

# The Organization of Knowledge

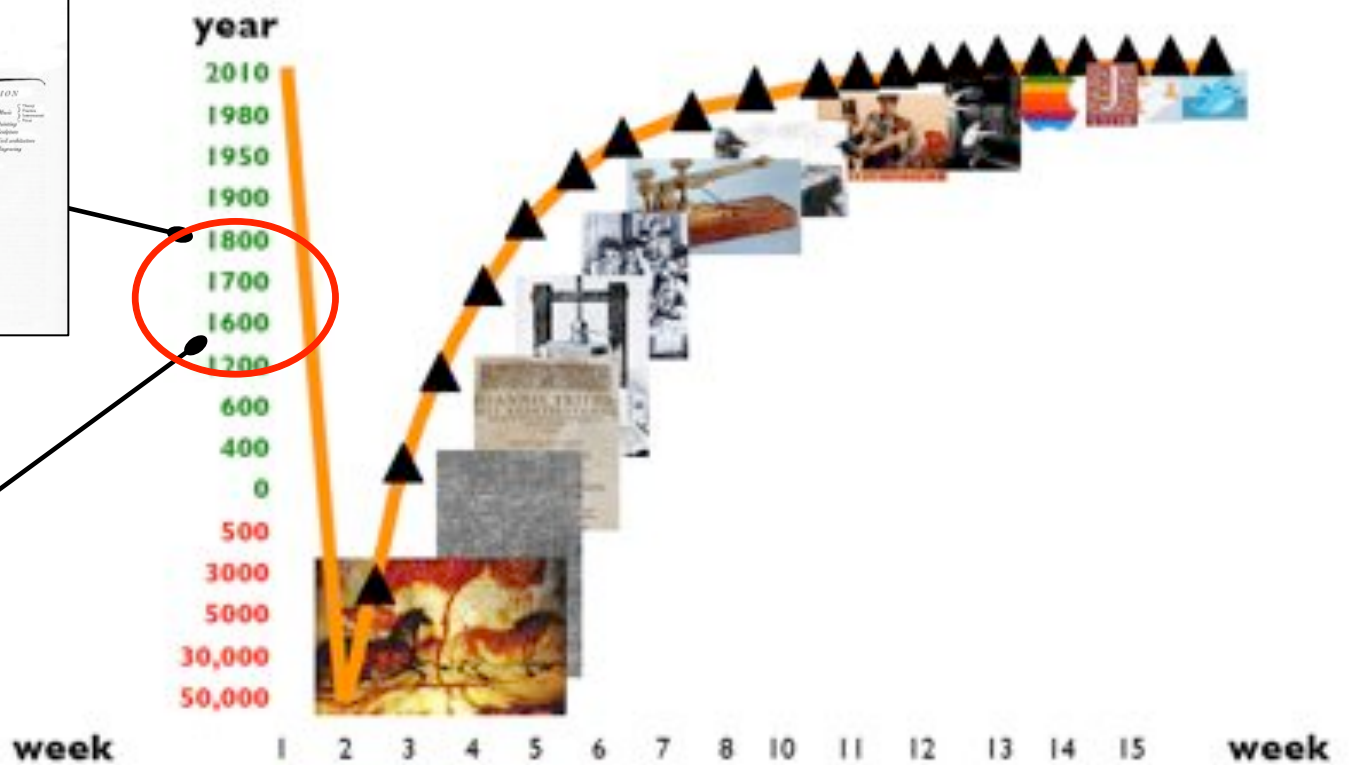
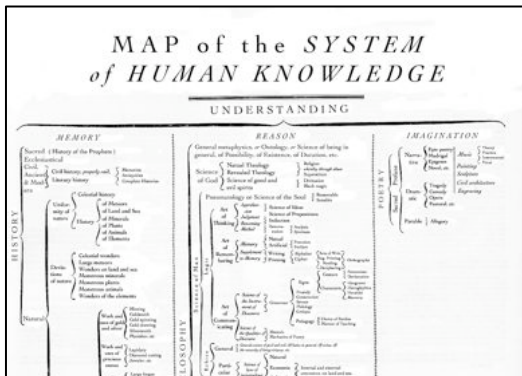
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**History of Information i218**  
**Geoff Nunberg**

**Feb. 18, 2010**

# Where We Are





## Itinerary: 2/22

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Defining "knowledge"

The shifting frame of knowledge; from  
Renaissance to Enlightenment

Early reactions to "information overload"

New conceptualizations of knowledge

The material representations of knowledge:  
encyclopedias, libraries, museums, dictionaries



# Defining "knowledge"

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# Defining "knowledge"

The received wisdom: "knowledge = massaged information "

"knowledge is information that is meaningfully organized, accumulated and embedded in a context of creation"

"The information we call knowledge is information that has been subjected to, and passed tests of validation."

