search, storage, & beyond

History of Information

May 5, 2009

order of business

1. search & storage to web 2.0

2. distance

search, storage, & beyond

History of Information

May 5, 2009

THE WHITE HOUSE BLOG

Friday, May 1st, 2009 at 2:03 pm

WhiteHouse 2.0

In the President's last Weekly Address, he called on government to "recognize that we cannot meet the challenges of today with old habits and stale thinking." He added that "we need to reform our government so that it is more efficient, more transparent, and more creative," and pledged to "reach beyond the halls of government" to engage the public. Today the White House is taking steps to expand how the Administration is communicating with the public, including the latest information and guidance about the H1N1 virus. In addition to WhiteHouse.gov, you can now find us in a number of other spots on the web:

- Facebook.com/WhiteHouse
- MySpace.com/WhiteHouse
- Twitter.com/WhiteHouse

The WhiteHouse blog (RSS) will power a lot of the content in these networks, but we're looking forward to hearing from our fans, friends and followers. Don't forget these sites as well:

- Flickr.com/WhiteHouse

storage & search

changing ideas of organization?

"to organize the world's information"

"the web is a global library produced by millions of people"
    --Yochai Benkler

"the Internet ... is a library"
            --Frances Cairncross
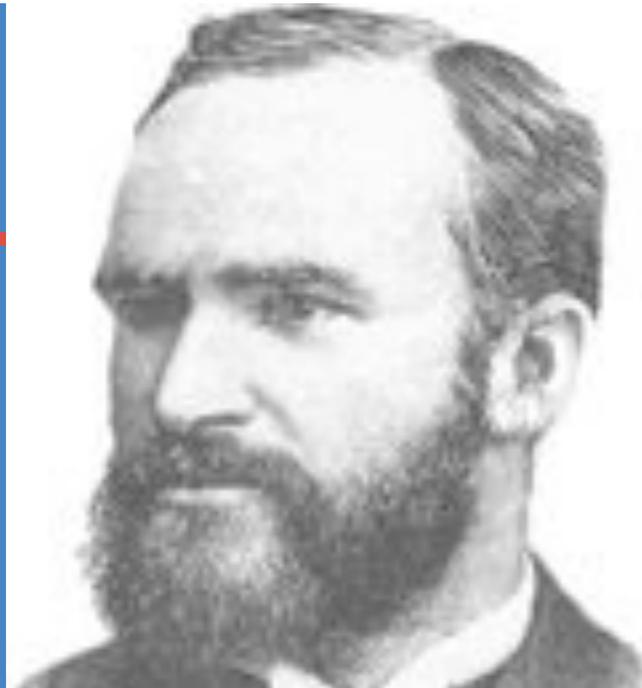
organizing

**the world before google**
ordering:
Dewey Decimal

Library of Congress:
Thomas Jefferson --Denis Diderot -- Francis Bacon

Melvil Dewey
1851–1931
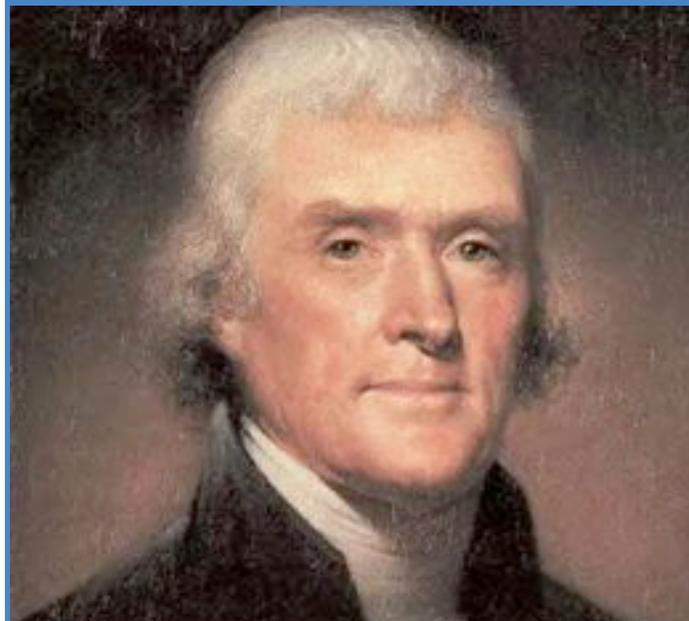
Thomas Jefferson
1743–1826

