print culture

history of information

feb 10, 2009
where we are

Plato
427-347 BC

Johannes Gutenberg
1380 - 1468

Trithemius
1462-1516

where we are
where we're going

print culture

Eisenstein: readers respond

assessing a revolution:
what happened, what came before, what came after, who was involved what was necessary, what was sufficient, what was incidental

what to make of it all
cultures & causality

**scribal culture**

Clanchy: from memory to written record

"Up to the eleventh century, western Europe could have returned to an essentially oral civilization. But by 1100 the die was cast".

--Brian Stock

**print culture**

"the shift from script to print entailed a large ensemble of changes ... but to say that ... is not the same thing as saying that nothing changed. To the contrary!"

--Elizabeth Eisenstein

**necessary and sufficient conditions**
Eisenstein

"I first became concerned with the topic of this book in the early 1960s after reading Carl Bridenbaugh's ... lament over 'the loss of mankind's memory' ... It seemed unhistorical to equate the fate of the 'common culture of Bible reading' with that of all of Western civilization when the former was so much more recent--being the by-product of an invention which was only five-hundred year's old ... Gutenberg"
McLuhan is the message

"I ran across a copy of Marshall McLuhan's *The Gutenberg Galaxy* ... He pronounced ... the age of Gutenberg to be at an end ... stimulated my curiosity ... about the specific historical consequences of the fifteenth-century communications shift.

"McLuhan raised a number of questions about the actual effects of the advent of printing .."

--Eisenstein
patron saint of Wired

McLuhan (1911-1980)
The Gutenberg Galaxy: the making of typographic man, 1962

"Printing ... created the public ... What we have called 'nations' ... did not and could not, precede the advent of Gutenberg technology ... isolation of the visual faculty from other senses ...  

"complementary to ... Albert B. Lord ... Milman Parry ..."
McLuhan's man

"When the perverse ingenuity of man has outered some part of his being in material technology, his entire sense ratio is altered. ...
In beholding this new thing, man is compelled to become it."

---Gutenberg Galaxy
agent of change

Eisenstein

"to my surprise ... no one had yet attempted to survey the consequences of the 15th-century communications shift."

" ... an unacknowledged
"Conjectures .. may be sampled below under headings that indicate my main line of enquiry"

"**some effects produced by ...**

"... increased output
"... standardization
"... rationalizing, codifying, cataloguing
"... from corrupted to improved
"... fixity and cumulative change
"... amplification and reinforcement"
Trithemius vs Eisenstein

scriptorium to printing shop

"Trithemius somewhat illogically compare the written word on parchment which would last one thousand years with the printed word on paper which would have a shorter life span. The possible use of paper ... by copyists, or of skin for a special printed version went unmentioned.... Whether he was genuinely worried about an increased use of paper ... is an open question. ... He used one Mainz Print shop so frequently that"it could almost be called the Sponheim Abbey Press".

--Eisenstein, pp 10-11
'the shift from script to print'

"different texts ... were also being brought closer together for individual readers"

"the clerk['s] richer, more varied literary diet than had been provided by the scribe"

"sedentary scholars less apt to be engrossed by a single text"

"knowledge explosion"

"combinatorial intellectual activity"
'the shift from script to print'

"a purification of Christian sources"

"the more standardized the type ... the more compelling the sense of an idiosyncratic personal self"

"the printer seems to have taken over where the clerical scribe left off. But in doing so he greatly amplified and augmented older themes"
Eisenstein concludes

"classical revival"

"Christendom disrupted"

"nature transformed"
recurring questions

1. what happened?
2. what and who were involved
3. what came before?
4. what came after?
5. what was necessary, what sufficient, what incidental?
what

**technologies**
- woodblock printing
- printing press
- moveable type

**institutions**
- church
- nation-state
- scientific institutions
- humanism
- civil society
technology of type

punch & matrix

composing stick

locked down chase

press & chase
Guttenberg: 
born Mainz

1438: exile, Strasbourg
partners: Riffe, Dritzehn, Helman

1438, December: Dritzehn dies
"4 pieces to be destroyed"

1439: Dritzehn's heirs sue

1450: back in Mainz
creditor Johannes Fust
employee Peter Schöffer
ally Cardinal Nicholas of Cusa
complete works

1454: Cyprus Indulgence

1455: 42-line bible
the Cardinal's connections?

1455: Fust sues, wins
new partnership of Fust & Schöffer
Mainz psalter
1454: Cyprus Indulgence

1455: 42-line bible
the Cardinal's connections?

1455: Fust sues, wins
new partnership of
Fust & Schöffer
Mainz psalter
The spread of print

- **1455**: Mainz
- **1465**: Subiaco, Italy
- **1470**: Paris, Cologne, Strasbourg, Basel, Rome, Venice, Bologna, Seville
- **1476**: London
- **1480**: Budapest, Krakow, Prague, Brussels

Eisenstein, cp Fevre & Martin
the revolution(s)

renaissance
reformation
scientific revolution
capitalism
nation-state
causality

cause or cure?
Luther and the indulgences of Mainz, 1517

Gutenberg and the indulgence, 1455

Letterae indulgentiarum, 1455
causality

cause or cure?
Luther and the indulgences of Mainz, 1517

Gutenberg and the indulgence, 1455

Letterae indulgentiarum, 1455
questions of timing?

