

print "revolution"

history of information

February 10, 2015





on this date (almost)



on this date (almost)

Most important developments in world history:



on this date (almost)

Most important developments in world history:

discovery of America



on this date (almost)

Most important developments in world history:

discovery of America

technology of printing



on this date (almost)

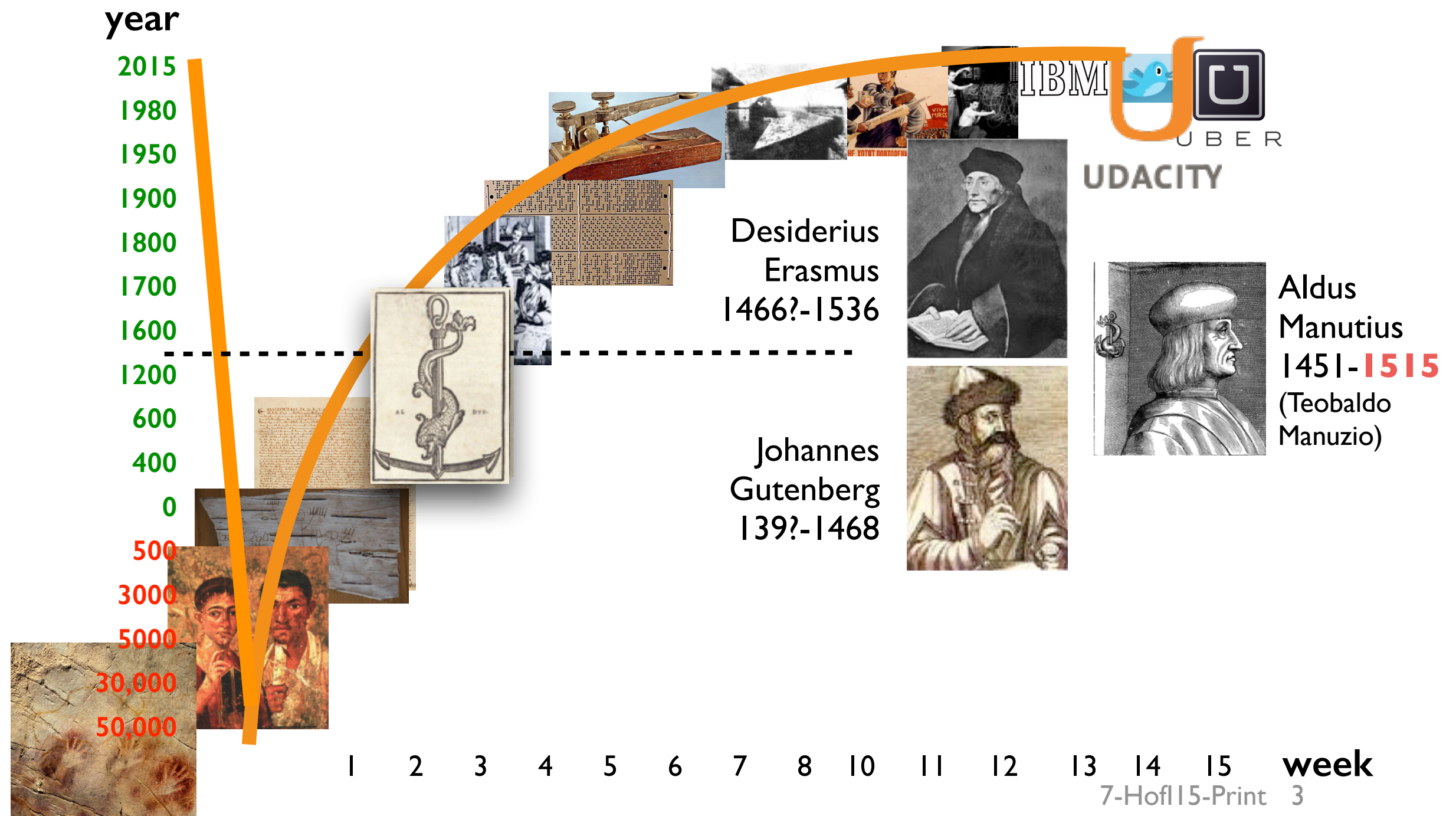
Most important developments in world history:

discovery of America
technology of printing
patent laws



theme:
talking about
technology

next generation

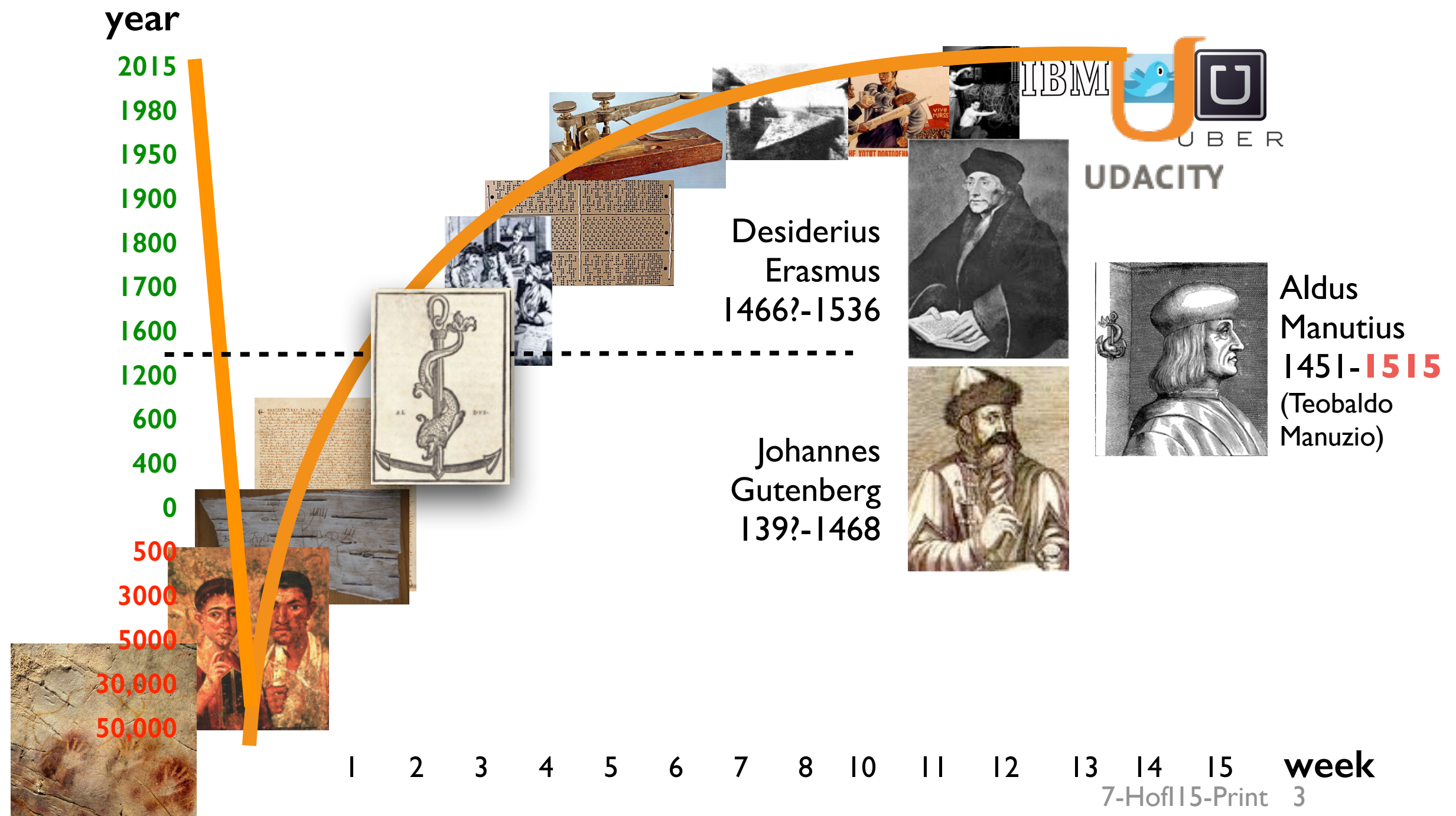




theme:
talking about
technology

Why TV in 1960s and 70s? "Television has now
been a ... service for a whole
generation" — Williams

next generation





picking up threads

determined ideas

“At Facebook, we’re inspired by technologies that have revolutionized how people spread and consume information. We often talk about **inventions like the printing press** and the television – by simply making communication more efficient, they led to a **complete transformation** of many important parts of society. They gave more people a voice. They encouraged progress. They changed the way society was organized. They brought us closer together.”

*Letter from Mark Zuckerberg US Securities and Exchange Commission
Form S-1 REGISTRATION STATEMENT Under The Securities Act of 1933*



overview

what gets overlooked

pros & cons

assessing a revolution

talking tech



overview

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pros & cons

Celeste Boureille

Yurika Jacobsson

Molly Babcock

Averell Wallach

Jonathan Allan

Justin Kwok

Terence Roe

Serena Wu

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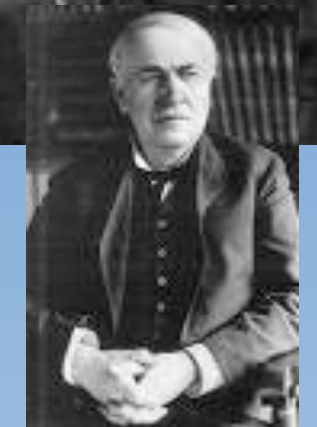
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talking tech

/talking techies/talking texts



Theuth

Moses

Lord Kulaba

Ts'ai Lun

Morse

Edison

Bell

Marconi



Bill Gates, Steve Jobs, Tim Berners-Lee, Mark Zuckerberg ...



