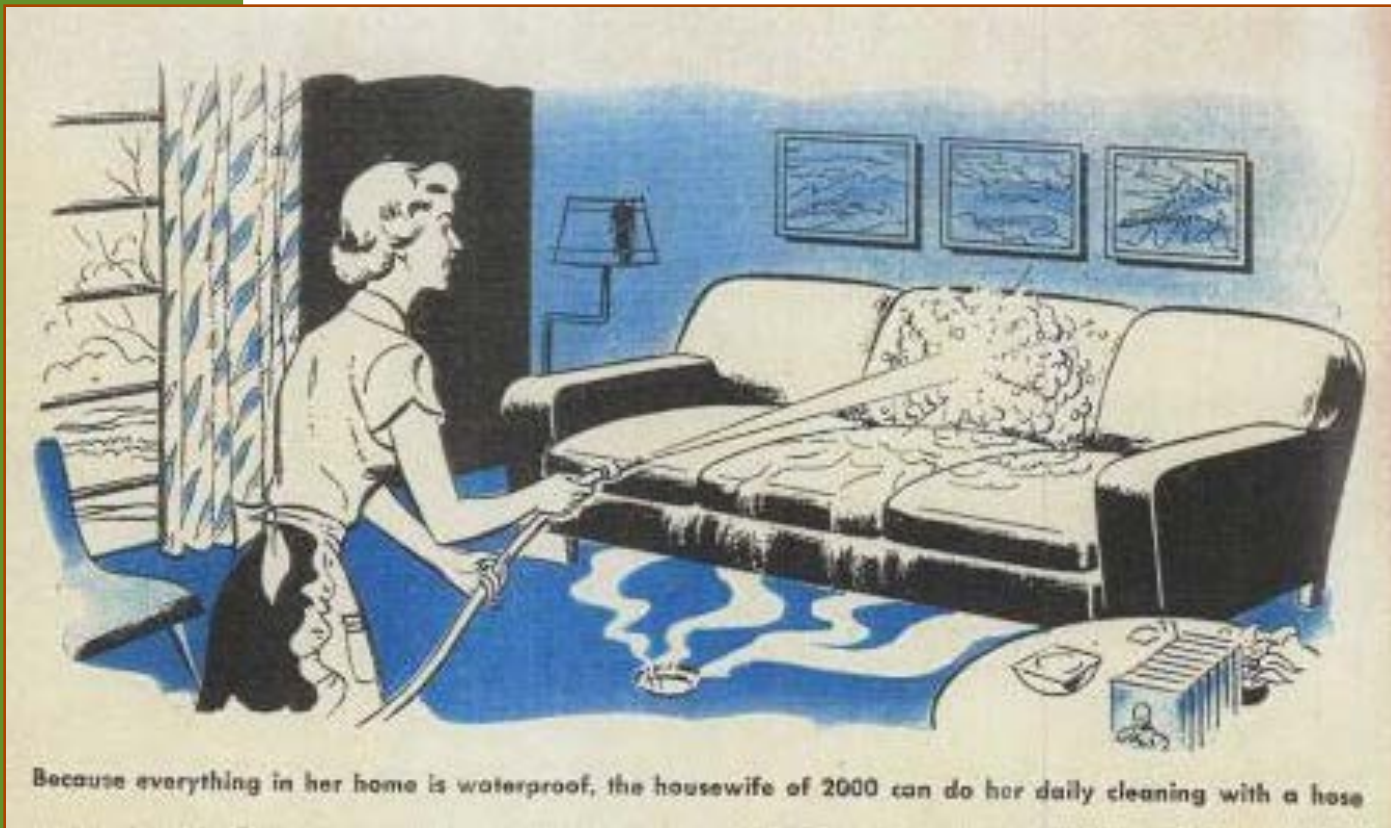

Monsanto, House of the Future, Disneyland, 1957 -- "Everything is ultra-modern and almost entirely synthetic."

Because everything in her home is waterproof, the housewife of 2000 can do her daily cleaning with a hose

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 2013?
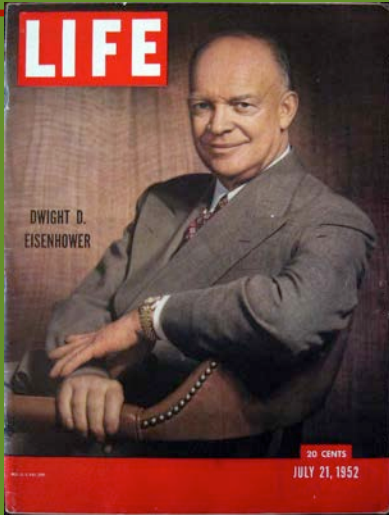
Anticipating Social Change:
What would grandad have said?