Gutenberg, d. 1468

Bacon, 1561-1626

Galileo, 1564-1642

Descartes, 1596-1650

Newton, 1642-1727
central players

Copernicus 1473-1543

Tycho Brahe 1546-1601

Johannes Kepler 1571-1630
pseudo-science

almanacs

"for three-and-a-half centuries, the Almanack has been the most popular book in the English language"

1492–1600, probably 600 published


400,000 a year

William St Clair, *The Reading Nation*, 2005

--diary, encyclopedia, calendar

Mother Shipton
Nostradamus
"Spectacular innovation .. should not divert attention from much less conspicuous, more ubiquitous changes. Increasing familiarity with regularly numbered pages, punctuation marks, section breaks, running heads, indexes, and so forth helped to reorder the thought of all readers, whatever their profession or craft."

--Eisenstein, p. 73
The expectation of readers was changed, and this was reflected in changes in the physical appearance of books. A writer organized his work for publication, and if he did not ... then a scribe would .. The production of books became more sophisticated ... The most spectacular example ... the Ellesmere manuscript of the Canterbury Tales."

Parkes, "Influence"

"The late medieval book differs more from its early medieval predecessors than it does from the printed book."

--Parkes, "Influence" 1976

-gloss
-running titles
-subdivisions: books, chapters
-analytical tables of contents
-chapter headings
-cross references
-alphabetical order
-page numbers, indexes
compare

alphabetical indexing
Alexandria

ms: "Sacra Parallela of John Damascene [8th century] ... an alphabetic subject index to the Bible and the Fathers."
Witty, "Early Indexing"

print: "The first known dated [printed] index appeared in 1468 in Speculum vitae, a moral treatise printed by Sweynheym and Pannarts in Rome."
moreover ...

"From about 1300 very many scribes, librarians, and book owners provided their volumes with leaf numbering ... [by the fifteenth century] the numbers were overwhelming ..."

--Smith, "Printed Foliation"
moreover ...

1470: first printed folios

"of 4194 incunables ... only 10.3 percent use printed foliation, none use page numbers ... nearly half ... in the period 1495-1500"
--Smith, "Printed Foliation"

**incunable:**
pamped book from before 1500

**foliation:**
providing leaf numbers

1470: incunable with ms foliation
*Missale Constantiense*
"pagination ... became common only in the second quarter of the 16th century"
--Fevre & Martin, *Coming of the Book*

"After examining about 80,000 Dutch books from the 16th and 17th century I think that printers did not care for page numbers ... 60-70% contain mistakes in the page numbers"

[some printed books with 50% of the page numbers wrong]

Verkruijsse, "Wacht u voor de bladwachter!"
what came before?

a complete picture?
"The idea of reducing 'printing and publishing' to the Western case alone is not upheld by anyone. On the other hand there are differences between xylography and letter press printing (as there are between alphabetic and ideographic languages). ... two quite different duplicative technologies."

--Eisenstein, RAND 2000
printing in china

- **175 AD:** printing of Confucian classics from stone carvings
- **868:** earliest surviving Chinese printing
- **972-83:** *Tripitaka*, 5,048 volumes, 130,000

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**lithography:** printing from stone

**xylography:** wood carving

- **c. 200 BC:** the use of seals
  
  *yin* = seal and print
Furthermore...

1041: Pi Sheng clay moveable type

"in the Northern Song in the eleventh century ... there were some thirty printing centers ... and some two hundred in the Southern Song" (twelfth century)

Lucille Chia, *Printing for Profit* 2002

10th century? playing cards printed textiles paper money
Empress Shotoku, and her charms

770: xylographic printing

? 1,000,000 copies
Korea: undetermined

8th century: xylography

918-1392: Koryo Dynasty
three methods of publishing transcription, xylography, typography

transcription: Royal library; practice
xylography: Buddhist temples
typography: civil service

1087: Tripitaka Koreana (xylography)
Korean printing

"demand side"

949-975: King Kwangjong
Guagou competitive civil service exams

"supply side"

1231: Mongol invasion
destruction of archives

moveable type
Korean printing

1241: Yi Munsun Chip

1337: Jijiki

1392: Kyosugam (dept. of publishing)

1403: Jujaso (type foundry)

1446: Hangul alphabet and typography
"[Theodore De Vinne, in his book *The Invention of Printing*, 1789] writes, 'The inventor of printing did not invent paper .. did not originate engraving on wood. He was not the first to print upon paper, he was not the first to make printed books, it is not certain that he made the first press, it is not probable that he was the first to think of or make movable type. What he did was to invent the type mold'"
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see also Paul Needham and Blaise Aguera y Arcas, "What did Gutenberg Invent?"
"Europe reckons the date of the invention of printing from the time when typography was invented, and considers block printing as merely an important step in preparation. The far East reckons the invention of printing from the time when block printing began and considers movable type as rather an unimportant later addition."