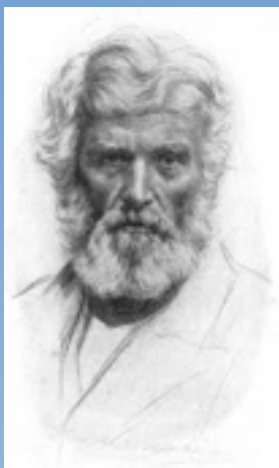
tech or techie



Francis Bacon
1561–1626

"Printing, gunpowder and the compass ... whence have followed innumerable changes, in so much that no empire, no sect, no star seems to have exerted greater power and influence in human affairs than these mechanical discoveries."

—Francis Bacon, *Novum Organum*, 1620



Thomas Carlyle
1795–1881

"He who first shortened the labor of copyists by device of movable types was disbanding hired armies, and cashiering most kings and senates, and creating a whole new democratic world: he had invented the art of printing."

--Thomas Carlyle, *Sartor Resartus*, 1833



tech, techie and text?



Holbein's
marginalia in
*In Praise
of Folly*
[*Encomium Moriae*]

succession

philosophers - emperors - printers

the result of poor proofreading?

"If things go on .. all power will in the end
be concentrated ... barbarous tyranny that
exists among the Turks. Everything will be
subject to the whim of one man... no traces ... of
civilian government ... law ... the will of the
dictator"



"Printers chased profits with dolphin-like speed,
unwilling to anchor their practice in man's rightful
heritage of *shared* truth and knowledge"

—Celeste Boureille



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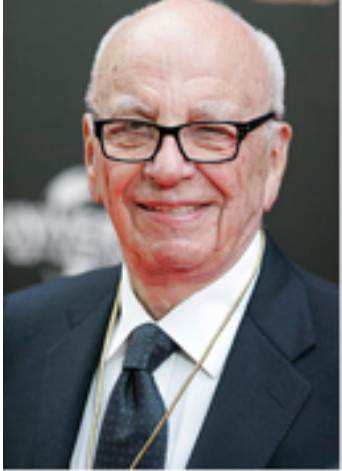
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going backwards/going global

library without walls

"popular among all those everywhere in the world to whom sound learning is either familiar or dear ... all devoted to the cult of liberal studies .. who despise the barbarous and uncouth learning of our own day and aspire to that true knowledge stemming from antiquity ... so that their supply of texts may be restored, complete and genuine and uncorrupted



“Thus, though Erasmus views printing press as an agent of transformation, it is a transformation backwards to what he views as the past golden age of knowledge.”
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“Aldus is building a library which **knows no walls** save those of the world itself.”



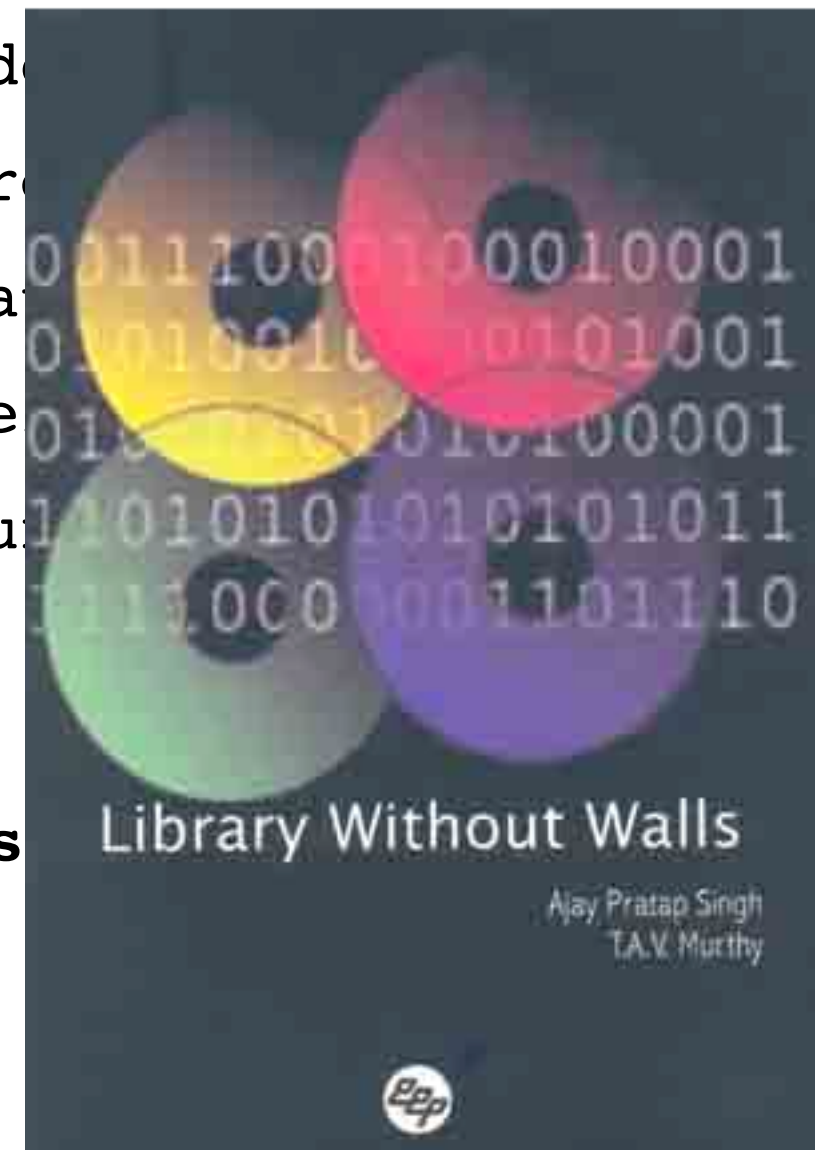
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"Aldus is building a library which **knows no walls** world itself."





print's effects



McLuhan (1911-1980) — going galactic

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 ..."

"uniformity ... individualism, nationalism ..."

"of all [discoveries] recorded in civil history, is of the most important and extensive consequences"





going global (again)



tech not text

"We are witnessing simultaneously the end of ... the Mechanical, or Gutenberg Era, dominated by movable type and later mechanical forms, and the birth pangs of the new and entirely different Electric Age ... the Age of Circuitry or Information.

"Books and jobs--all are obsolete. Any phrasemaking yokel can become a world center."

—McLuhan, *Life*, 1966



tracing consequences



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 ..."

Elizabeth
Eisenstein
*The Printing Press
as an Agent of
Change*

1979



agent of change

the three Rs

"The impact of printing, experienced first by literate groups in early modern Europe, changed the character of the Italian **R**enaissance and ought to be considered among the causes of both the Protestant **R**eformation and the **r**ise of modern science."

--Eisenstein, "The Emergence of Print Culture in the West" 1980.



how determined?

necessary vs sufficient

Renaissance, Reformation, Scientific Revolution

- the press inevitably produces R, R, & SR?
- couldn't have R, R, & SR without the press?





overview

what gets overlooked

prose & cons

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assessing

what happened?

what/who was involved?

what did (or did not) come before?

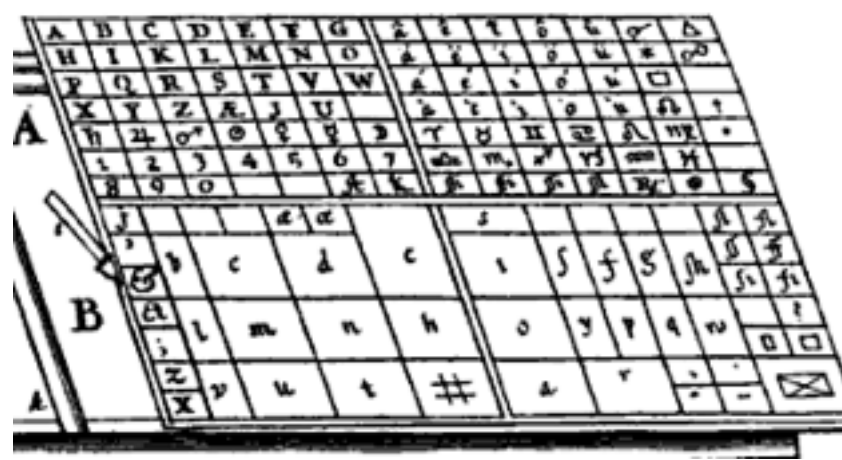
what did (or did not) follow?

what did (or did not) contribute?

what happened elsewhere?

what's likely to be underestimated?

what was necessary, what sufficient?

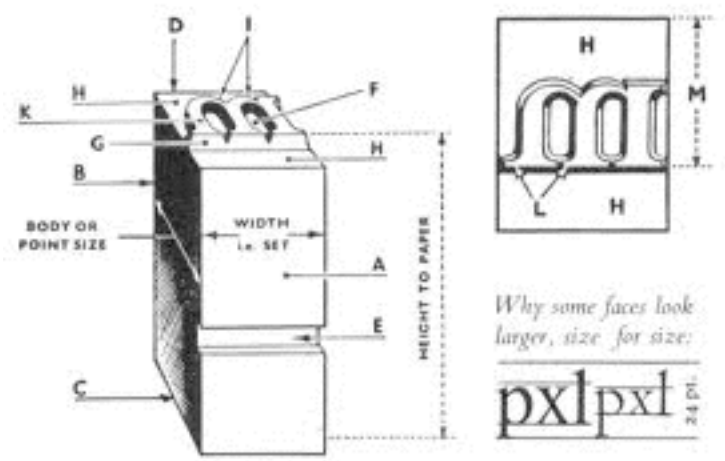
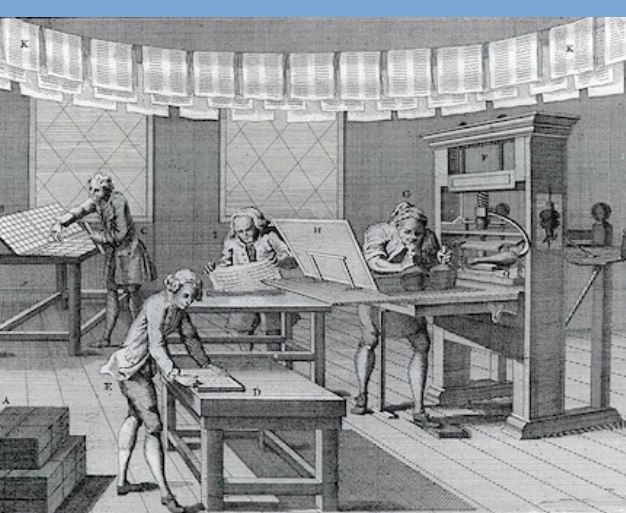
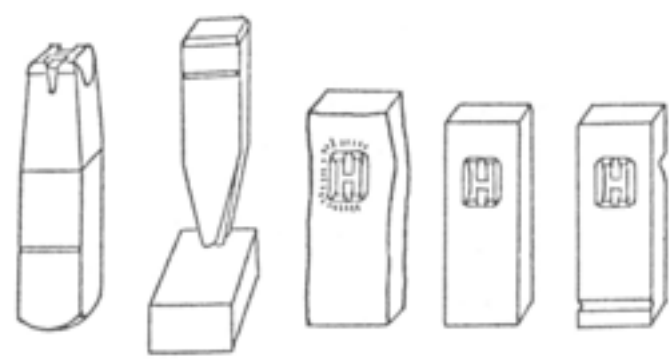