searching the store

Edward Gibbon
1737–1794

the world before google
cataloguing

card catalogues

4

cataloguing

break with the past

WAIS

Veronica

Archie
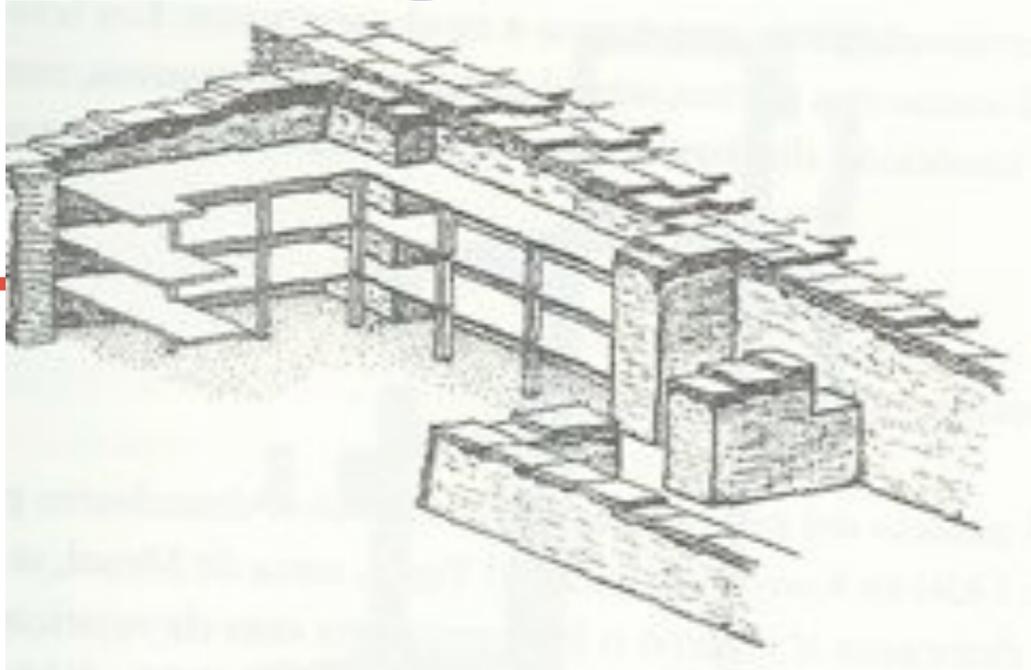
deep storage

Ebla (Syria) c 2250 bce

Babylon (Iraq) 15,000 tablets

Nineveh (Iraq) c. 650 bce

what was stored?

Ebla: accounts, lists, etc.

Nineveh: *Gilgamesh*
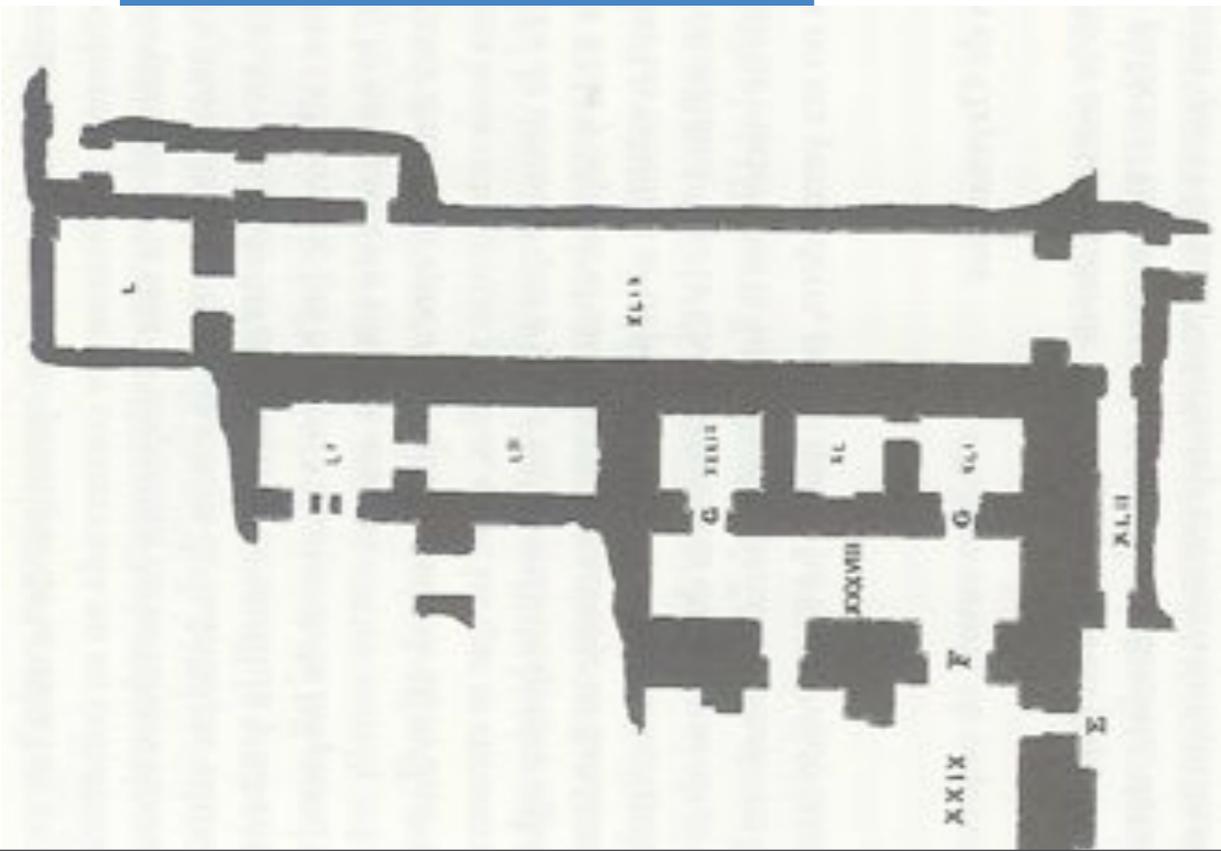
from stone to parchment and paper

"You would imagine that they had intelligence, but if you want to know anything and put a question to one of them, the speaker always gives one unvarying answer. And when they have been once written down they are tumbled about anywhere among those who may or may not understand them."

Lyceum [Greece] (Aristotle)

Pergamum [Turkey] (c 197 bce) 200,000 scrolls parchment

progress & pillage

libraries
royal library, Mouseion, "daughter", Serapion
Caesarion

Ptolomies
I (367/6-283/2 bce)
II (308-246 bce)

holdings
490,000 "main"
42,000 "daughter"

sorting

Zenodotus
alphabetical ordering

Callimachus
subject categories

Aristophanes & Aristarchus
scholarly versions
editorial commentary

Dionysius the Thracian
Greek grammar

all progress?

