print culture

history of information
feb 10, 2009
Adrian Johns on history of 'piracy'
http://www.insidehighered.com/news/2010/02/03/johns

Codex Sinaiticus
http://www.bl.uk/onlinegallery/sacredtexts/codexsinai.html
something happened

- **Plato**: 427-347 BC
- **Trithemius**: 1462-1516
- **Johannes Gutenberg**: 1380? - 1468

Not much happening?
where we're going

Eisenstein:
readers respond

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

what to make of it all
Eisenstein

"I first became concerned with the topic of this book in the early 1960s after reading [a] ... 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"
"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
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 ..."
altered senses?

**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."

--MM *Gutenberg Galaxy*

**Eisenstein's reader**

"Editorial decisions made by early printers ... helped to reorganize the thinking of readers."

--EE, *The Printing Revolution*
agent of change

Eisenstein

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

"... an unacknowledged revolution."
This shift, which revolutionized all forms of learning... affected human behavior... a large cluster of changes.

"Conjectures .. may be sampled below under headings that indicate my main line of enquiry"
This shift, which revolutionized all forms of learning...
... affected human behavior ... a large cluster of changes

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

what was he thinking?

"modern scholars smile at the notion of an abbot instructing his monks to copy printed books so that texts would not perish."

--Eisenstein
there's copying and then there's ...

what was he thinking?

"There are four ways men make books. One writes another's words, but adds or changes nothing. He is called a writer. Another writes others' words and adds work from yet others. He is called a compiler. A third adds his own words to the writing of another, but the other remains the central text, what is added merely evidence. He is called a commentator. And one writes both his own and another's words, but his are the main text and the other is added as confirmation. He truly can be called an author."

St Bonaventure of Bagnoregio (1217-1274), *Commentaries*
there's copying and then there's ...

For more than a decade, we've been waging a war on our kids in the name of the 20th Century's model of "copyright law." In this, the last of his books about copyright, Lawrence Lessig maps both a way back to the 19th century, and to the promise of the 21st. Our past teaches us about the value in "remix." We need to relearn the lesson. The present teaches us about the potential in a new "hybrid economy" — one where commercial entities leverage value from sharing economies. That future will benefit both commerce and community. If the lawyers could get out of the way, it could be a future we could celebrate.

About the author

Lawrence Lessig is a Professor of Law at Stanford Law School and founder of the School's Center for Internet and Society. Professor Lessig is the author of *Code v. 2.0*, *Free Culture, The Future of Ideas* and *Code and Other Laws of Cyberspace,* and has been a columnist for Wired, Red Herring, and the Industry Standard.
'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 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"
readers respond

always identify sources

in general, use your own words

be sure to answer the question

justify your answers with examples

reread your text before submitting it
"Eisenstein ... holds that the writer in an age of scribes had a fundamentally different relation to his public ... could not hope that his work could not be distributed in anything like a stable form ... could not bring out his private idiosyncracies for public inspection as Montaigne ... Nor could hope to win lasting fame ... Indeed [in Eisenstein's view], it is probably wrong to speak of 'publication before printing. Here, too, I fear, there is a measure of exaggeration."

Anthony Grafton, "The Importance of Being Printed," 1980
Though manuscripts served as the steppingstones for the printing press, and eventually, the electronic age to develop, I agree with Eisenstein when she claims that the manual process of storing information before the 16th century spread nothing but inaccuracies and confusion. Thus, it comes to no surprise that because these manuscripts were manually produced, they were also vulnerable to human error. Eisenstein is keen to point out that there are instances where monks who blind-copy manuscripts recorded information that contradicted what was being taught in monasteries. She also points out that Egyptian hieroglyphics “contributed more to mystification than to enlightenment” because they were not completely standardized. She goes on to point out that other important forms of textual information such as calendars, dictionaries, maps, charts, and other reference guides were also prone to error (p.46 – 52). This, she argues, may have led to a lot of confusion and arbitrary knowledge in society.

Though I appreciate that the Manuscript Culture opened doors to different ways of storing information, I still agree with Eisenstein’s sentiments. After all, spreading false information is worse than spreading no information at all.