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what happened



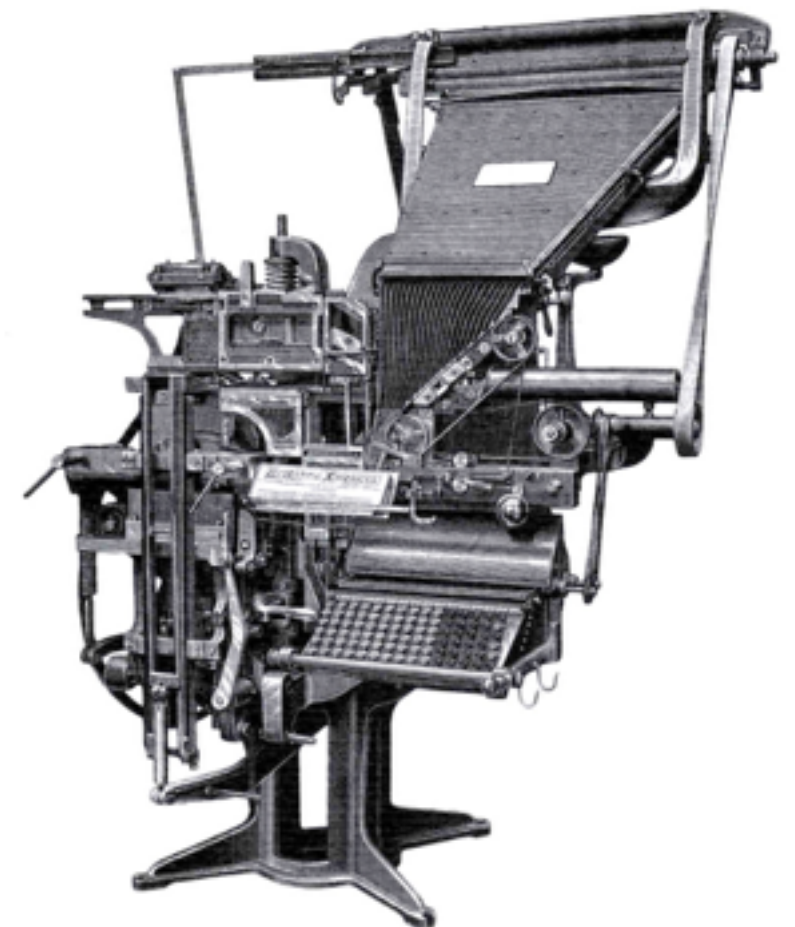
technologies
 woodblock printing
 moveable type





print technology

- c. 1460: Roman type
- c 1495-1595: Aldus Manutius, Venice
- 1539: first press in the Americas
- c 1720 - 1780: invention of stereotype
- 1814: steam press
- 1847: rotary press
- 1886: Mergenthaler Linotype
- 1887: Monotype
- 1892: process color printing
- 1902: offset lithography





Aldus' influence



"Aldus, making haste slowly, has acquired as much gold as he has reputation, and richly deserves both ...the noble, positively royal ambitions of my friend Aldus ... I can promise students a great future in the next few years"

PETRI BEMBI DE AETNA AD
ANGELVM CHABRIELEM
LIBER.
Factum a nobis pueris est, et quidem fe-
dulo Angele; quod meminisse te certo
scio; ut fructus studiorum nostrorum,
quos ferebat illa aetas nō tam maturos, q̄
uberes, semper tibi aliquos promeremus:
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how about 500 ? — and

scholarly editions / Greek revival
colophon/trademark/copyright

pocket book

Italic type <public static final int Italic>

punctuation ;



Bembo

Aldus

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Nicholas of Cusa
1400/1–1464

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who was involved?



Johannes Gutenberg
139?–1468



Johannes Fust
1400–1466

back to Gutenberg:
 metalworker from Mainz

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

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

1439: Aachen mishap; 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:
Fust & Schöffer

1457: Mainz psalter



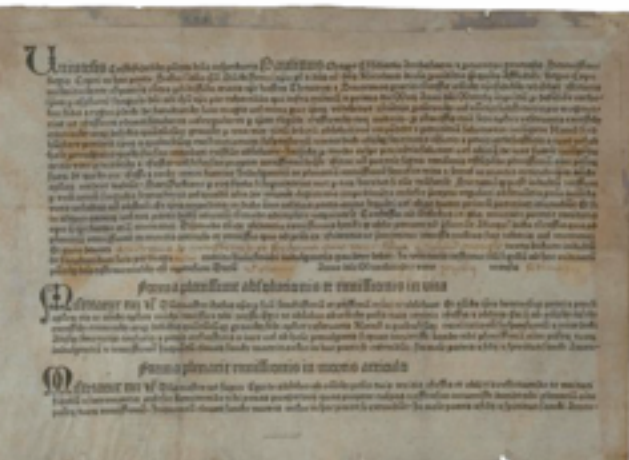


lookalikes?





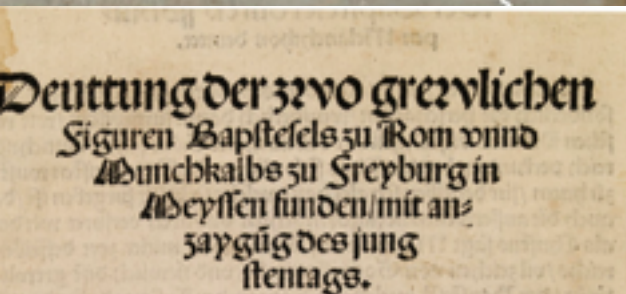
what went “viral”?



1454: Cyprus Indulgence

"200,000 indulgences printed between 1498 and 1500 at the behest of the Benedictines of Monserrat in Catalonia."

--Ann Blair, *Too Much to Know*, 2010



1455: 42-line bible

? 230 copies

1457: Mainz psalter

1500: Adagia

"most popular sixteenth-century book"

—Eden, *Friends Hold All Things in Common*, 2001

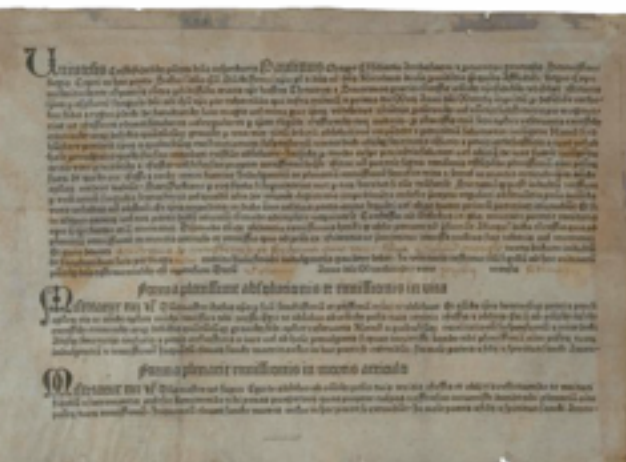


Wittenberg
M.D. VIII.

dog in the manger; one foot in the grave; cart
before the horse; in the same boat; no stone
unturned; war is sweet to those who know it not



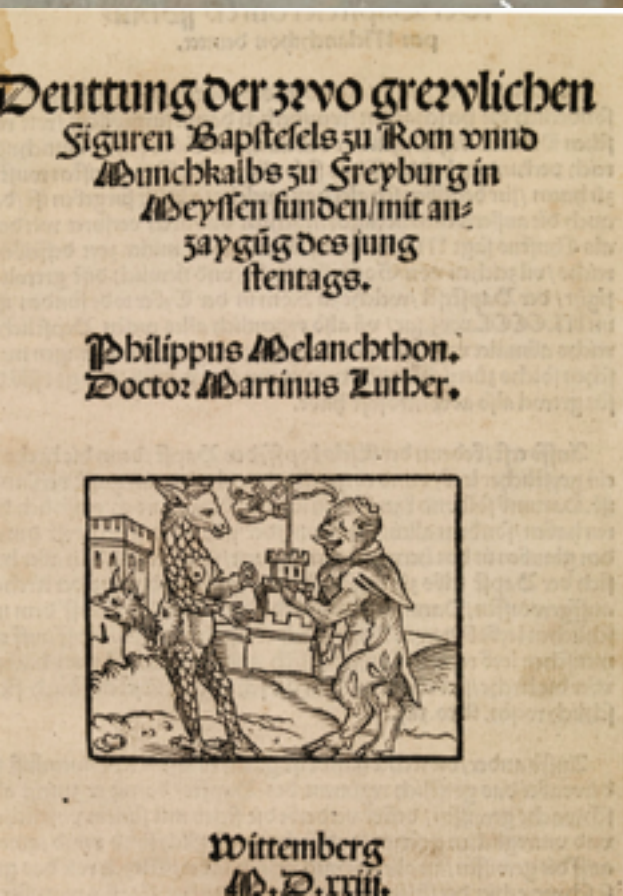
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Social media in the 16th Century

