Why HOFI?

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IS 103
History of Information
Jan. 19, 2010
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 Hofl 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)
i- : A Prefix Whose Time has Come

What puts the i- in iSchool?

Why "the history of information"?
"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
## What Makes "Information" Different?

<table>
<thead>
<tr>
<th>Age of X/X age</th>
<th>Google hits (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>information</td>
<td>2274</td>
</tr>
<tr>
<td>digital</td>
<td>1880</td>
</tr>
<tr>
<td>internet</td>
<td>1137</td>
</tr>
<tr>
<td>computer</td>
<td>722</td>
</tr>
<tr>
<td>electronic</td>
<td>494</td>
</tr>
<tr>
<td>space</td>
<td>1990</td>
</tr>
<tr>
<td>Cold War</td>
<td>1270</td>
</tr>
<tr>
<td>air</td>
<td>512</td>
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<tr>
<td>nuclear</td>
<td>494</td>
</tr>
<tr>
<td>atomic</td>
<td>327</td>
</tr>
<tr>
<td>oil</td>
<td>188</td>
</tr>
<tr>
<td>terrorism</td>
<td>220</td>
</tr>
<tr>
<td>democracy</td>
<td>220</td>
</tr>
<tr>
<td>television</td>
<td>96</td>
</tr>
<tr>
<td>automobile/-motive</td>
<td>69</td>
</tr>
<tr>
<td>Aquarius</td>
<td>268</td>
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</tbody>
</table>
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?

George W. Bush is the first Information Age president. *Seattle Times*, 8/27/06
Obama’s insistence on keeping his BlackBerry underscores not just his own tech savvy, but also the ubiquitous nature of the device. “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 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.
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
**Industrial Age Classrooms vs. Information Age Classrooms**

by Jane Bluestein, Ph.D.

On this page you will find a comparison between the Industrial Age and the Information Age, particularly as these differences correspond to classroom values, priorities, motivators, authority relationships, student behaviors and discipline goals.

<table>
<thead>
<tr>
<th><strong>Industrial Age</strong></th>
<th><strong>Information Age</strong></th>
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<tbody>
<tr>
<td><strong>The Traditional Classroom</strong></td>
<td><strong>The 21st Century Classroom</strong></td>
</tr>
<tr>
<td><em>Values, Priorities &amp; Motivators</em></td>
<td><em>Values, Priorities &amp; Motivators</em></td>
</tr>
<tr>
<td>- Uniformity, sameness; fitting in.</td>
<td>- Diversity, personal potential and unfoldment; growth potential, personal fulfillment</td>
</tr>
<tr>
<td>- Stability, permanence, security (rigid roles)</td>
<td>- Flexibility, choices, personal control, (variable roles, expectations)</td>
</tr>
<tr>
<td>- Competitive</td>
<td>- Cooperation</td>
</tr>
<tr>
<td>- Motivation for cooperation: pleasing authority (approval-seeking), avoiding punishment, humiliation, rejection, disapproval; oriented to adult and adult’s reaction</td>
<td>- Motivation for cooperation: personal satisfaction; curiosity; positive consequences or outcomes that are unrelated to adult’s reaction; oriented to student</td>
</tr>
<tr>
<td>- Outcome or product orientation</td>
<td>- Process or person orientation</td>
</tr>
<tr>
<td>- Pleasing others regardless of personal needs</td>
<td>- Self-care; doing for others with regard for personal needs</td>
</tr>
<tr>
<td>- Perfectionism</td>
<td>- Mistakes seen as a necessary and valuable part of growth</td>
</tr>
<tr>
<td>- Black-and-white thinking (or all-or-nothing thinking, dualism); tunnel vision</td>
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</table>
"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 "unprecedented" 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

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
Tracing Technological "Antecedents"
"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.
Who was the first suicide terrorist?
History as a Whiggish Progression leading to.... us

All history = a triumphant (and, often, ineluctable) 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"

talking about info
Rethinking "Information Technologies"
Does history of Information = history of IT?
Complicating the Story, 1: The Interconnection of Technologies
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- Times Printing Press -- 1814
- Fournier Machine, 1811
- Stephenson’s Rocket, 1827
Complicating the Story, 1: The Interconnection of Technologies
Complicating the Story, 1: The Interconnection of Technologies
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
The Uses of 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
Every Age Gets the Future it Thinks It Needs

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 Social Change

What would be most surprising to the characters of "Father Knows Best" if they could see the world of 2010?
Anticipating Social 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," community, 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)
What could "history of information" mean?

Individuating the object of inquiry: "History of X"

X= "Belgium," "America," "English literature," "fashion," etc.

We see the past through the lens of the present...
Assignment for 1/21

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

- a bicycle
- a necktie
- a blanket
- a piece of string
- an electric transmission tower
- a dishrack