Christian Ignacio
Because Eisenstein focuses so much on the “unacknowledged revolution” – the transformation from manuscript to print – she seems to somewhat brush over the merits that manuscript writing did have. Her concern is not to discuss both processes, but instead to give recognition to the emergence of print that she believes is deserved, but mostly overlooked. In fact, even when she does mention an advantage that manuscript possessed, such as the “inability of scribes to produce ‘standardized errors,’” she would turn that around to make it seem as an actual advantage of print: “this degradation of quality led to an ‘explosion of knowledge’ where readers were researching and correcting publishers.”

That said, it should be noted that Eisenstein did mention “one must be wary of overstating the novelties introduced by printing or overlooking how previous developments helped to channel the uses to which the new tool was put.” She references the fact that devices such as diagrams, brackets, and the habit of cross referencing were not uncommon in medieval times, and may have in fact contributed to the coding and cataloguing that is commonly seen as a by-product of “typographic culture.”

Amy Azaren
Eisenstein underestimates the achievements of manuscript culture. Her chapter focuses on the improvements and novelties brought about by the printing press and set them against the failures of manuscript. For example, she says, “No manuscript...could be preserved for long...” (78). Also, “there is no equivalent in scribal culture for the “avalanche” of...books that poured off the new presses...” (64). While she also discusses some of the negative consequences of print, like the proliferation of errors and corruption in printed herbals between 1480 and 1526 (74), she quickly follows up with the advantages of print. “But in the very course of accelerating a process of corruption... the new medium...offered a way of overcoming it for the first time.” (74). By targeting the inadequacies of manuscript and highlighting the positive changes brought about by print, Eisenstein underestimates the achievements of manuscript culture.

Eisenstein concedes that some of the advances that arose because of print, such as various ways to reorganize texts, had foundations in manuscript culture. “Attempts at lexography had been made before print” and “efforts at codifying and systematizing which predated the new presses had long been made...” (67). She also says, “One must be wary... of overlooking how previous developments helped to channel the uses to which the new tool was put.” (68). Overall, however, she undervalues the successes of manuscript culture.
recurring questions

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

Guttenberg:
metalworker from Mainz

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

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

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
spread of print

1455: Mainz
1465: Subiaco, Italy
1476: London
1480: Budapest, Krakow, Prague, Brussels

Eisenstein, cp Fevre & Martin
Richard Atkyns
The Original and Growth of Printing, 1664

industrial espionage

The Original and Growth

This New Art: As fast, with much ado, they got off one of the Under-Workman, whose Name was found and called (as rather confess) who late one Night stole from his Fellow in Dissidence, into a Vessel prepared before for that purpose; and so the Wind (favouring the Design) brought him safe to London.

Twas not thought so prudent, to set him on Work at London, (but by the Arch-Bishop means, who had been Vice-Chancellor, and afterwards Chancellor of the University of Oxford) confess was carried with a Guard to Osnab, which Guard constantly watch'd, to prevent confess from any possible Escape, will he had made good his Promise, in reaching how to Peace: So that at Oxford Printing was first set up in England, which was before there was any Printing Preface Printer, in France, Spain, Italy, or Germany, (except the City of Rome) which claims Seniority, as to Printing, except the Origin of Harpia itself, calling her City, small Magazine, Arts Typographia a Reformation printer, though it is known to be otherwise, that City gaining that Art by the Brother of one of the Workmen of Rome, who had learnt it at Home of his Brother, and after for up for himself in Rome.

This Press in Osnab was at least ten years before there was any Printing in Rome (except at Rome), and so where it was but new born, this Press in Oxford, was afterwards found likewise to be by the sole Printing place of England being too far from London, and the Sea: Whereupon the King sent a Preface to St. Albans, and another in the Abbey of St. Albans, where they printed several Books of History and Plays, (for the King, for so long been known as himself and Council) permitted them no Law-Books to the Press was nor did any Printer write that Art, but easily such as were the Kings own Servants 5 to the King himself, for the Price and Entitlement for Printing Books.