"Knowledge is information that changes something or somebody..." Peter Drucker





# Defining "knowledge"

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## Individual senses

*Oxford English Dictionary:*

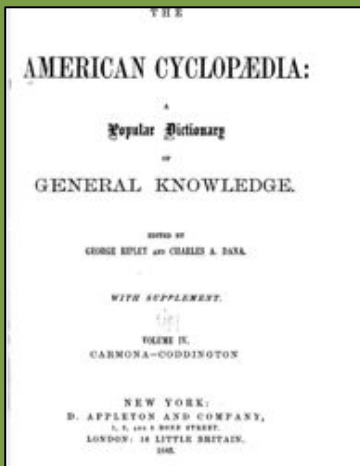
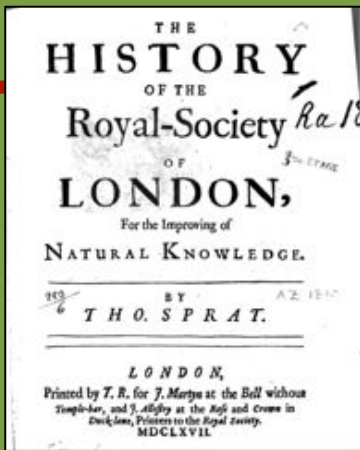
- The fact of knowing a thing, state, etc., or a person; familiarity gained by experience. *His knowledge of human nature must be limited indeed.*
- Acquaintance with a branch of learning, a language, or the like; *His knowledge of French is excellent.*

## Collective sense

The sum of what is known. *All knowledge may be commodiously distributed into science and erudition.*



# Collective knowledge: the missing roles

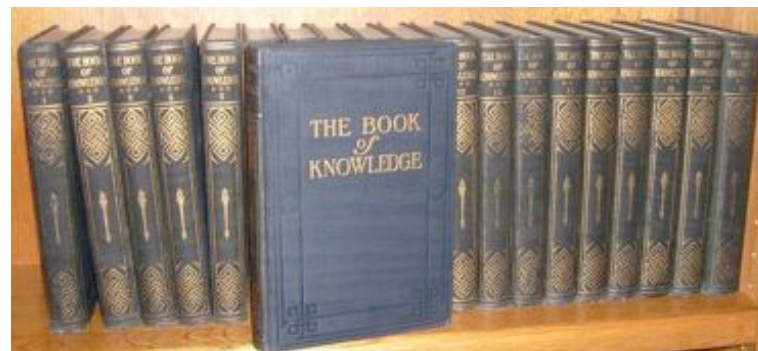


Collective sense: knowledge as a three-place relation

The sum of what is known [about X] [by Y]

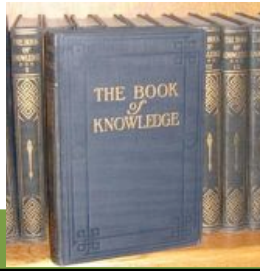
Medical knowledge vs medical information: what is the difference?

The difference between "knowlege" and "what is known."





# What makes for "knowledge"?



## THE WONDER MEN OF FLORENCE

There, in a little town in Tuscany called Siena, a tragedy of a dirty place, sitting in the sun. Lorenz, of beautiful hair, a man, looking for shoes; here in the thirteenth century were the first leather manufacturers of that epoch known as the Medicis.

The two workings of the Alps by behind as beauty is intensely as wings, and leading of this light men's hearts only to the three like we and covers. Hence the's beauty again it reached a scene, the's great beauty needed the way to each included had out in a lot to the car.



## WILLIAM TELL

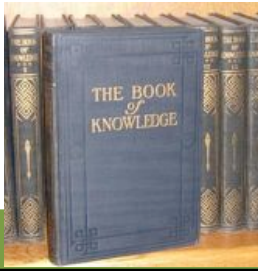
It is not three weeks, but four only, since he would be happy to ride on the Alps that story of the hero of the forest. One day the little nation, under the guidance of the old man, Tell, was called to the aid of the Swiss people, who were being oppressed by the Duke of Austria.

## FOXES, JACKALS, & WOLVES OF THE WORLD





# Collective knowledge: the missing arguments



Knowledge belongs to the society.

"The third-century Chinese had knowledge of porcelain"  
In that medical knowledge doubles every 3.5 years or less, by 2029, we will know at least 256 times more than we know today.



# **Shifting Conceptions of Knowledge, 1500-1800**

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# Shifting Conceptions of Knowledge, 1500-1800

Varieties of Renaissance knowledge:

*scientiae/artes*

"Ars sine scientia nihil est."