How Luther went viral

Five centuries before Facebook and the Arab spring, social media helped bring about the Reformation

Dec 17th 2011 | From the print edition



Timekeeper



Like

4.8k



Tweet

3,565

spread of print

1455: Mainz

1465: Subiaco,
Italy

1470: Paris,
Cologne,
Strasbourg,
Basel,
Rome, Venice,
Bologna,
Seville

1476: London

1480: Budapest,
Krakow, Prague,
Brussels



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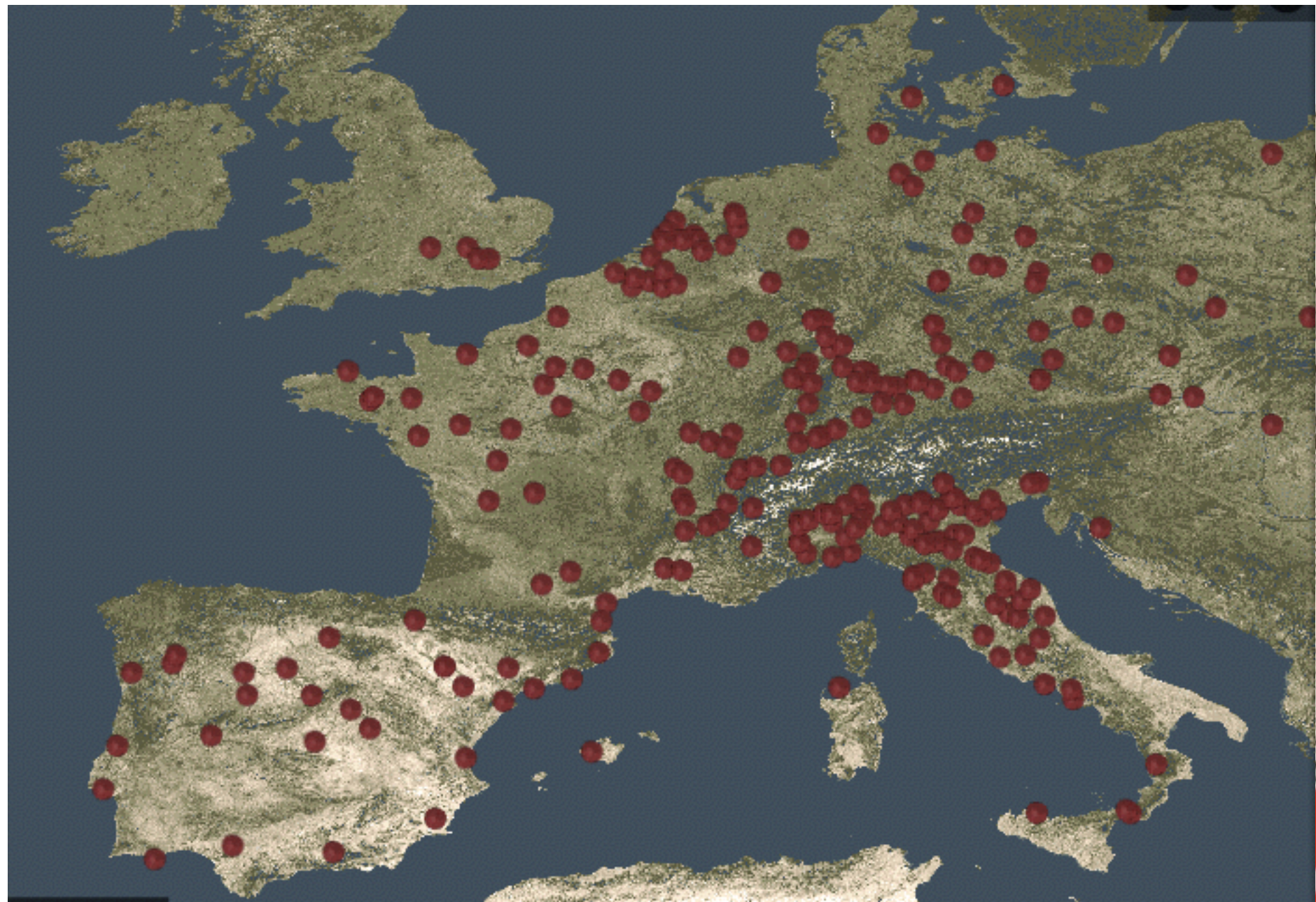
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The
Economist



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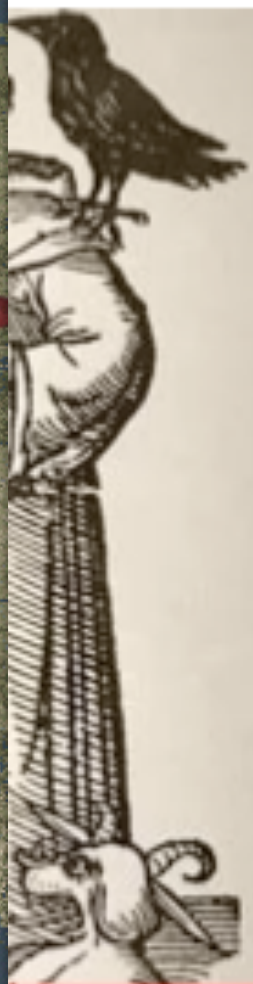
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Religion in Germany Fast Facts

Links go to the ReligionFacts main page for that religion.

- [Protestant 34%](#)
- [Roman Catholic 34%](#)
- Other or unspecified 28.3%
- [Muslim 3.7%](#)
- [Mormon 1.7%](#)



scientific revolution



a question of timing?

Gutenberg, d. 1468

Copernicus, 1473-1543

Tycho Brahe, 1546-1601

Bacon, 1561-1626

Galileo, 1564-1642

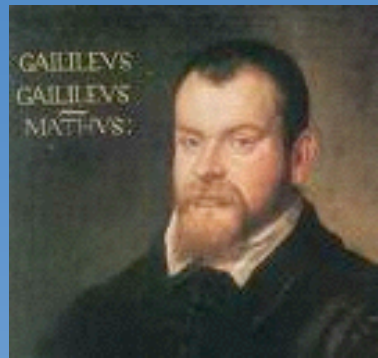
Descartes, 1596-1650

Newton, 1642-1727

Royal Society, 1660

Transactions, Journal des Scavans, 1665

coming up next:
Scientific
"Revolution"





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whose revolution?

Ptolemy (2d c)

Islamic critique

Ali Qushji (15c)

Regiomontanus (15C)

Copernicus (16C)

fitatem:epicyclus
 :o: aut eccentricus
 idem sufficiens

ue soli colligata est in
 itas itaq3 q' motus epi
 rico: & motus planete
 cti equent medio mo/
 dmodu' superius ostē/
 centrici vo centrū mo/
 lionē signo:ū eque ve/
 : & planeta ipse simili/
 : procedat: qua epi cy/
 rminet linea a centro
 trict per centrum pla/
 iper centro.3. & sit pū/
 iuge epi cy cli: sc3 pun/
 unctus. b. fuit centrū
 neta in epi cy clo super
 3. erit angulus. a. 3. b.
 medij argumēti. Sit
 . erit centrum ecentri/
 : eccentricum equale:
 netrum epi cy cli equa/
 ntro:um. Erit igitur
 i. 3. b. ct. d. b. o. equan/
 3. cālio angulo. d. b. o.
 it equales: erunt due
 ntro. n. descripto cir/

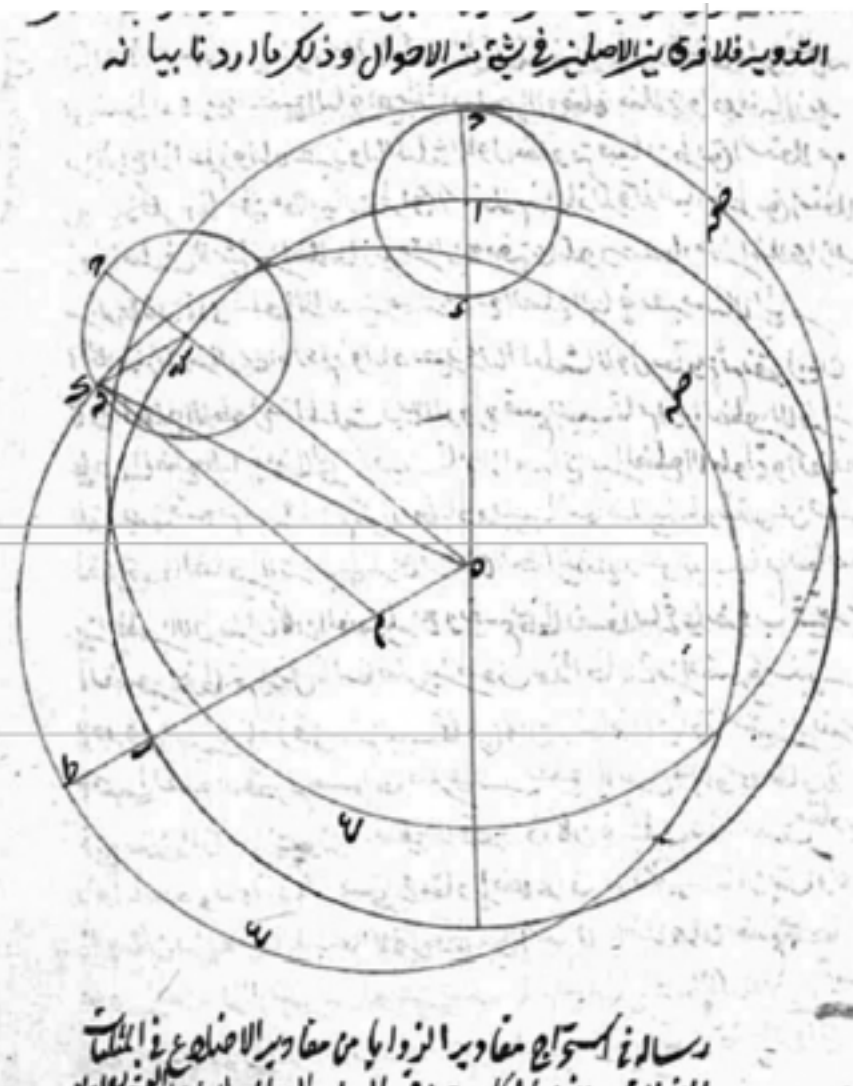
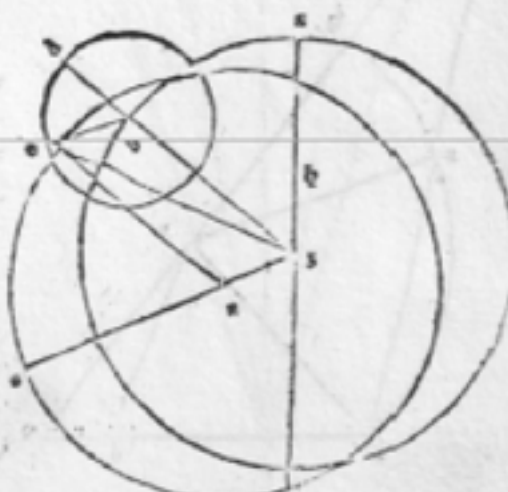