lost and found

"immutable mobiles"
Bruno Latour
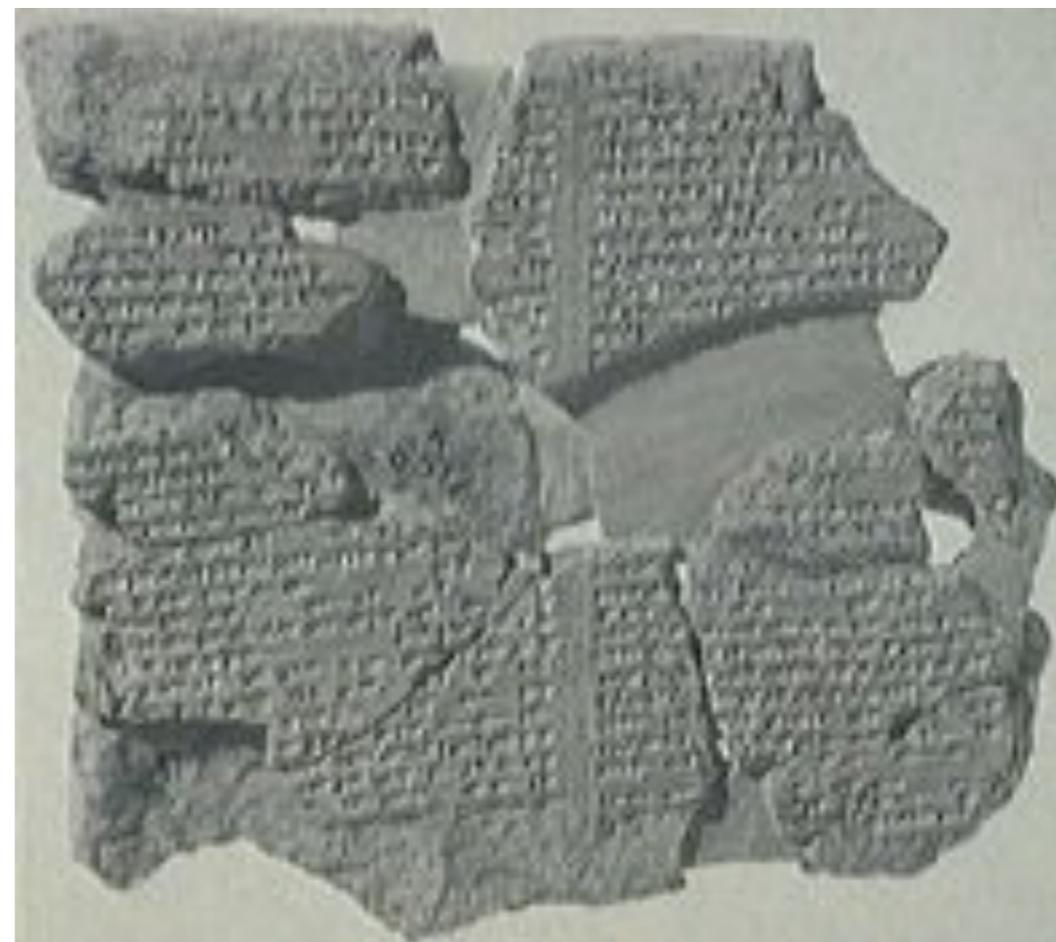
mutability & bit rot