Private/public (alchemy, cf *métier*, "trade")

General/specialized

The "universal man": "A man is able to learn many things and make himself universal in many excellent arts." Matteo Palmieri, 1528





# The 15<sup>th</sup>-Century Curriculum

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The *enkyklios paideia* ("circle of learning"):

Trivium: grammar, logic, rhetoric

Quadrivium: arithmetic, astronomy, geometry, music

The three philosophies: ethics, metaphysics, "natural philosophy"

Higher faculties: theology, medicine, law





# The 15<sup>th</sup>-Century Curriculum



Curriculum roughly uniform throughout Europe, enabled *peregrinatio academica*  
"town and gown"





# The 15<sup>th</sup>-Century Curriculum

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3. TREE OF KNOWLEDGE, TITLE-PAGE OF R. LULL, ARBOR SCIENTIÆ (1515; rpt. 1635); COPY IN CAMBRIDGE UNIVERSITY LIBRARY (P<sup>o</sup>.3.52)

System of knowledge is "closed"; built around classical sources and religious texts (courses organized around texts, not subjects)

Organization of knowledge is fixed and "natural"



## Breaking with the past



It would disgrace us, now that the wide spaces of the material globe, the lands and seas, have been broached and explored, if the limits of the intellectual globe should be should be set by the narrow discoveries of the ancients. Francis Bacon, *The Advancement of Learning*, 1605





# Breaking with the past

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Within 200 years, something like the mod, system emerges.

Responses to influences that are:

Pragmatic/material

Philosophical/academic

Symbolic/political



# The Closed World of Knowledge

*Herbarum vivae eicones* ("Living Pictures of Herbs") by Otto Brunfels, 1532. Matched Swiss & German plants to those known to Pliny and Discorides, ignoring differences, with residual *herbae nudae* ("naked plants")



# Opening the world of knowledge



VALERIUS CORDUS  
*Medicus excellens.*

## VALERII CORDI SIMESII, Historiæ plantarum, liber I. qui est de herbis diuersis.

*Provisi quæ hominum casu natura creavit,  
Palsivus quæ rerum cognitione nobil.*

DE ROSELLA SIVE SALSIPORA, *Epica adyrtis*  
Soli dicitur. ] CAP. I.

**R**OSSELLA habet mi-  
nima, septem vel octo  
numero, plura inter-  
dum, & interdum pau-  
ciora, longis et ruben-  
tibus pediculis in or-  
bem per terram sparsa,  
leniter plerumque, qua-  
runt spectant, concava & hirsuta, cæca ruben-  
ti capillo ut sita, coque in medio breviori, in am-  
bitu longiori: facillimis etiam temporari-  
bus utroris minutissimas guttas et aspergines  
habentia: sapore acris, nitenti & glabra omnino  
sunt ex inferiore parte foliola, habentq; tota  
minimo cochlearis figuram: è medio vero folio-  
rum coliculus exit dodrante breuior, gracilis,  
rubescens, & sine ramulis, in summo paruos & pallidos flosculos sustinens, radica-  
li habet paruas, breves, & capilli modo tenuissimas. Nascitur uliginosis & palu-  
stribus arenis. Habent folia, caules, & flosculi, acerbum, leniter acetosam & modicu-  
m acris saporem.



Valerius Cordus, *Historia plantarum*  
1561 (1544), published posthumously  
by Conrad Gesner.

Records numerous plants not  
described by the ancients;  
emphasizes differences among  
similar plants.

By 1600, thousand of species are  
described, though in  
disorganized fashion.

Systems of description (not  
taxonomies) emerge. Plants bear  
four names (common,  
pharmacists' Latin, trad. Latin,  
Greek)



Drawing annotated  
by Gestner



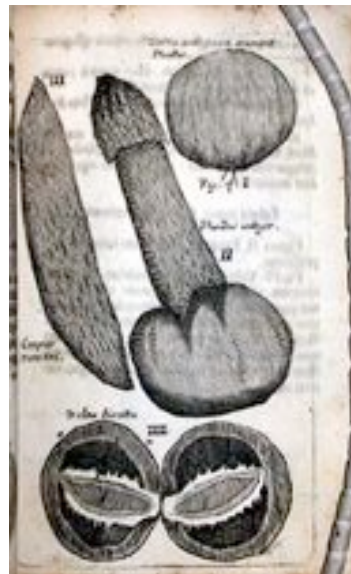
# Opening the world of knowledge



John Ray, *Historia generalis plantarum*, 1686-  
Classified 6100 plant species by seeds, seeds, fruit and leaves. Produced first modern definition of the species.

"... no surer criterion for determining species has occurred to me than the distinguishing features that perpetuate themselves in propagation from seed. Thus, no matter what variations occur in the individuals or the species, if they spring from the seed of one and the same plant, they are accidental variations and not such as to distinguish a species..."

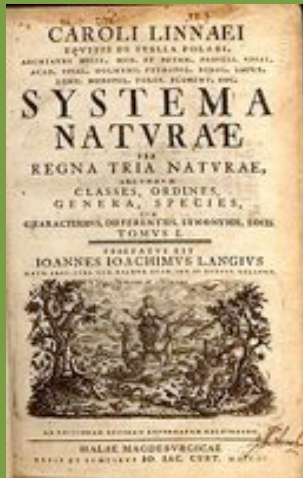
"I reckon all Dogs to be of one Species, they mingling together in Generation, and the Breed of such Mixtures being prolifick"