Printing thus brought into England, was most Graciously received by the King, and most cordially entertained by the Church,
change?
causality

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

Gutenberg and the indulgence, 1455

Letterae indulgentiarum 1455
"there is need to distinguish between initial and delayed effects"

questions of timing?

scientific revolution
Gutenberg, d. 1468
standardization, dissemination, fixity

Bacon, 1561-1626

coming up:
Galileo, 1564-1642
scientific information
Descartes, 1596-1650
Newton, 1642-1727
central players

Copernicus 1473-1543

Tycho Brahe 1546-1601

Johannes Kepler 1571-1630
idealizing the press?

Professor Mary Alice White, Electronic Learning Laboratory, Columbia Teachers College

"Electronic society is here," she says, and educators should acknowledge it and adjust their teaching to it. But she also believes that people ought to know the consequences of what children see on television and, if possible, help to improve it. 'If the first printing press had printed court gossip and low drama instead of psalters and the Bible,' she says, 'people would have said how terrible the printing press was then, too.'

pseudo-science

chapbooks and almanacs

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

1492–1600, probably 600 published
Bosanquet, English Printed Almanacks and Prognostications, 1917

400,000 a year
William St Clair, The Reading Nation, 2005

--diary, encyclopedia, calendar, prognosticator, medical handbook

Mother Shipton
Nostradamus
science?

Chinese attitudes

English attitudes
"Quacks here, as with us, do thrive vastly into great Riches ... It was a pleasant diversion ... to read upon the Walls every where about ... the Quacks Bills printed in great Uncial Letters ... Conversing with many of the Physicians .... all agree in the low Condition and Disesteem [medicine] was in from the boundless Confidence and intruding of Quacks, Women, and Monks."

Dr Martin Lister, A Journey to Paris in the Year 1698, 1698
It is well known that during the first ten years of the History of California as a Gold Region, the mortality of the mines was frightful ... At length Hostetter's Stomach Bitters, which had already become celebrated in all the Eastern States, found their way to California ... It sustained the vigor of the frame ... strengthened the digestion and toned the bowels.
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nothing changes?
underestimating?

**stability, reference, comparison**

"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" 1976

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

--Parkes, "Influence" 1976

The dividing up of the late medieval book differed more from its predecessors than it did from the printed book. This change was reflected in changes in the physical appearance of books. Writers began to organize their work for publication, and if they did not, a scribe would do it for them. The production of books became more sophisticated. The most spectacular example of this is the Ellesmere manuscript of the Canterbury Tales.

--Parkes, "Influence" 1976
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."

Bell, Indexers and Indexes
"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"
the challenge of new technologies

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"

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 happened elsewhere?

a complete picture?
what happened elsewhere?
"[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
printing in china

**lithography:** printing from stone

C. 200 BC: the use of seals

*yin* = seal and print

**175 AD:** printing of Confucian classics from stone carvings

**868:** earliest surviving Chinese printing

**972-83:** *Tripitaka*, 5,048 volumes, 130,000

**xylography:** wood carving
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
Japan

Empress Shotuku, 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
(metal moveable type)

1377: 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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"... it was the type mold that the Koreans developed."

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"... it was the type mold that the Koreans developed."

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*
"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
linear history?

Christian codex, 2d century

Islamic codex, 8th century

Hebrew codex, 9th century

Chinese sutra fold, 10th century
### and now?

**technological diffusion**

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Search and find magazines on Google Book Search
12/09/2008 09:47:00 AM
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.
overestimated aspects of print culture?

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
printing problems

"[Tycho] built his own printing house and paper mill: he discovered that he could not otherwise obtain acceptable materials and workmanship. ... the English astronomer royal ... dismissed the posthumous printing of [Tycho's] star tables as quite simply a 'fraud.'"

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
"If even Tycho Brahe found it so difficult to maintain his printed materials as ... immutable, what hope is there of explaining the achievements of less powerful figures...? If we are to understand how and why printed texts became trustworthy ... we need to appreciate all of them, in something approaching their full 'woof'

Adrian Johns, *The Nature of the Book*
next up

'public sphere'

11 Feb: Emergence of the public sphere

Required reading:

12 Feb: Emergence of the Public Sphere