magna carta
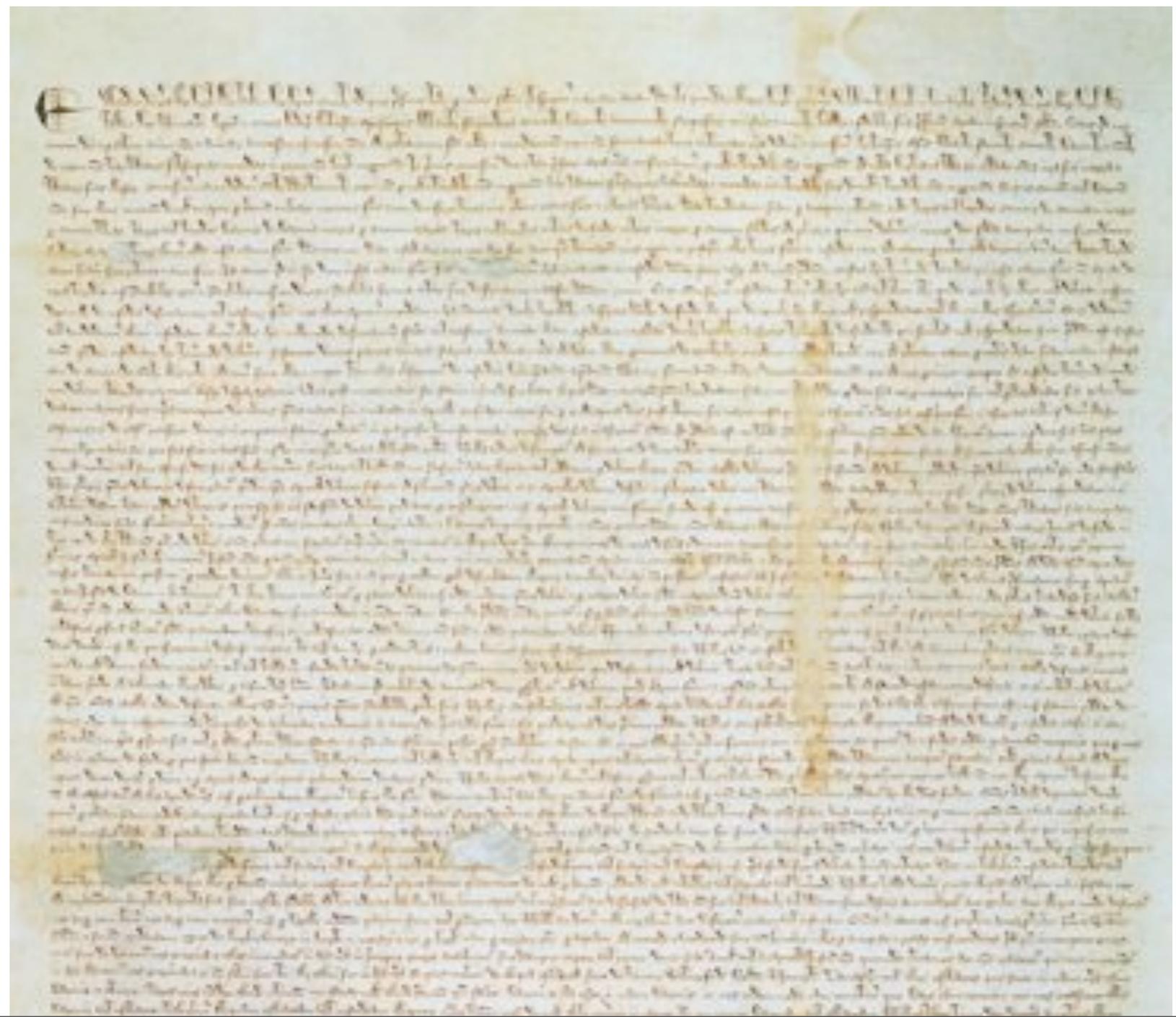
religious libraries

monastic libraries

"[F]rom the fourth hour until about the sixth let them apply themselves to reading. After the sixth hour, having left the table, let them rest on their beds in perfect silence; or if anyone may perhaps want to read, let him read to himself in such a way as not to disturb anyone else."
Rule of St Benedict, Chapter 48.

Islamic libraries

Jerusalem, Damascus, Cairo, Cordoba

running a library

Humbert de Romanis
(c1194-1277)

dry, well ventilated, ample shelving, subject categories, catalogue, titles on spines; up to date, selling old and duplicates to buy new; regular hours; 'reference' book chained, others portable; loans recorded
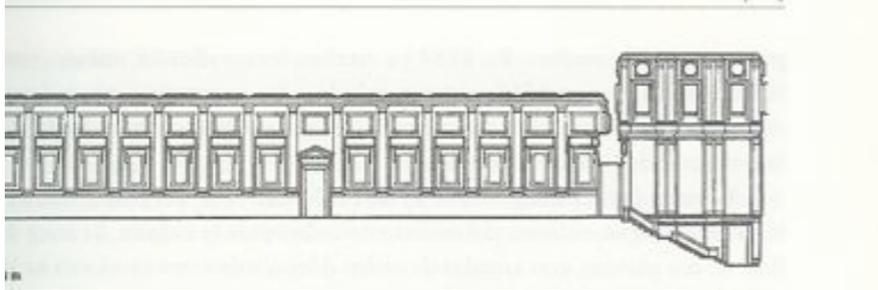
state libraries

Paris (Charles V, 1338-1380): 1368

Florence (Cosimo Medici, 1389-1464): 1436

Vatican (15th century)

Escorial (1584)

British Museum (1754)

public libraries

Florence, 1444

Chetham, 1653

Chetham Library
1653

"These Libraries in a few years, will be full and compleat, being furnished, not only with all the valuable and usefull Old Books in any Art of Science, but also with all the valuable New Books, so soon as every they are heard of or seen in the World"
An Overture for Founding and Maintaining of Bibliothecks in Every Paroch Throughout this Kingdom, James Kirkwood, 1699

and private libraries
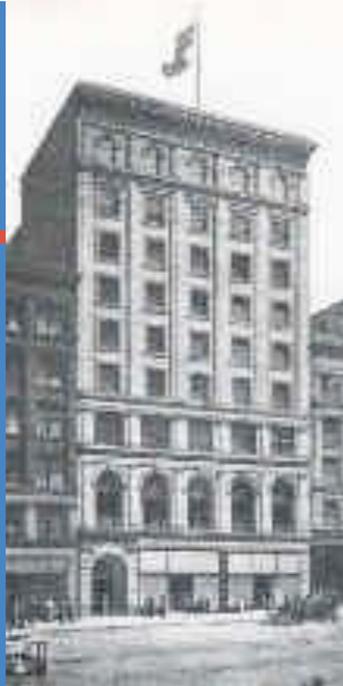
Mechanic's Institue, SF
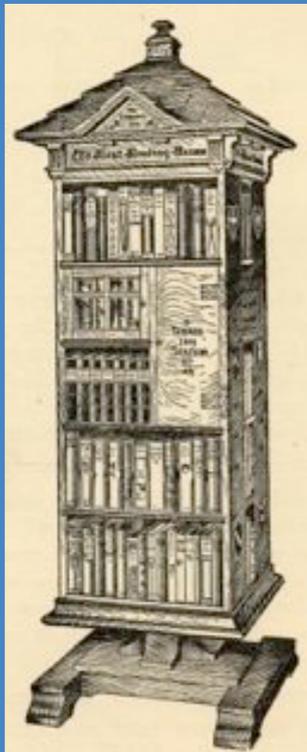
Tabard Inn bookcase

19th century private libraries

Beijing libraries and bun shops

Mudie's Select Library

Mechanics subscription libraries

Tabard Inn 5 ¢ Booklover's Library

the public beats the private?

libraries act (1850)

Carnegie libraries

W.H. Smith

bibliothekswesens

1953 rental libraries: 600 million circulations

(20 times the circulation of public libraries)

books of character

Tobias Smollett
1721-1777

"the British Museum ... adding to each at the public expense, those articles that are wanting .... by purchasing all the books of character that are not to be found already in the collection. They might be classed in centuries, according to the dates of their publication, and catalogues printed of them and the manuscripts .... a complete apparatus of a course of mathematics, mechanics, and experimental philosophy."