FIG. 1. Comparison of diagrams of Regiomontanus and Qūshjī. (Left) J. Regiomontanus and G. Peurbach, *Epytoma Joannis de monte regio In almagestum ptolemaei* (Venice, 1496), n4r, and (right) °Alī Qūshjī, *Fī anna aṣl al-khārij...*, Carullah MS 2060, f. 137a. Reproductions courtesy of the History of Science Collections, University of Oklahoma Libraries, and of the Süleymaniye Library, Istanbul, respectively.

Ragep, Jamil F. (2007). “Copernicus and His Islamic Predecessors: Some Historical Remarks.”

History of Science, 45 (1), pp. 65–81, 75



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assessing

Nuremberg
Chronicle
c 1493





printing in china



lithography:
printing from
stone

c. 200 bce: the use of seals
yin = seal and print

175 ce: printing of Confucian classics from stone
carvings

868: *Diamond Sutra*
earliest surviving, dated Chinese printing



972-83: Tripitaka, 5,048 volumes



xylography:
wood carving



printing in china



lithography:
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Chinese book
Buddhist text
Sanskrit
translated by a Turk

972-83: Tripitaka, 5,048 volumes



xylography:
wood carving



furthermore ...



10th century?

playing cards, printed textiles, paper money

1041: Pi Sheng clay moveable type

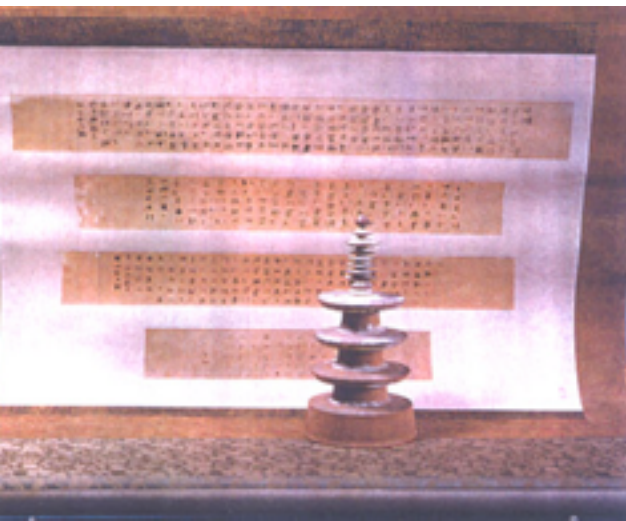
"in the Northern Song in the eleventh century ... there were some thirty printing centers ... and some two hundred in the Southern Song (twelfth century)"

--Lucille Chia, *Printing for Profit* 2002





Japan



Empress Shotoku, and her charms

770: xylographic printing (? 1,000,000 copies)

Japanese "printing was for many centuries a Buddhist monopoly ... religious texts formed the bulk of material ... before 1600 ... only the monasteries ... could afford the costs of book production."

--Kojiro Ikegami,
Japanese Bookbinding, 1986



Korea



8th century: xylography

918-1392: Koryo Dynasty

three methods of publishing:

transcription: Royal library

xylography: Buddhist temples

typography: civil service



1087: *Tripitaka Koreana* (xylography)

80,000 wood blocks, 77 years to complete
destroyed 1232 and then recarved



Korean printing

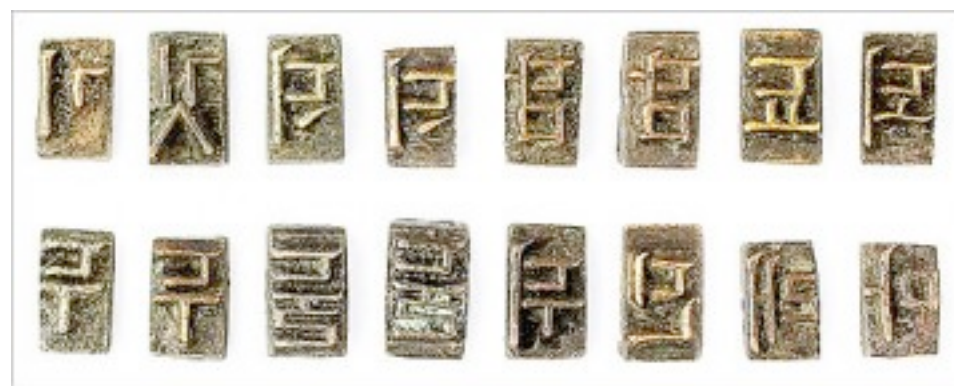
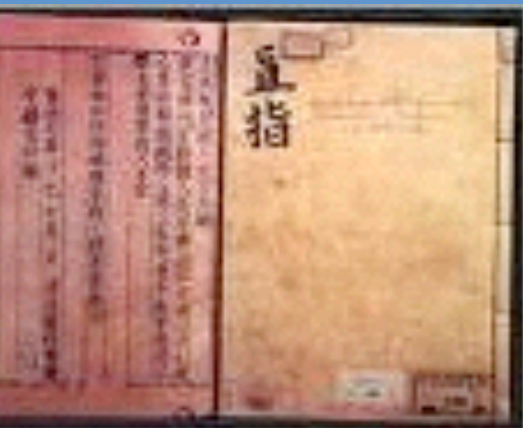
1241: Yi Munsun Chip (metal moveable type)

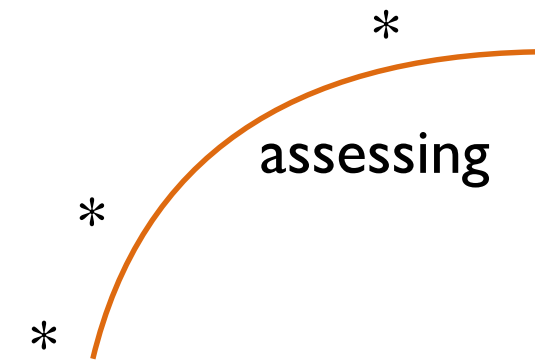
1377: Jikji (earliest book with metal type)

1392: Kyosugam (dept. of publishing)

1403: Jujaso (type foundry)

1446: Hangeul alphabet and typography





and elsewhere

enigmatic hints

"The first attempts at Hebrew printing may well have been made at Avignon, where on 10 March 1446 a certain Procope undertook to make for a former associate 27 square Hebrew letters engraved on iron."

-- Colette Sirat,
Hebrew Manuscripts of the Middle Ages, 2002



western ways

"[Theodore]De Vinne, in his book [The Invention of Printing, 1878] 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'

—Thomas Carter, *The Invention of Printing in China*, 1955.



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western ways

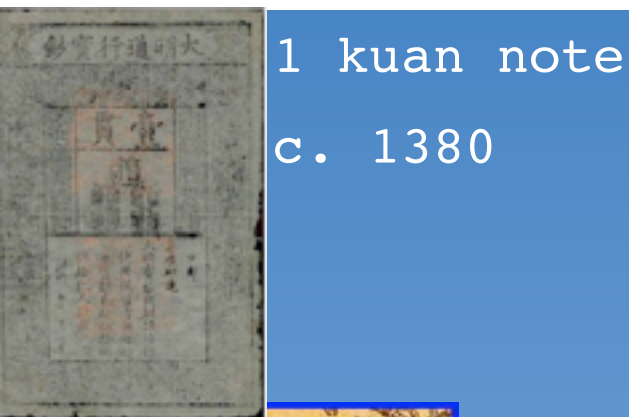
"[Theodore]De Vinne, in his book [The Invention of Printing, 1878] writes, 'The inventor of printing did not invent paper .. did not originate engraving on wood. He was not the first to print upon paper, he was not the first to make printed books, it is not certain that he made the first press, it is not probable that he was the first to think of or make movable type. What he did was to invent the type mold' ... it was the type mold that the Koreans developed."

—Thomas Carter, *The Invention of Printing in China*, 1955.

see also — Paul Needham and Blaise Aguera y Arcas, "What did Gutenberg Invent?"



linear connection?



c. 1290:

"HOW THE GREAT KAAH 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."