# The birth of "modern" classification



Systema naturae  
1735 20

CAROLI LINNAEI				REGNUM ANIMALE								
I. QUADRUPEDIA		II. AVES		III. AMPHIBIA		IV. PISCES		V. INSECTA		VI. VERMES		
<b>CAROLI LIN</b> <b>I. QUADRUPEDIA.</b> <i>Corpus biferum. Pedes quatuor. Femina vivipara. lactifera.</i>				<b>II. AVES.</b> <i>Corpus planifolium. Alae duae. Pedes duo. Reprom ovisum. Femina ovipara.</i>								
<b>ANTHROPO-</b> <b>MORPHIA.</b> Homo Simia Bradypus	Natus in iplois. Aetatibus: Puertatem. Digni Pulcritudo caritativus Sicut.	Digni 3. . . . . 4 Mamma 4. (Aid.) Callosus lactis. Pelle crura postum.	Scandens. Scandens. Scandens.	<b>ACCIPITRES.</b> Falco Strix Puffinus	Digni 3. . . . . 4 Mamma 4. (Aid.) Callosus lactis. Pelle crura postum.	Scandens. Scandens. Scandens.	<b>ACCIPITRES.</b> Falco Strix Puffinus	Digni 3. . . . . 4 Mamma 4. (Aid.) Callosus lactis. Pelle crura postum.	Scandens. Scandens. Scandens.	<b>ACCIPITRES.</b> Falco Strix Puffinus	Digni 3. . . . . 4 Mamma 4. (Aid.) Callosus lactis. Pelle crura postum.	Scandens. Scandens. Scandens.

"I know no greater man on earth." Jean-Jacques Rousseau



# The birth of "modern" classification



Frontispiece to  
Linnaeus, *Hortus  
Cliffortianus* 1737

Plants classified into 24 classes according to length and number of stamens; further classified into orders etc. Established binary system of naming



Plate 156: An illustration by Georg Dionysius Ehret for the *Hortus Cliffortianus* (1735–48) in which the Swedish plantman, Carl Linnaeus, first began to work out his 'methodus plantarum sexialis', grouping plants according to the number and arrangement of their stamens.



# **Pragmatic Issues: Early Modern "Information Overload"**

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# Pragmatic Forces: Perceptions of "Information Overload"

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Antonfrancesco Doni, 1550: there are “so many books that we do not have time to read even the titles.”

“That horrible mass of books... keeps on growing, [until] the disorder will become nearly insurmountable.” Gottfried Leibniz, 1680



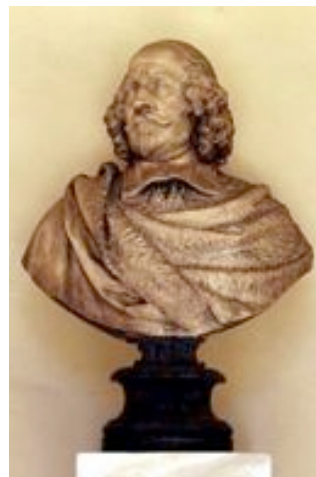
# The Reorganization of Libraries



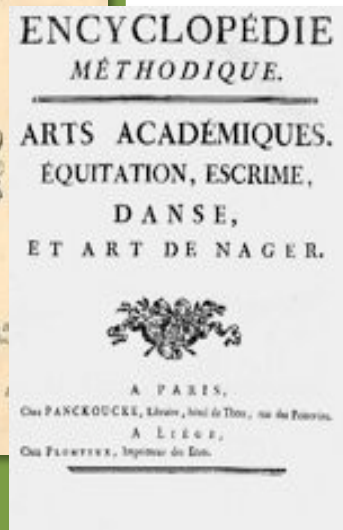
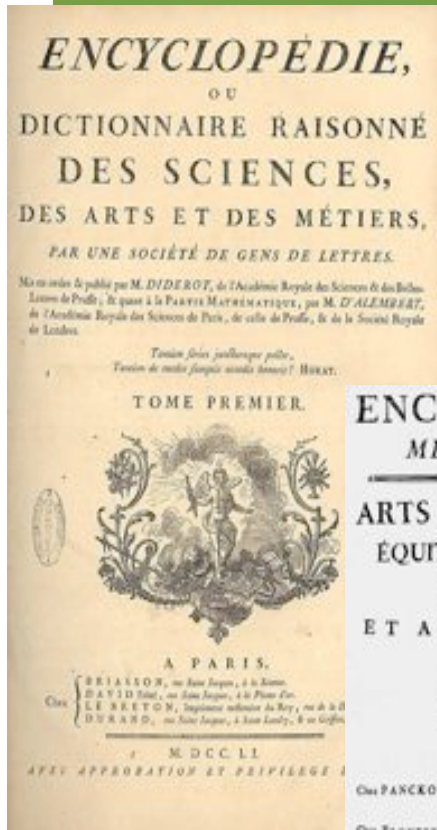
Gabriel Naudé proposes library organization scheme to “find books without labor, without trouble, and without confusion.” (1627)



Bibliothèque  
Mazarine (1643)



# Strategies for dealing with information overload



Compendia and reference books (*répertoires* or *trésors*)

As long as the centuries continue to unfold, the number of books will grow continually, and one can predict that a time will come when it will be almost as difficult to learn anything from books as from the direct study of the whole universe. It will be almost as convenient to search for some bit of truth concealed in nature as it will be to find it hidden away in an immense multitude of bound volumes.