Tobias Smollett, *Humphrey Clinker*, 1771

circling libraries

Smirke, British Musem Reading Room, 1851

Pelz/Casey Reading Room, LOC, ca 1898
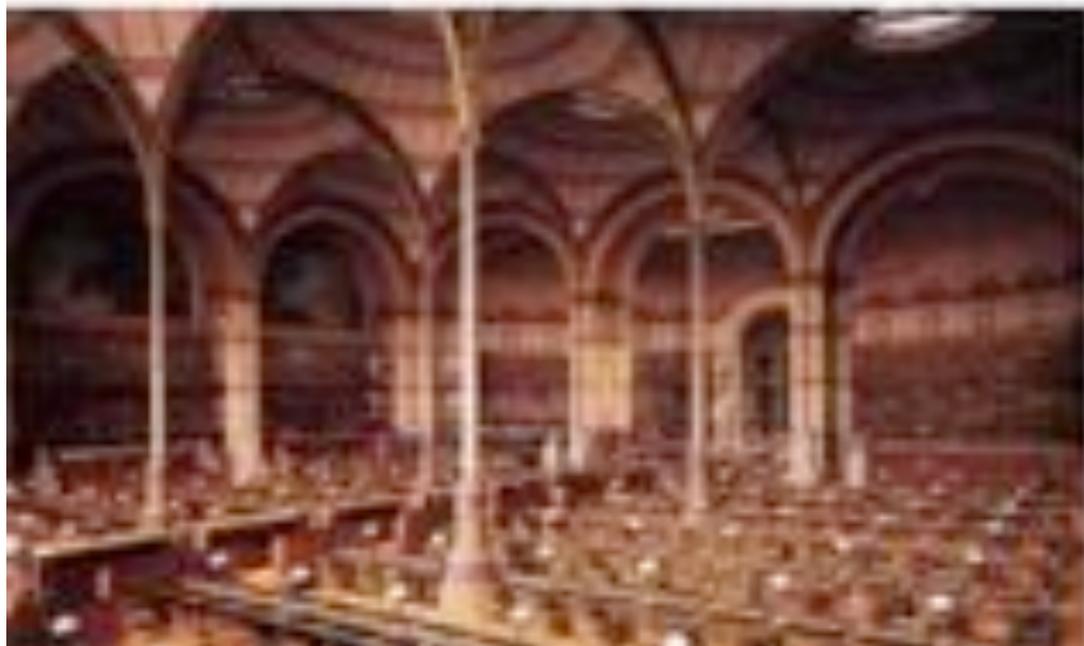
Labrouste, Bibliothèque Nationale 1868

Asplund, Stockholm City Library, 1928

film of the book

escaping paper
Notes & Queries, 1854, 1855

Photography applied to Catalogues of Books.— May not photography be usefully applied to the making of catalogues of large libraries? It would seem no difficult matter to obtain any number of photographs, of any required size, of the title-page of any book. Suppose the plan adopted, that five photographs of each were taken; they may be arranged in five catalogues, as follows: — Era, subject, country, author, title. These being arranged alphabetically, would form five catalogues of a library probably sufficient to meet the wants of all. Any number of additional divisions may be added. By adopting a fixed breadth—say three inches—for the photographs, to be pasted in double columns in folio, interchanges may take place of those unerring slips, and thus librarians aid each other. I throw out this crude idea, in the hope that photographers and librarians may combine to carry it out.   ALBERT BION, LL.D.

Dublin.

Photographic Copies of Ancient Manuscripts. —Might not photography be well employed in making facsimiles of valuable, rare, and especially of unique ancient manuscripts? If copies of such manuscripts could be multiplied at a moderate price, there are many proprietors of libraries would be glad to enrich them by what, for all purposes of reference, would answer equally well with the originals.   A.

[This subject, which has already been touched upon in our columns, has not yet received the attention it deserves. We have now before us a photographic copy of a folio page of a MS. of the fourteenth or fifteenth century, on which are inscribed a number of charters; and, although the copy is reduced so as to be but about 2 inches high and 1½ broad, it is perfectly

escaping the library

"an America where every child can stretch a hand across a keyboard and reach every book ever written, every painting ever painted, every symphony ever composed". Bill Clinton, 1966

"A young generation of entrepreneurs asked what if we could take all the information in a library and put it on a little chip the size of a fingernail? We did that and changed the world forever". John Kerry, 2004

"universal access to all knowledge". Brewster Kahle
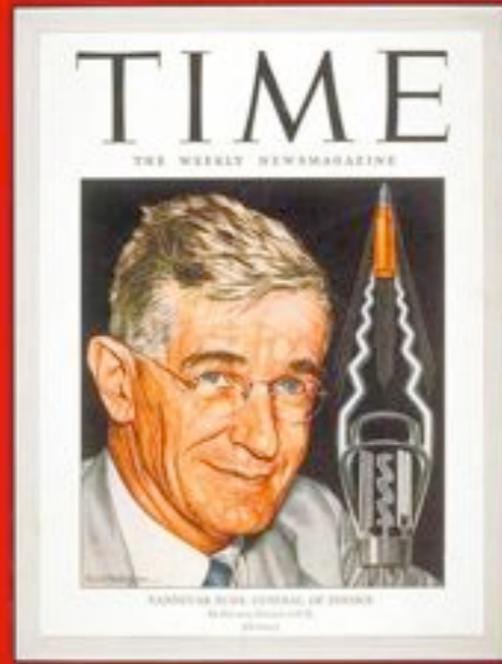
old problem
new technology

Vannevar Bush (1890-1974)

"There is a growing mountain of research.
But there is increased evidence that we
are being bogged down today as
specialization extends. ... A record if it
is to be useful to science, must be
continuously extended, it must be stored,
and above all it must be consulted"
--As we may think, 1945

memex

looking back

Two centuries ago Leibnitz invented a calculating machine which embodied most of the essential features of recent keyboard devices

... Babbage, even with remarkably generous support for his time, could not produce his great arithmetical machine

...progress in photography is not going to stop .... dry photography ... is already here