Carter, *The Invention of Printing in China*
c. 1290:

"HOW THE GREAT KAAN CAUSETH THE BARK OF TREES, MADE INTO SOMETHING LIKE PAPER, TO PASS FOR MONEY OVER ALL HIS COUNTRY

"All the grand Kaan's subjects receive this paper money without hesitation because wherever their business may call them, they can dispose of it again in the purchase of merchandise they have occasion for."

--Marco Polo
"[E]ither the Germanes borrowed this Invention from the Chineses, or at leastwise the Chineses had the practise & vse of it long before them.

George Hakewill, *An Apology of the Power*, 1627

"Whether the Germans first borrowed this Invention from the Chineses, or whether amongst the Germans (who undoubtedly lay best claim to it) Iohn Gutenberg the Knight of Mentz, or Iohn Fust a Moguntine, was the first Inventor thereof, it matters not."

Robert Heath, *Paradoxical Assertions*, 1659
linear history?

- Christian codex, 2nd century
- Islamic codex, 8th century
- Hebrew codex, 9th century
- Chinese sutra fold, 10th century
### and now?

#### technological diffusion

<table>
<thead>
<tr>
<th>Region</th>
<th>Paper</th>
<th>Codex</th>
<th>Printing</th>
<th>Typography</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>3d cent BC</td>
<td>10th cent</td>
<td>8th cent</td>
<td>11th cent</td>
</tr>
<tr>
<td>Korea</td>
<td>4th cent AD</td>
<td>19th cent</td>
<td>8th cent</td>
<td>15th cent</td>
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<tr>
<td>Japan</td>
<td>7th cent AD</td>
<td>19th cent</td>
<td>9th cent</td>
<td>17th cent</td>
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<tr>
<td>India</td>
<td>5th cent AD</td>
<td>6th cent</td>
<td>19th cent</td>
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<td>Islam</td>
<td>8th cent AD</td>
<td>8th cent</td>
<td>19th cent</td>
<td>19th cent</td>
</tr>
<tr>
<td>Europe</td>
<td>12th cent AD</td>
<td>2d cent</td>
<td>15th cent</td>
<td>15th cent</td>
</tr>
</tbody>
</table>
The word "magazine" is derived from the Arabic word "makhazin," meaning storehouse. Since Daniel Defoe published the world's first English magazine back in 1704, millions of magazines catering to nearly every imaginable taste have been created and consumed, passed from person to person in cafes, barber shops, libraries, and homes around the world. If you're wondering what cars people drove in the eighties or what was in fashion thirty years ago, there's a good chance that you'll find that answer in a magazine. Yet few magazine archives are currently available online.
the reliability of print vs
the search for copy

"Book-sellers follow their owne
judgment in printing the antient
Authors according to such Text as
they found extant ... Errors
repeate & multiply in every
Edition".

-- John Evelyn, 1666
problems of authenticity

piracy and plagiarism

"Martin Luther's German translation of scripture was actually beaten into print by its first piracy."


church & government responses

- censorship
- copyright
- sedition acts
problems of fixity

"[Shakespeare's] first folio [1623] ... boasted some six hundred different typefaces along with nonuniform spelling and punctuation, erratic divisions and arrangements, mispaging, and irregular proofreading. No two copies were identical."

--Johns
the search for truth

"donations of Constantine"

"false decretals"

"Historical criticism became a Protestant weapon, and documents were used as missiles."

James Thompson, "The Age of Mabillon," 1942
"A certain band of fellows existed, some centuries ago, who had undertaken the task of concocting ancient history as we now have it, there being at that time none in existence; ... they had as aids the works of Cicero, Pliny, the *Georgics* of Vergil, the *Satires* and *Epistles* of Horace. These alone ... [are] the genuine monuments out of the whole of Latin antiquity."

Grafton, "The Antiquary as Pariah", 1999
detective work

back to the monastery

"the Reformation era ... bringing to light thousands of documents .. hitherto inaccessible and unknown. ... France pioneered in this new historical research ... Mabillon .... Montfaucon."

--Thompson
Jean Mabillon (1632-1707)

De Re Diplomatica, 1681

opposing

Paperbroche

Acta Sanctorum 1675

"The Benedictine order ... regarded Paperbroche's work as ... an attack on their property rights."

--Thompson
"Mabillon frankly admitted that the authenticity of a charter could not be proved by any metaphysical or a priori argument; a decision could be reached only after the expert had examined a whole series of different indications -- the material used, the seal, the signature, the grammar and orthography, the modes of address, the plausibility of the dating, the intrinsic consistency of the whole document."

David Knowles
a guide to forgery

the charter of La Tour d'Auvergne
"skilfully forged [using Mabillon's principles] by a sublibrarian who ended his days in the Bastille"

--David Knowles
summary

revolution(s)?
what did & did not come before?
what happened?
what came after?
technology, practices, & institutions
(un)reliability
next time

12 Feb: Emergence of the Public Sphere