—Denis Diderot, *Encyclopédie*, 1755



## Distillations

Men of good will have extracted the substance of a thousand volumes and passed it in its entirety into a single small duodecimo, a bit like skillful chemists who press out the essence of flowers to concentrate it in a phial while throwing the dregs away."

Louis-Sebastian Mercier, *L'An 2440*, 1771



E-L. Boullée, plan for the Bibliothèque du Roi, 1785





# Strategies for dealing with information overload

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Compendia and reference books (*répertoires* or *trésors*)

"I esteem these Collections extreamly profitable and necessary, considering, the brevity of our life, and the multitude of things which we are now obliged to know, e're one can be reckoned amongst the number of learned men, do not permit us to do all of ourselves." Gabriel Naudé, 1661 [librarian to Mazarin]

The *Cyclopaedia* will "answer all the Purposes of a Library, except Parade and Incumbrance." Ephraim Chambers, 1728



# Strategies for dealing with information overload

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The most accomplished way of using books at present is twofold. Either, first, to serve them as men do Lords, learn their titles exactly and then brag of their acquaintance :—or, secondly, which is indeed the choicer, the profounder, and politer method, to get a thorough insight into the Index, by which the whole book is governed and turned, like fishes, by the tail... Thus men catch knowledge by throwing their wit on the posteriors of a book, as boys do sparrows by flinging salt upon the tail."

Jonathan Swift, "Tale of a Tub," 1704



# Strategies for dealing with information overload

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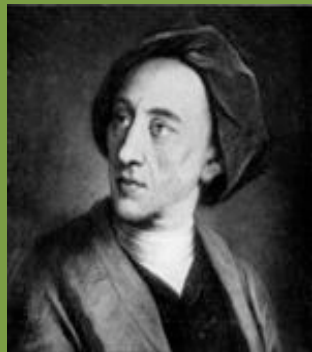


The most accomplished way of using books at present is twofold. Either, first, to serve them as men do Lords, learn their titles exactly and then brag of their acquaintance :—or, secondly, which is indeed the choicer, the profounder, and politer method, to get a thorough insight into the Index, by which the whole book is governed and turned, like fishes, by the tail. For to enter the palace of Learning at the great gate requires an expense of time and forms ; therefore men of much haste and little ceremony are content to get in by the back-door. ... Thus men catch knowledge by throwing their wit on the posteriors of a book, as boys do sparrows by flinging salt upon the tail."

Jonathan Swift, "Tale of a Tub," 1704

...How Index-learning turns no student pale,  
Yet holds the eel of Science by the tail.

Pope, "The Dunciad," 1728

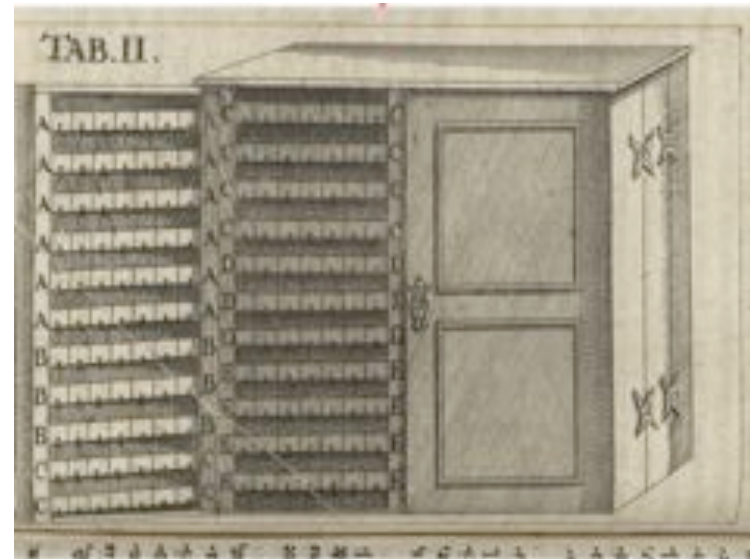
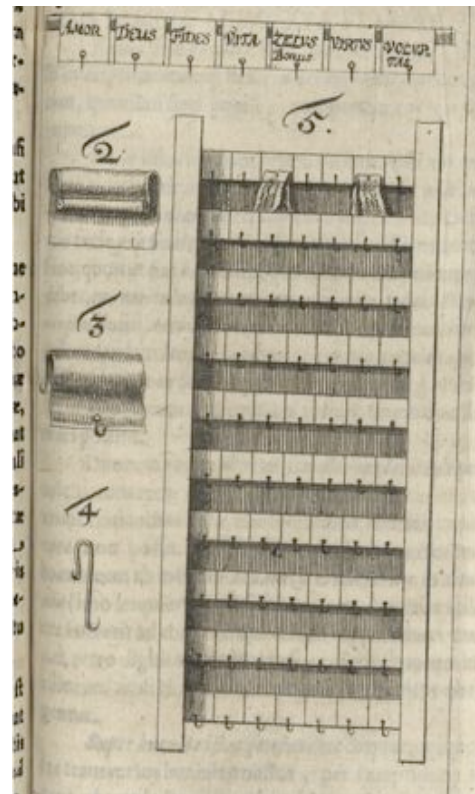






# Strategies for Dealing with Information Overload

Note-taking system of Vincent Placcius, from *De arte excerptendi*, 1689





# **Reconceptualizations of Knowledge**

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# The Classificatory Urge: Thematic Organization

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Vincent de Beauvais, *Speculum triplex*, 1244, in 3 divisions:

*Speculum naturale*: God, angels & devils, man, the creation, and natural history

*Speculum doctrinale*: Grammar, logic, ethics, medicine, crafts...