... a scheme for facsimile transmission

...microphotography ... compression ... advanced arithmetical machines .... will select their own data and manipulate it

memex

looking ahead

A memex is a device in which an individual stores all his books, records and communications ... mechanized ... associative indexing ... his trails do not fade
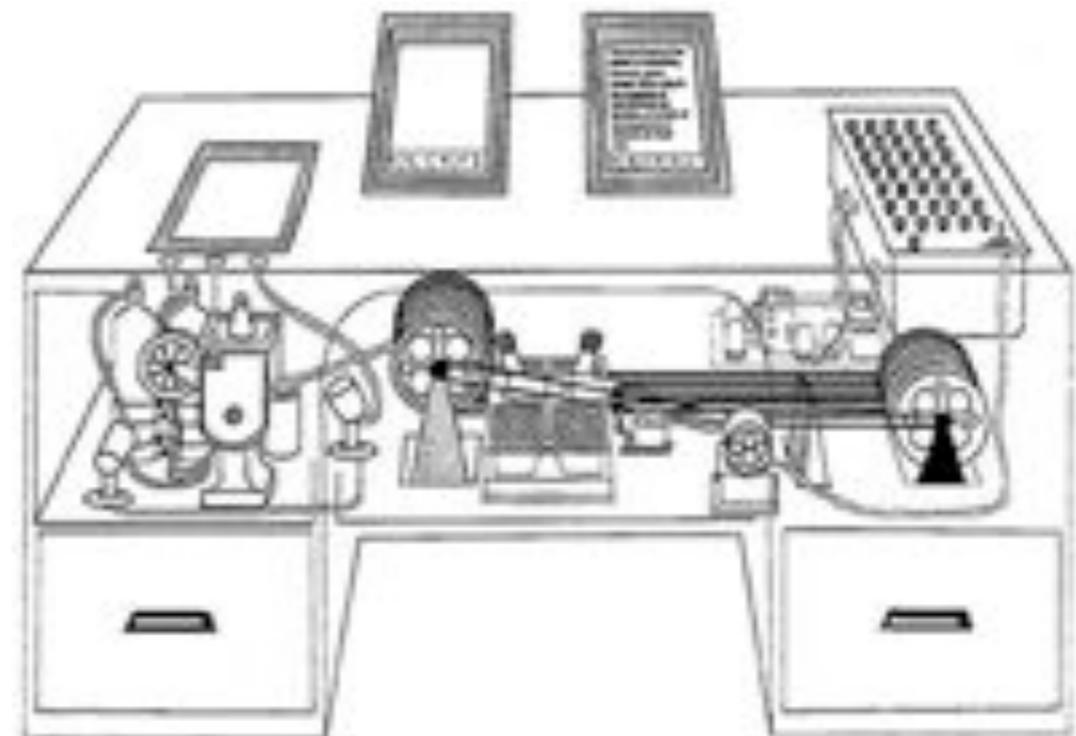
great escape

open source beyond software

"Linux has broader implications ... Peer production

is a phenomenon of much wider implication"

-- Yochai Benkler

Web 1.0		Web 2.0
DoubleClick	-->	Google AdSense
Ofoto	-->	Flickr
Akamai	-->	BitTorrent
mp3.com	-->	Napster
Britannica Online	-->	Wikipedia
personal websites	-->	blogging
evite	-->	upcoming.org and EVDB
domain name speculation	-->	search engine optimization
page views	-->	cost per click
screen scraping	-->	web services
publishing	-->	participation
content management systems	-->	wikis
directories (taxonomy)	-->	tagging ("folksonomy")
stickiness	-->	syndication

Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat ... I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi)

open source

Richard Stallman, MIT
1983 *GNU Manifesto*

Computer Science Research Group, UCB 1977-1995

Bill Joy
1977: 1 BSD (Berkeley Software Distribution)
1991: Networking Release 1
1992: USL (Unix Systems Laboratory) vs BSDi

Linus Torvalds, U. Helsinki
linux, 1991

open source

Hello everybody out there using minix -

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Linus
(torvalds@kruuna.helsinki.fi)

Richard Stallman, MIT
1983 *GNU Manifesto*

Computer Science

FreeBSD 7.2-RELEASE Announcement

The FreeBSD Release Engineering Team is pleased to announce the availability of FreeBSD 7.2-RELEASE, the 7-STABLE branch which improves on the functionality of FreeBSD 7.1 and introduces some new features.

- support for fully transparent use of superpages for application memory
- support for multiple IPv4 and IPv6 addresses for jails
- csup(1) now supports CVSMode to fetch a complete CVS repository
- Gnome updated to 2.26, KDE updated to 4.2.2
- sparc64 now supports UltraSparc-III processors

For a complete list of new features and known problems, please see the online release notes and errata

- http://www.FreeBSD.org/releases/7.2R/relnotes.html

going open

project gutenberg

Michael Hart, 1971
Declaration of Independence

Distributed Proofreading, 2000

28,000 + titles

2,000,000 monthly downloads

```
"large, well-organized ... comprehensive scholarly
       ... We do not write for the reader who cares
 whether a certain phrase in Shakespeare has a ":"
or a ";" between its clauses. We put our sights on
a goal to release etexts that are 99.9% accurate in
               the eyes of the general reader"
```

books to ascii

Top 100 EBooks last 7 days

1. The Outline of Science, Vol. 1 (of 4) by J. Arthur Thomson (3292)
2. Manners, Customs, and Dress During the Middle Ages and During the Renaissance Period by P. L. Jacob (2795)
3. Illustrated History of Furniture by Frederick Litchfield (1788)

List of Illustrations.

Frontispiece--Dwelling Room of a French Chateau

Chapter I.

Vignette of Bas-relief--egyptian Seated, as Ornament to Initial Letter.
Assyrian Bronze Throne and Footstool

Assyrian Furniture.