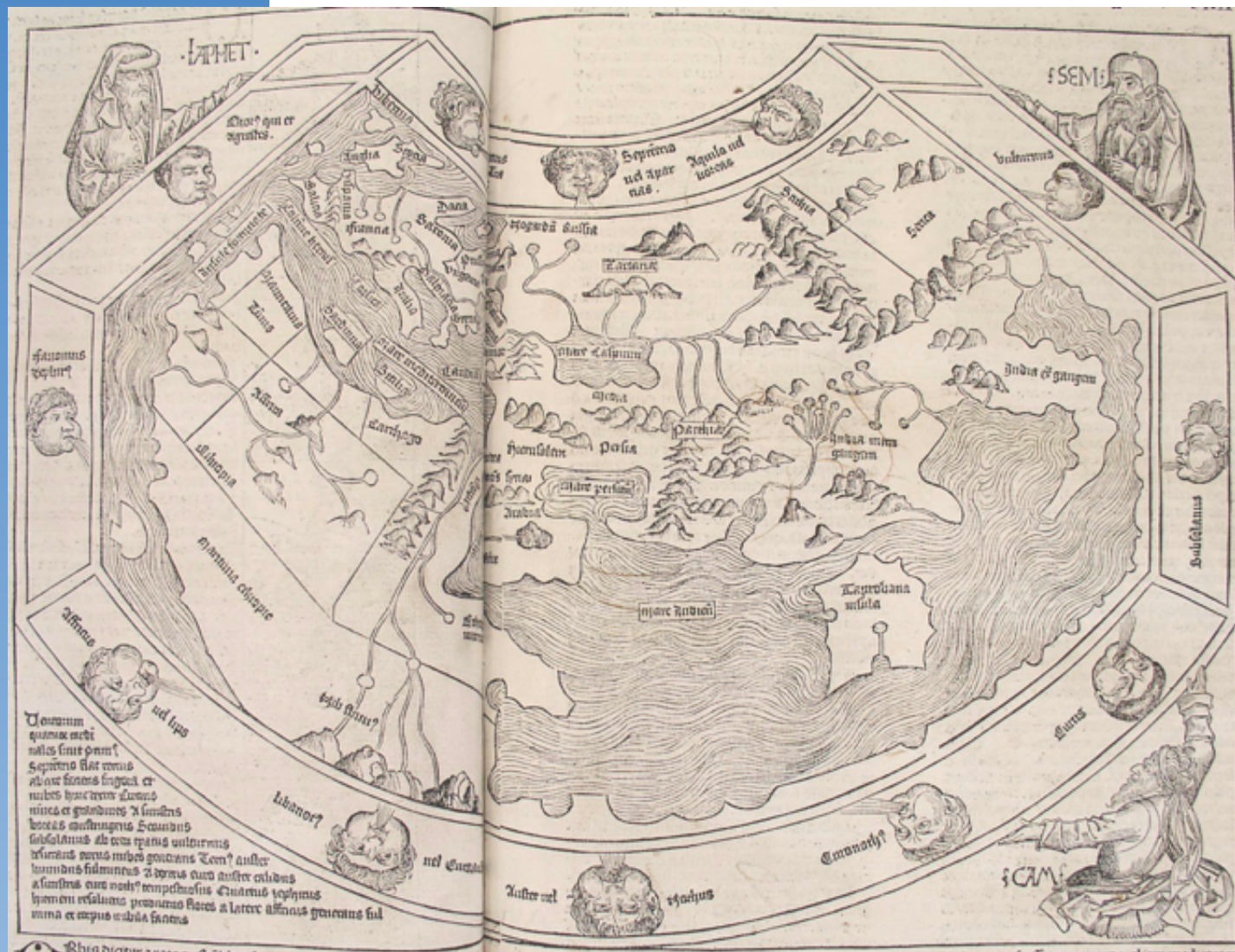


assessing

world of print

printing

China,	7th century
Korea,	8th century
Japan,	8th century
W. Europe,	15th century
Jews,	15th century
India,	18th century
Islam,	19th century





world of books

printing

China,	7th century
Korea,	8th century
Japan,	8th century
W. Europe,	15th century
Jews,	15th century
India,	18th century
Islam,	19th century



world of books

parchment to paper

China, 200 bce

Korea, 3d century

India, 5th century

Japan, early 7th century

Islam, 8th century

Jews, 10th century

Byzantium, 9th century

Western Europe, 11 century

printing

China, 7th century

Korea, 8th century

Japan, 8th century

W. Europe, 15th century

Jews, 15th century

India, 18th century

Islam, 19th century



world of books

parchment to paper

China, 200 bce

Korea, 3d century

India, 5th century

Japan, early 7th century

Islam, 8th century

Jews, 10th century

Byzantium, 9th century

Western Europe, 11 century

scroll to codex

Christians, 2d century

Islam, 8-9th century

Jews, 8-9th century

China, 9th (butterfly)
13th (thread binding)

Korea, ?12th century
(sutra binding)

Japan 18th century

printing

China, 7th century

Korea, 8th century

Japan, 8th century

W. Europe, 15th century

Jews, 15th century

India, 18th century

Islam, 19th century



overview

what gets overlooked

prose & cons

Given the advantages of the printing press and his involvement with it, does Erasmus's discussion of the great printer Aldus Manutius manage to dismiss the concerns of Socrates or Trithemius? Do his thoughts have any bearing on the present?

assessing a revolution

talking tech



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assessing a revolution

talking tech



your views



your views

printing transformed

Scholarship — 66%

Religion — 15%

Politics — 15%

Science — 2%

Erasmus dis/agreed with

Socrates 50/50

Trithemius 50/50



not much effect

"In terms of scholarship, Erasmus stands against the claim that the process of printing has caused any notable transformation."

—Yurika Jacobsson

"It is possible to argue that the print 'revolution' had effects long before it was coined with the name"

—Molly Babcock



serious problems?

"Transformed scholarship, ... The only issue is typo-riddled copies, which they both agree needs to be fixed."
—Jonathan Allan

"The credibility of the written word is therefore diminished, and Socrates' issue with writing remains: it cannot speak for, defend, nor comment on itself."
—Justin Kwok

"as information technology becomes more available ... there's more room for the authority of text to become corrupted and intellectually misconstrued."
—Terence Roe



mercenary appetites

“[T]houghts of money overshadow the true value of knowledge and push quality to the side (147). With money in mind, scholastic integrity is no more. ... With every great technological revolution comes unintended consequences.”