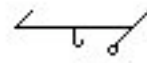
*Speculum historiale*: History of the world...






# Wilkins' universal language

Explaining the symbol



The generic character  doth signify the genus of space. the acute angle on the left side doth denote the first difference, which is Time. The other affix signifies the ninth species under the differences, which is Everness. The Loop at the end of this affix denotes the word is to be used adverbially; so that the sense of it must be the same which we express by the phrase, For Ever and Ever.

John Wilkins "An Essay Towards a Real Character and a Philosophical Language' 1668

*de*, an element

*deb*, the first of the elements, fire

*deba*, a part of the element fire, a flame

"children would be able to learn this language without knowing it be artificial; afterwards, at school, they would discover it being an universal code and a secret encyclopaedia." Borges



## Wilkins' universal language

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... a certain Chinese encyclopaedia entitled 'Celestial Empire of benevolent Knowledge'. In its remote pages it is written that the animals are divided into: (a) belonging to the emperor, (b) embalmed, (c) tame, (d) sucking pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) et cetera, (m) having just broken the water pitcher, (n) that from a long way off look like flies.

there is no classification of the Universe not being arbitrary and full of conjectures

Jorge Luis Borges



## New Schemes of Organization: Philosophical Influences

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Francis Bacon's scheme puts man at the center:

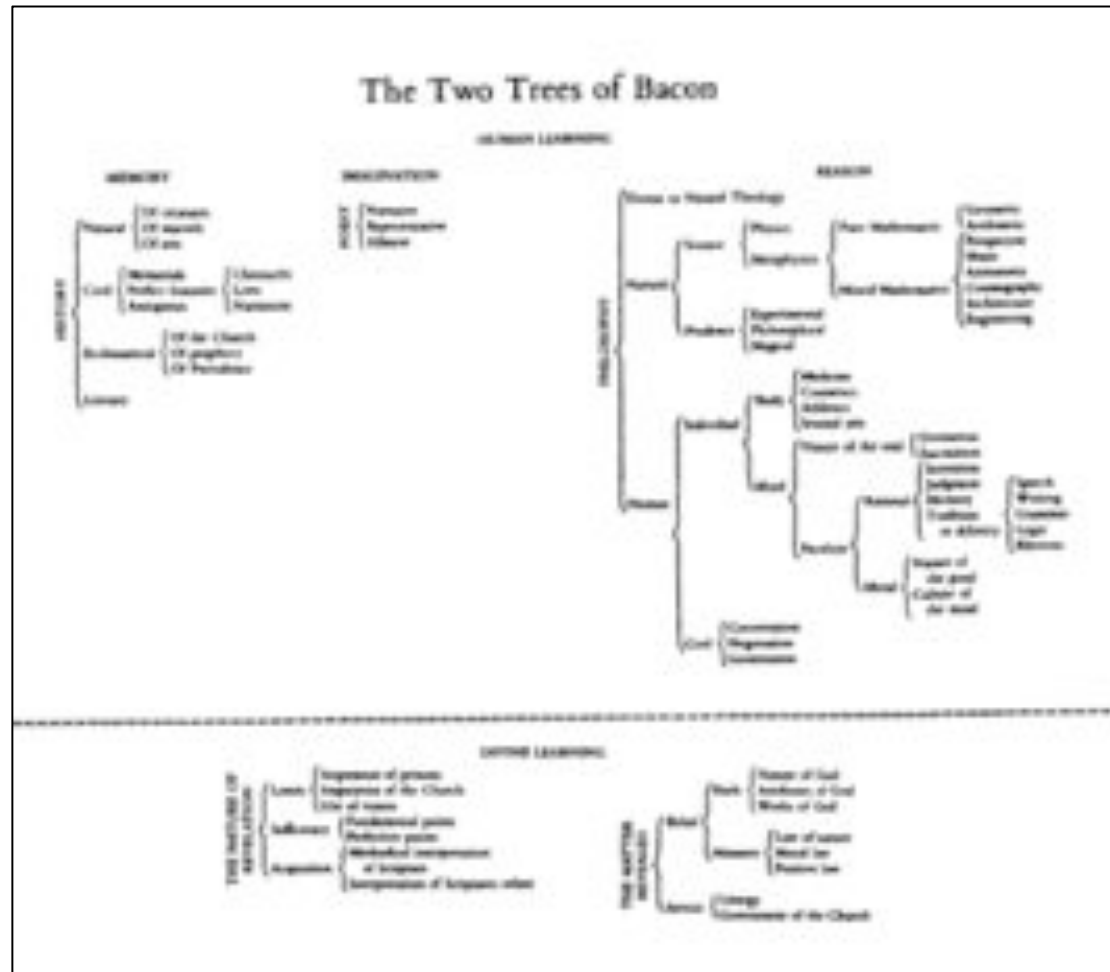
Nature (astronomy, meteorology, etc.).