[Illustration: Part of Assyrian Bronze Throne and Footstool, about B.C.
880, Reign of Asshurnazirpat. (_From a photo by Mansell & Co. of the
original in the British Museum._)]

books to ascii

Babbage, Charles. 1835. "Registering Operations" and "On the Division of Mental Labour," chapters 8 & 20 in *On the Economy of Machinery and Manufactures.*

```
Chapter 19

On the Division of Labour

Chapter 20

On the Division of Labour
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books to ascii

Babbage, Charles. 1835. "Registering Operations" and "On the Division of Mental Labour," chapters 8 & 20 in *On the Economy of Machinery and Manufactures.*

The table on the following page will then express the series of movements and their results.

If now only those divisions struck or pointed at by the clock A be attended to and written down, it will be found that they produce the series of the squares of the natural numbers. Such a series could, of course, be carried by this mechanism only so far as the numbers which can be expressed by three figures; but this may be sufficient to give some idea of the construction--and was, in fact, the point to which the first model of the calculating engine, now in progress, extended.

Babbage, Charles. 1835. "Registering Op[...] Labour," chapters 8 & 20 in *On the Econo[...]*

The table on the follo[...] of movements and their

If now only those divi[...] A be attended to and w[...] produce the series of [...] series could, of cours[...] as the numbers which c[...] may be sufficient to g[...] was, in fact, the poin[...] calculating engine, no[...]

Repetitions of Process	Move- ments.	CLOCK A. Hand set to I.	CLOCK B. Hand set to III.	CLOCK C. Hand set to II.
		TABLE.	First difference	Second difference
1	Pull A.	A. strikes 1	. . . .	. . . . .
	— B.	The hand is ad- vanced (by B.) 3 divisions . .	B. strikes 3	. . . .
	— C.	. . . .	The hand is ad- vanced (by C.) 2 divisions . .	C. strikes 2
2	Pull A.	A. strikes 4	. . . .	. . . .
	— B.	The hand is ad- vanced (by B.) 5 divisions . .	B. strikes 5	. . . .
	— C.	. . . .	The hand is ad- vanced (by C.) 2 divisions . .	C. strikes 2
3	Pull A.	A. strikes 9	. . . .	. . . .
	— B.	The hand is ad- vanced (by B.) 7 divisions . .	B. strikes 7	. . . .
	— C.	. . . .	The hand is ad- vanced (by C.) 2 divisions . .	C. strikes 2
4	Pull A.	A. strikes 16	. . . .	. . . .
	— B.	The hand is ad- vanced (by B.) 9 divisions . .	B. strikes 9	. . . .
	— C.	. . . .	The hand is ad- vanced (by C.) 2 divisions . .	C. strikes 2
5	Pull A.	A. strikes 25	. . . .	. . . .
	— B.	The hand is ad- vanced (by B.) 11 divisions . .	B. strikes 11	. . . .
	— C.	. . . .	The hand is ad- vanced (by C.) 2 divisions . .	C. strikes 2
6	Pull A.	A. strikes 36	. . . .	. . . .
	— B.	The hand is ad- vanced (by B.) 13 divisions .	B. strikes 13	. . . .
	— C.	. . . .	The hand is ad- vanced (by C.) 2 divisions . .	C. strikes 2

open source

gracenote

cataloguing 52 million tracks
song -- artist -- album -- genre

If you see an error in the data for a favorite CD, or the data is incomplete, or the service does not recognize the CD at all, you can submit changes or additions to the database maintained by the service. In turn, you benefit from the processed submissions from the millions of other fans who have ever used the service. In addition, Gracenote staff are constantly entering and correcting disc entries by hand and working with artists and labels

gracenote

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Giovanni		5:51	1.01 Introduzione: Notte E Giorno Faticar (Leporello, Donna Anna, Don Giovanni, Il Commendatore)		Mozart – Don
n Giovanni		6:30	1.04 Recitativo Accompagnato: Ma Qual Mai S'offre, O Dei (Donna Anna, Don Ottavio)		Mozart – Don
n Giovanni		1:35	1.06 Recitativo: Orsu, Spicciati Presto (Don Giovanni, Leporello)		Mozart – Don

ame	Time	Artist	Album
Mi – Par Ch'oggi Il Demonio Si Diverta	1:13	Krips, Siepi, Della Casa, Danco, Gueden, Corena, Dermota, Berry, Bohme	Don Giovanni (2/3)
Non Ti Fidar, O Misera	4:16	Krips, Siepi, Della Casa, Danco, Gueden, Corena, Dermota, Berry, Bohme	Don Giovanni (2/3)
Don Ottavio, Son Morta !	3:10	Krips, Siepi, Della Casa, Danco, Gueden, Corena, Dermota, Berry, Bohme	Don Giovanni (2/3)
Or Sai Chi L'onore	3:08	Krips, Siepi, Della Casa, Danco, Gueden, Corena, Dermota, Berry, Bohme	Don Giovanni (2/3)
Dalla Sua Pace	4:09	Krips, Siepi, Della Casa, Danco, Gueden, Corena, Dermota, Berry, Bohme	Don Giovanni (2/3)

Name	Time	Artist	Album
Di Molte Faci Il Lume (Leporello)	0:29	Wolfgang Amadeus Mozart (1756–1791)	Mozart: Don Giovanni Siep–
Sola, Sola, In Buio Loco (Donna Elvira)	8:13	Wolfgang Amadeus Mozart (1756–1791)	Mozart: Don Giovanni Siep–
Ah, Pieti sIgnori Miei (Leporello)	2:39	Wolfgang Amadeus Mozart (1756–1791)	Mozart: Don Giovanni Siep–
Il Mio Tesoro Intanto (Don Ottavio)	4:14	Wolfgang Amadeus Mozart (1756–1791)	Mozart: Don Giovanni Siep–

Name	Time	Artist	Album
Allegro Con Brio	9:05	Ludwig van Beethoven (1770–1827)	Alexander String Quart
Adagio Affettuoso Ed Appassionato	9:20	Ludwig van Beethoven (1770–1827)	Alexander String Quart
Scherzo. Allegro Molto	3:29	Ludwig van Beethoven (1770–1827)	Alexander String Quart
Allegro	6:58	Ludwig van Beethoven (1770–1827)	Alexander String Quart
Allegro	6:31	Ludwig van Beethoven (1770–1827)	Alexander String Quart

Name	Time	Artist	Album	Genre
Op. 18 No. 2 in G Major	7:45	Allegro	Beethoven String Quartets vol. 2	Classical
Op. 18 No. 2 in G Major	6:56	Adagio cantabile	Beethoven String Quartets vol. 2	Classical