—Serena Wu



overview

what gets overlooked

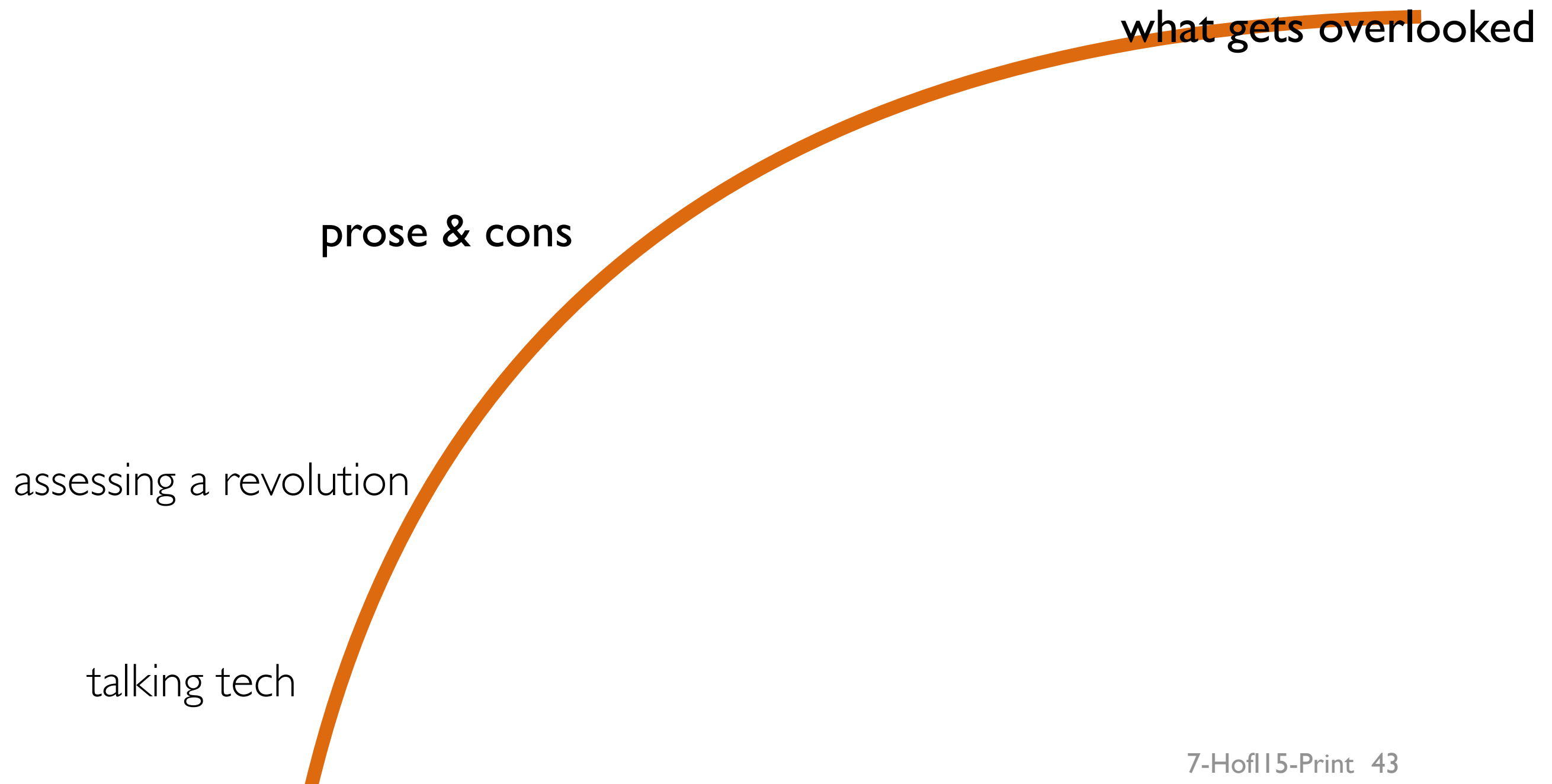
prose & cons

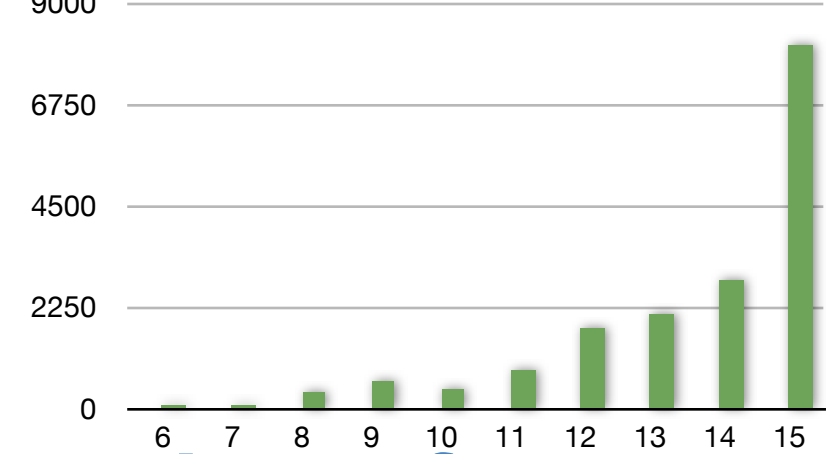
assessing a revolution

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overview



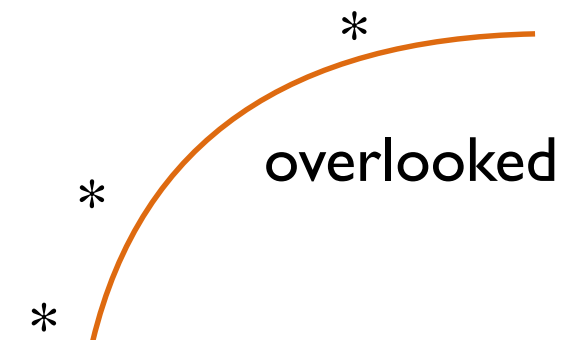


market forces

"labour indeed worthy of Hercules .. to give back to the world something so heavenly ... to dig up what is buried, to call back the dead, to repair what is mutilated, to correct what is corrupted ... especially by the fault of those common printers who reckon ... profit worth more than the whole realm of letters.

... any books shipped from Venice to foreign countries immediately find a readier market merely because they bear that city's imprint .. yet .. the name of Venice is so misused by certain sordid printers

...They fill the world with pamphlets and books ... foolish, ignorant, malignant, libellous, mad, impious, and subversive"



market forces

“eminent authors ... published to the world by men so ill-educated that they cannot so much as read .. rather see a good book filled with thousands of mistakes than spend a few paltry gold pieces on hiring someone to supervise the proof-correcting ... none make such grand promises on the title-page as those who are most shameless in corrupting. ... Punishment ... for the man who sells cloth dyed in England for cloth dyed in Venice ... left free to profit from mere textual corruptions ... under the label of good authors”



cash crop

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

By 1700 "printers were producing between 350,000 and 400,000 copies in the last two months of every year."

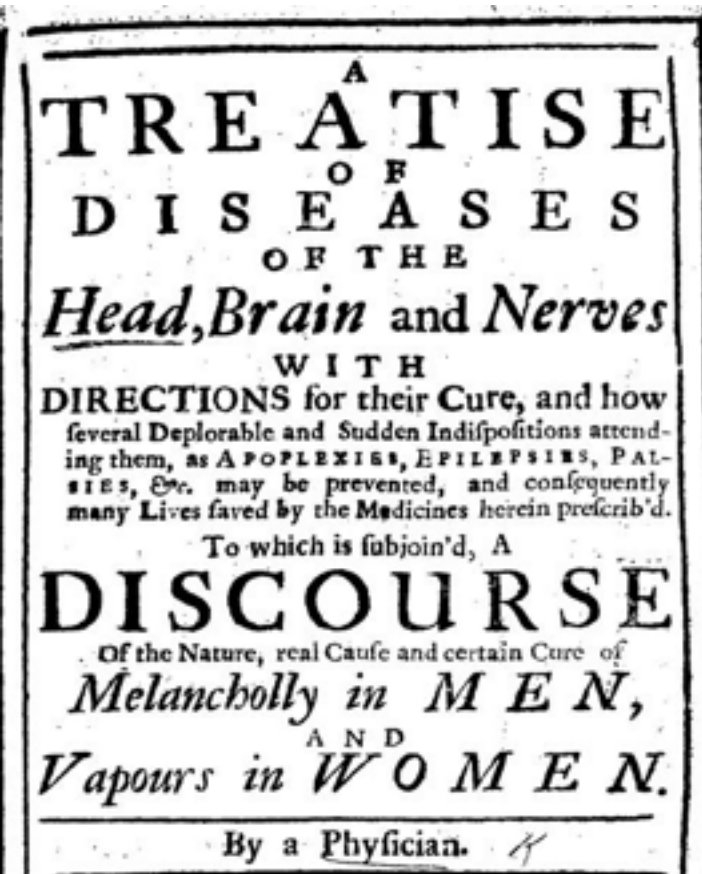
- Louise Curth, "Medical Contents of English Almanacs, 1640-1700"
2005



the making of print culture



whom to trust



the making of print culture

whom to trust

TREATISE
DISEASES
OF THE
Head, Brain and Nerves

WITH
DIRECTIONS for their Cure
several Deplorable and Sudden Indisposi-
tions, as **APOPLEXIES, EPILEPSIES,**
etc. may be prevented, and
many Lives saved by the Medicines here

To which is subjoin'd, A
DISCOURSE
Of the Nature, real Cause and certain
Melancholly in M
AND
Vapours in WOM

By a Physician.

Lithotomia Douglassiana :

O R,

An Account of a New METHOD
of making the High Operation, in
order to extract the Stone out of the
Bladder.

Which is much easier to the Patient, much
sooner done by the Operator, and the
Cure much more certain, than after any
of the other Methods now in Use.

By which also, several of the most dismal
Consequences of the common Operations
are entirely prevented, such as *Incontinency*
of *Urine, Impotency, Fistula's, &c.*

Invented and successfully perform'd

B Y

JOHN DOUGLAS, Surgeon.

g of print culture

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Invented and succe

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JOHN DOUG

g of print culture

TREATISE

ON THE

SMALL-POX AND FEVERS:

Wherein is demonstrated the salutary Effects of a

M E D I C I N E,

Known by the Name of

SEXTON'S POWDER;

For a more certain and easy Cure of those Distempers,
than has hitherto been Known or Practised.

Humbly addressed to the **PUBLICK,** but in particular
to the President, Vice-Presidents, and the Rest of the
Governors of the **SMALL-POX HOSPITAL.**

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g of print culture

A NEW
PRACTICAL ESSAY
ON
CANCERS:

CONTAINING,

- | | |
|---|---|
| I. An Account of their Nature, Causes, and different Species. | as Specifics, but found to be either dangerous, or ineffectual; with Remarks on the same. |
| II. A Detail of the general Method of Practice, commonly called rational or palliative. | |
| III. A Description of the Remedies proposed by some | IV. Is annexed the most safe, efficacious, and only certain Method of Cure, founded on Reason, and confirmed by Experience. |

To which is also added,

A new, more safe, and efficacious Method of
ADMINISTERING HEMLOCK;

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Every Patient His own Doctor;

OR, THE

S I C K M A N's
TRIUMPH OVER DEATH AND THE GRAVE.

CONTAINING,

The most approved METHODS of curing every DISEASE
incident to the **HUMAN BODY**, *internal or external*;
whether owing to Defects of Nature, occasioned by In-
temperance, contracted by Accident, or caused by Decay.

WITH

THE BEST REMEDIES
Prescribed by the Authority of the most eminent Physicians
for removing each Disorder, restoring Health, preserving
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INCLUDING

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g of print culture

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M E D I C I N E S.

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

—Adrian Johns, *Nature of the Book*, 1998

solutions



IP or Open Source?

1486 Marcantonio Sabellico — privilegium [©]

1496 Aldus Manutius — patent, Greek type

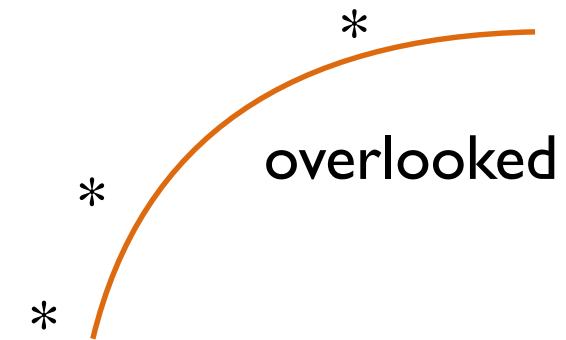
1498 Aldus - © Demosthenes, Plutarch, Xenophon ...

1501 Aldus Manutius — patent, Italic type

1507 Aldus - legal battles for control

1507 *Adagia* I: "Amicorum Communia Omnia"

coming up:
Information as
Property



solutions

legal control

“provided by law that no man should sew a shoe
.. or make a cupboard, unless he has been
approved by his trade guild

Punishment ... for the man who sells cloth dyed
in England from cloth dyed in Venice .. left
free to profit from mere textual
corruptions .. under the label of good
authors”



control or censorship?