Man (anatomy, powers, actions),

Man acting on nature (medicine, visual arts, arithmetic),,,



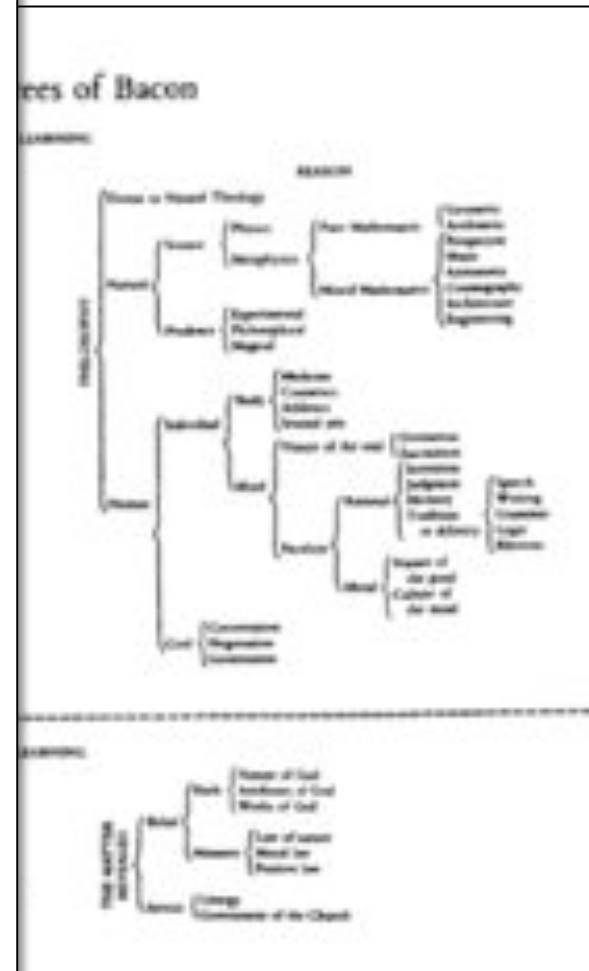
# The Tree of Bacon





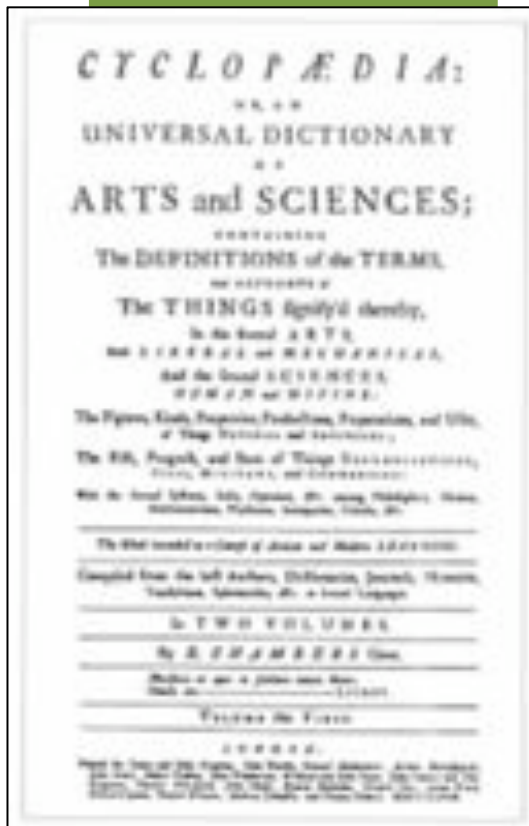


# The Tree of Bacon





# Chamber's Cyclopædia,



### The Tree of Chambers



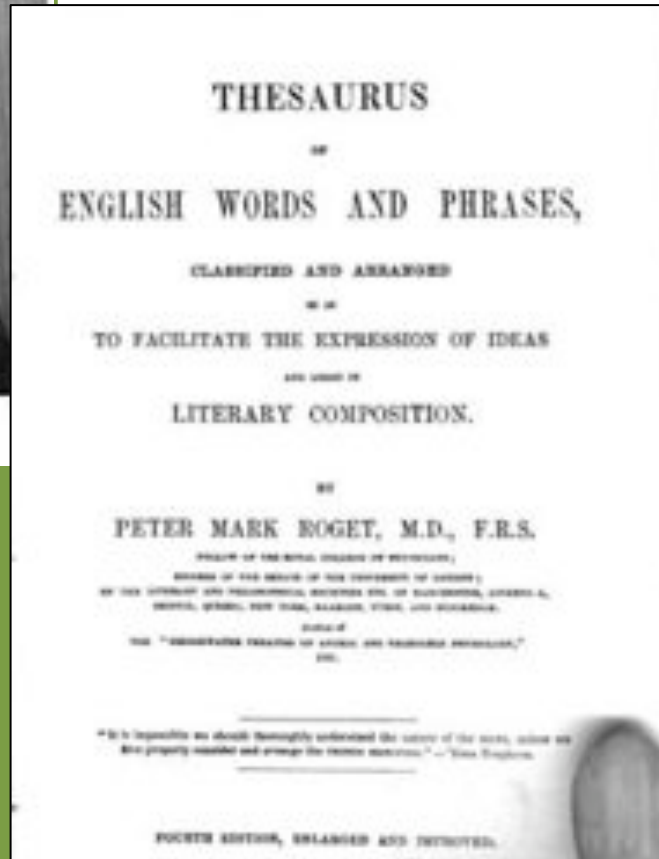


# Survivals of Thematic Organization

Peter Marc Roget: 1779-1869



*P. M. Roget.*





# The Encyclopédie

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## Then and now...

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### **Differences:**

..., the second (among hundreds of others) difference: their contents and the way they are presented. MacArthur states that “the Encyclopédie belongs with such other eighteenth-century trail blazers of radical humanism as the American Declaration of Independence...It did not simply inform; it incited” (MacArthur, 106). In contrast, Wikipedia endeavors to maintain a neutral stance, “striv[ing] for articles that advocate no single point of view” (Wikipedia). Although Wikipedia’s lack of bias may benefit the reader, it also means that it lacks the “creative and almost prophetic genius” of the Encyclopédie, an example of which would be Diderot’s speculation on teaching the blind using their tactile senses (MacArther, 105). -Diana



## Then and now...

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### **Differences:**

...Another difference is who can contribute. Anyone can write on a Wiki page, whereas "men of letters" (d'Alembert, 1) and "great names of the modern world" (McArthur, 107) are involved in the production of the Encyclopédie. – Mia

The ...Encyclopédie, permits only contributions from credible sources, "many of the great names of the modern world," it is "the work of a society of men of letters," whereas the latter, Wikipedia, allows anyone the ability to write and contribute to articles (McArthur, 107; d'Alembert, 2). It appears that the Encyclopédie only accepted contributions from recognized professionals in their field of work, while a child who has sufficient knowledge is able to contribute to Wikipedia, which makes Wikipedia more democratic. -Amy



## Then and now...

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### **Differences:**

The authors of the Encyclopédie had much more interest in the genealogical aspects of knowledge and wanted to organize the various branches in order to show the nature of their interconnectedness. In d’Alembert’s words: “After reviewing the different parts of our knowledge and the characteristics that distinguish them, it remains for us only to make a genealogical ... tree which will gather the various branches of knowledge ... and will serve to indicate