Op. 18 No. 2 in G Major	4:46	Scherzo (Allegro) & Trio	Beethoven String Quartets vol. 2	Classical
Op. 18 No. 2 in G Major	5:30	Allegro molto, quasi presto	Beethoven String Quartets vol. 2	Classical

Name	Time	Artist	Album
String Quartet in D major, Op. 18, No. 3.0 – Allegro	7:56	Alexander String Quartet	Alexander String Qua
String Quartet in D major, Op. 18, No. 3.1 – Andante con moto	8:55	Alexander String Quartet	Alexander String Qua
String Quartet in D major, Op. 18, No. 3.2 – Allegro	3:21	Alexander String Quartet	Alexander String Qua

Name	Time	Artist	Album
String Quartet No.13 Op.13...	13:43	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133
Presto	2:00	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133
Andante con moto ma non t...	7:06	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133
Alla danza tedesca. Allegro ...	3:36	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133
Cavatina. Adagio molto esp...	6:40	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133
Finale. Allegro	9:34	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133
Grosse Fuge Op. 133 in B fl...	17:36	Beethoven – Alexander String Quartet	String Quartets – Vol.7 – Op. 130 – No. 13 – Op. 133

web 2.0 the wiki way

Ward Cunningham

WikiWikiWeb, 1994
Ward Cunningham

Nupedia, 2000
Wikipedia, 2001
Jimmy Wales & Larry Sanger

Wikipedia:UuU

From Wikipedia, the free encyclopedia

This is an old revision of this page, as edited by eiffel.demon.co.uk (talk) at 20:08, 16 January 2001. It

(diff) ← Previous revision | Current revision (diff) | Newer revision → (diff)

- UnitedKingdom
- United States
- Uruguay

open encyclopedia

Daniel Defoe

From Wikipedia, the free encyclopedia.

Revision as of 08:44, 11 October 2005; view current revision
← Older revision | Newer revision →

Daniel Defoe (1660 – April 24, 1731) was an English writer and journalist, who first gained fame for his novel *Robinson Crusoe*. Defoe is also notable for being arguably the earliest constant practitioner of the novel form.

Contents [hide]

1 Biography
2 Defoe and the Anglo-Scottish Union of 1707
3 Quotations
4 See also
5 Electronic books

Daniel Defoe

Biography

Born **Daniel Foe**, the son of James Foe, a butcher in Stoke Newington, London. He later added the aristocratic sounding "De" to his name as a nom de plume. His gravestone gives his name as DANIEL DE-FOE. He became a famous pamphleteer, journalist and novelist at a time of the birth

(cur) (last) ◯   04:14, 13 October 2005 Malo (Talk I contribs) m *(re-added gravestone info, it demonstrates that he accepted a name, varied from his birthname.)*

manager of a London tile factory.

dubious evidence

"I strongly suspect that most English speakers would only recognize Defoe through RC; the Esperanto article mentions two or three translations of Robinson Crusoe, but no other works of Defoe, and a quasi-random sampling of the Library of Congress catalog turned up a number of translations of RC into French, German and Japanese, but no obvious translations of any of Defoe's other works"

Daniel Defoe (1660-April 24, 1731) was an English writer and journalist, who first gained fame for his novel Robinson Crusoe.

entropy in action

"He is most famous for his novel [*RC*]"- 9/02

"He became a famous pamphleteer, journalist and novelist"--1/04

"He became famous for [*RC*]"--10/04

"He first became famous for [*RC*]"--11/04

end of story?

Daniel Defoe

From Wikipedia, the free encyclopedia

Daniel Defoe (c. 1659-1661 — 24 April 1731[?]), born **Daniel Foe**, was an English writer, journalist, and pamphleteer, who gained enduring fame for his novel *Robinson Crusoe*. Defoe is notable for being one of the earliest practitioners of the novel, as he helped to popularise the form in Britain, and is even referred to by some as one of the founders of the English novel.[?] A prolific and versatile writer, he wrote more than five hundred books, pamphlets, and journals on various topics (including politics, crime, religion, marriage, psychology and the supernatural). He was also a pioneer of economic journalism.

Contents [hide]

1 Biography
    1.1 Early life
    1.2 Pamphleteering and prison
    1.3 Later life and writings
2 Novels
3 Defoe and the Anglo-Scottish Union of 1707

Daniel Defoe

	Daniel Defoe
Born	c. 1659 - 1661
Died	24 April 1731

Daniel Defoe died on April 26, 1731, probably whilst in hiding from his creditors. He was interred in Bunhill Fields, London, where his grave can still be visited.

limits to openness?

"the rise of effective, large-scale cooperative efforts .. beyond ... **encyclopedias**, to **news** and **commentary**, to **immersive entertainment** ...

"What, then, are the limitations of peer production?"
--Yochai Benkler

for the prosecution

the promise of using technology to bring *more* culture to the masses had been drowned out by FOO Campers' collective cry for a democratized media

... Everybody was simultaneously broadcasting themselves but nobody was listening.

...democratization ... is undermining truth, souring civic discourse, and belittling expertise, experience, and talent ... threatening the very nature of our cultural institutions

... today ... there is an even more threatening Big Brother lurking in the shadows: the search engine

Andrew Keen, *Cult of the Amateur*

to the rescue?

from amateur to professional?

`"I'm a professor, dude!"`

the university in the digital age