1487: State control: Court of Star Chamber

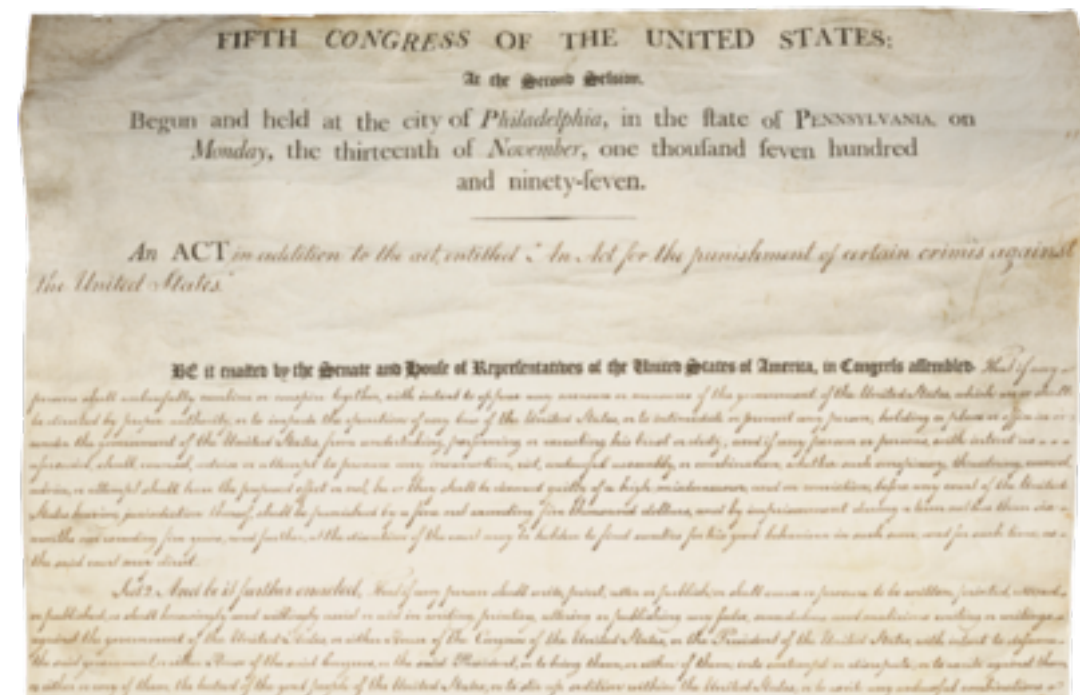
1557: Guild control: Stationer's Company

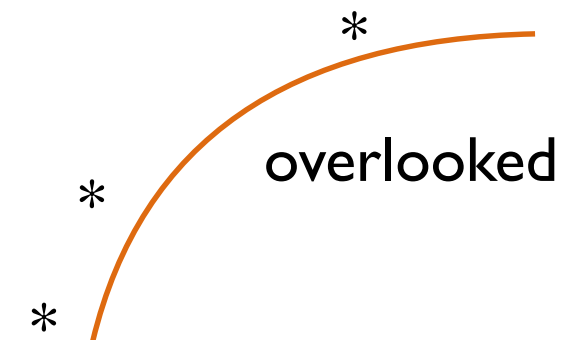
1571: Religious control: *Index Expurgatorius* "Opera omnia Erasmi cautè legenda: tam multa enim insunt correctione digna, ut vix omnia expurgari possint"

1710: Statute of Anne

18c: Stamp Acts

1798: Alien and Sedition Acts





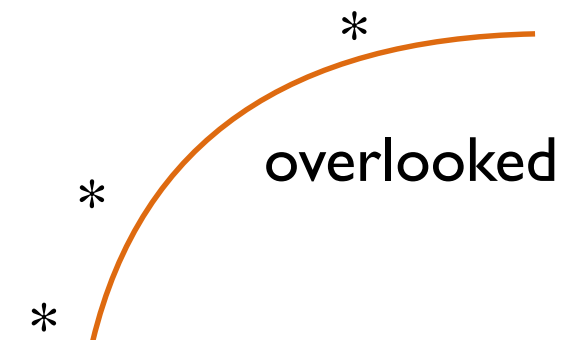
solutions

public subsidy

"I must suggest a remedy ... grants from either princes or from bishops and abbots or from the public treasury if only the princes on our side of the Alps encouraged liberal studies"

or private philanthropy?

"I will not put on record here how many ways our magnates have of wasting money, how much is absorbed by gaming, wenching, drinking, needless travel, pageants, wars .. ambition, favourites, players, or fools"



where are the philanthropists?

"The merchants are the biggest fool of all. They carry on the most sordid business and by the most corrupt methods. Whenever it is necessary, they will lie, perjure themselves, steal, cheat, and mislead the public. Nevertheless, they are highly respected because of their money. There is no lack of flattering friars to kowtow to them, and call them Right Honorable in public. The motive of the friars is clear: they are after some of the loot"

— Erasmus, *Encomium Moriae*

How HBO's John Oliver Helped Move The Needle on Net Neutrality

ARTICLE

COMMENTS (1)

'LAST WEEK TONIGHT' FEDERAL COMMUNICATIONS COMMISSION HBO JOHN LEWIS

Email Print



By GAUTHAM NAGESH CONNECT



GIZMODO

Republicans Call Foul Play Over New Net Neutrality Proposal



Darren Orf

Filed to: NET NEUTRALITY Yesterday 5:00pm

35,592 7

The biggest news on the internet last week [was about the internet itself](#), specifically FCC's announcement that he will be proposing that broadband be II, allowing everyone equal, unbiased access to the internet. In [bama called on the FCC](#) to support net neutrality by exercising the or did exactly that on Wednesday, some members of Congress grew

An Argument For Not Taking Down Horrific Videos

Posted by **timothy** on Sunday February 08, 2015 @09:20PM
from the what's-actually-happening dept.



A few days ago, we posted a story that asked whether posting horrific videos online [served a legitimate journalistic purpose](#); some images that are shocking in their violence are now routinely available, including and especially the recent video of Jordanian pilot Muath al-Kaseasbeh being burned alive. Matthew Ingram writes at GigaOm that, whatever you think of the motives or results of the traditional news media showing such videos or choosing not to, there's [good reason for social media sites not to reflexively remove such content](#).

still fighting?

[Street Journal](#), Rep. Jason Chaffetz, who is chairman of the House
ent Reform Committee, contacted Wheeler on Friday asking for all
ar appointments, and visitor logs between the FCC and The White
s suspicious of Wheeler's change in policy.



in sum

talking about information and revolutions requires talking about a lot more than “technology”

we need to distinguish tech, techies, and text

we need to consider the political economy of tech

we need to understand the mechanisms of authority and authenticity

perhaps this Labour is not so proper for Experimenters to undergo; for it would not only devour too much of their Time, but it would go near to make them a little more *magisterial* in Philosophy, than became them; by being long accustomed to command the Opinions, and direct the Manners, of their Scholars. And as to the other Particular, the large Estate which he required to the Maintenance of his College; it is evident, that it is so difficult a Thing to draw Men in to be willing to divert an ancient Revenue, which has long run in another Stream, or to contribute out of their own Purcs, to the supporting of any new Design, while it shews nothing but Promises, and Hopes; that, in such cases, it were (it may be) more advisable to begin upon a small Stock, and so to rise by degrees, than to profess great Things at first, and to exact too much Benevolence all in one Lump together. However, it was not the excellent Author's Fault, that he thought better of the Age than it did deserve. His Purpose in it was like himself, full of Honour and Goodness: Most of the other Particulars of his Draught the *Royal Society* is now putting in Practice.

I come now to the second Period of my Narration; wherein I promised to give an Account of what they did, till they were publicly owned, encouraged, and confirmed by Royal Favour. And I trust, that I shall here produce many Things, which will prove their Attempts to be worthy of all Men's Encouragement: though what was performed in this Interval may be rather styl'd the *Temporary Scaffold* about the Building, than the *Frame itself*. But in my Entrance upon this Part, being come to the Top of the Hill, I begin to tremble, and to apprehend the Greatness of my

12 Feb: Scientific "Revolution"

Required Reading

Sprat, Thomas. 1667. *The History of the Royal Society of London for the Improving of Natural Knowledge*. London.

Read: pp. pp 60-79

Source: bcourses [hyperlink to follow]

coming up

Sprat divides his history into three parts. The first gives the background of the group which formed the Royal Society. The second describes what they did that earned them the title "Royal Society" (in 1662). And the third describes what they did between 1662 and the publication of Sprat's book in 1667. You are asked to read from the second part:

Start at page 60 with the paragraph that begins, "I come now to the Second Period of my Narration..." and read to p. 79, "The *Royal Society* will become *Immortal*."

Note: The Royal Society was founded in England in 1660. It still exists today-2010 was its 350th anniversary and claims to be the world's oldest scientific society. This year is the 350th anniversary of its still-published journal *Transactions of the Royal Society*. Thomas Sprat (1635-1713), the author of the work you have to read, joined the Society in 1663 and was asked to write the Society's history. In this book, then, we have a contemporary, insider's account of the founding of a very influential society, one that people argue was at the center of the "scientific revolution." Because it was written in the seventeenth century, however, the text is a challenge. But it is manageable and even rewarding with patience. Take it slowly. The section you have to read, pages 60-79, is not very long. If you keep going, what is at first confusing may become clear (or irrelevant). Mark up passages that don't make sense (as well as those that interest you) to discuss in class, but keep on reading. As you read, ask yourself how much this does or does not resemble what we think of as modern science.

68 THE SPECTATOR. N° 572

twixt his soul, and the sight of that being, who is always present with him, and is about to manifest itself to him in fulness of joy.

If we would be thus happy, and thus sensible of our Maker's presence, from the secret effects of his mercy and goodness, we must keep such a watch over all our thoughts, that, in the language of the scripture, his soul may have pleasure in us. We must take care not to grieve his holy spirit, and endeavour to make the meditations of our hearts always acceptable in his sight, that he may delight thus to reside and dwell in us. The light of nature could direct *Seneca* to this doctrine, in a very remarkable passage among his epistles: *Sacri inest in nobis spiritus honorum malorumque custos, & observator, & quemadmodum nos illum trahamus, ita & ille nos.* 'There is a holy spirit residing in us, who watches and observes both good and evil men, and will treat us after the same manner that we treat him.' But I shall conclude this discourse with those more emphatical words in divine revelation. *If a man love me, he will keep my words; and my father will love him, and we will come unto him, and make our abode with him.*

N° 572 Monday, July 26.

Quod medicorum est
Promittunt medici — Hor. Ep. 1. 1. 2. ver. 115.
Physicians only boast the healing art.

I Am the more pleased with these my papers, since I find they have encouraged several men of learning and wit to become my correspondents: I yesterday received the following essay against quacks, which I shall here communicate to my readers for the good of the public, begging the writer's pardon for those additions and retrenchments which I have made in it.

If you go to [Early English Books Online](#) , you will be able to see the pages as they appeared in the original book.

[Steele, Richard], 1712. "Essay against Quacks," *The Spectator* 572 Monday, July 26.

Source: EEBO [hyperlink]