Welcome UC Berkeley Students

Anticipating Social Change

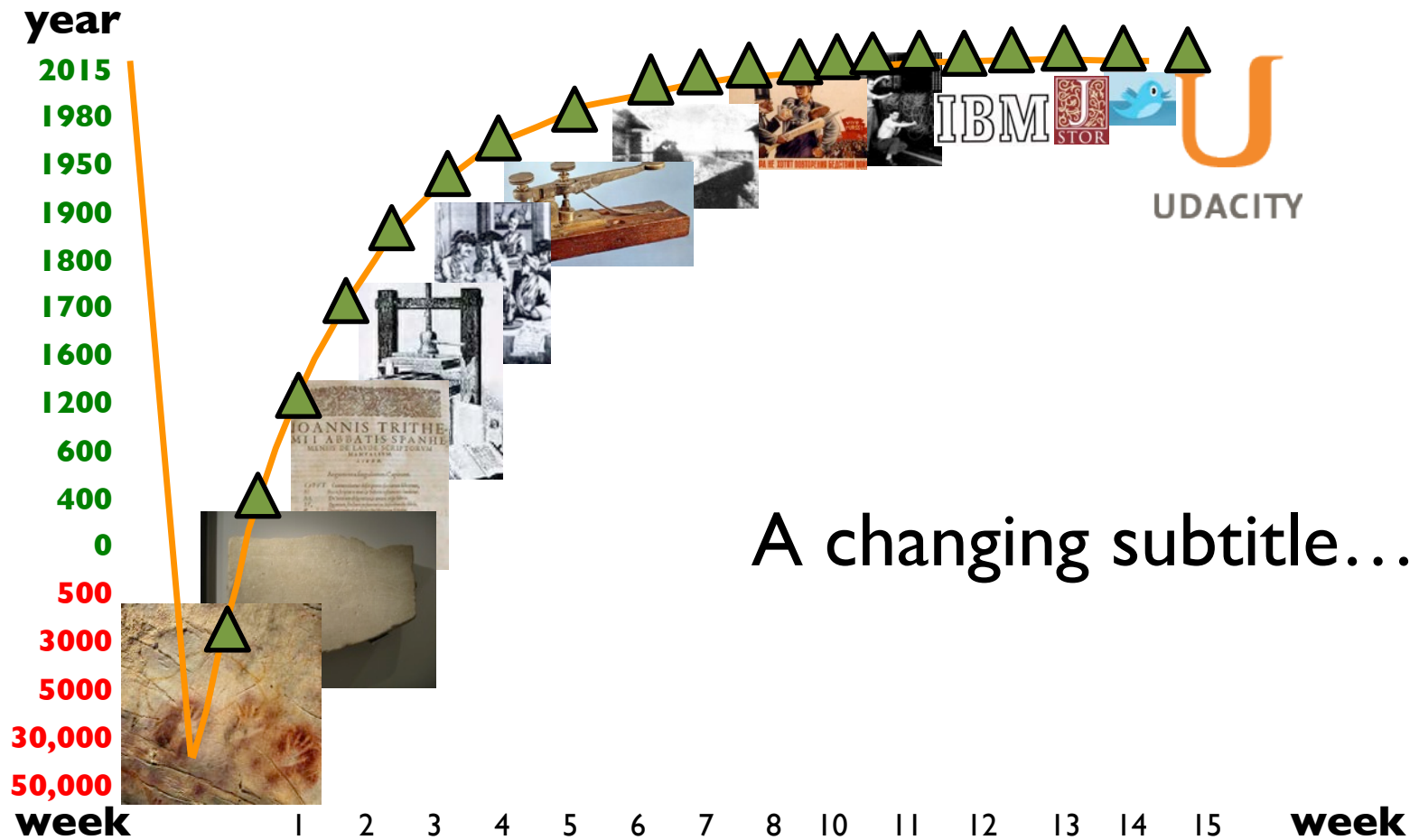What will make our predictions most quaint or ridiculous to our descendants?

Not just getting the technology wrong…

> Recognizing the historical roots of categores we take for granted—
> news, information, intellectual property, objectivity, privacy, etc.

(PD, next time)

A changing subtitle…

week 1 2 3 4 5 6 7 8 10 11 12 13 14 15 week

year
2015
1980
1950
1900
1800
1700
1600
1200
600
400
0
500
3000
5000
30,000
50,000

Pick one of the following and write a (very) brief story or anecdote in which it serves as an "information technology," perhaps in conjunction with other things. Try to make your stories ingenious without being completely implausible. Bring your answer to class for discussion (but no need to hand them in).

a necktie
a blanket
a rubber duckie
a can of beans
a lemon

"Extra credit" if you manage to use two of these in your story.