their ... relationships to one another” (d’Alembert, 4). Wikipedia, on the other hand, is not concerned these relations. Instead, Wikipedia has a structure in which all articles are in parallel, at the top level. If you are interested in a more specific aspect of a topic, it is likely there will be a hyperlink. This allows you to simply click and move from page to page, following the desired information. -Aaron P.

The authors of the Encyclopédie make clear in the first paragraph of their introduction that their aim was to organize as much as to explain. They seek in their *Système Figuré* a complete taxonomy of human knowledge, Wikipedia although having portals for common categorizations of subjects does not rely on or attempt to impose a structure. Because of this structural aim and the “Baconian” philosophy underlying it, the information in the Encyclopédie is related in a hierarchical way. The technology of storage enabling Wikipedia means that its information is linked in more horizontal ways. -Gavin





## Then and now...

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### **Differences:**

Another way in which these two seem different is that the Encyclopedie could be both thematic and alphabetic, "Diderot's volumes were alphabetic... the Encyclopedie methodique... was thematic", while Wikipedia cannot really be categorized in neither, mostly because you just need to type whatever you are searching information on, or click on links, you don't necessarily have to look for a theme or in alphabetical order. –Monica

Another dissimilarity is the actual content of which is included in both the Encyclopedie and Wikipedia. The three divisions of knowledge within the former are History (memory), Philosophy (reason), and the Fine Arts (imagination). Wikipedia, however, has information on any subject imaginable including current cultural phenomena. Last year, there was actually a battle between Wikipedia Editors and Justin Bieber fans for the control of this young pop sensation's personal Wikipedia page, which demonstrates the limitless boundaries of both contributors and content within Wikipedia (Weiner).

D'Alembert describes the structure of Encyclopédie to be like that of a world map, but implies that articles are limited to one category which can sometimes be arbitrary(7). Wikipedia, on the other hand, allows articles to be children of multiple categories. -Josh



## Then and now...

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### **Similarities:**

Both projects have been viewed as subversive in their intent. The Encyclopédie, by employing the rational thought of radical thinkers, set out to challenge the old orders and as McArthur argues, was not just interested in the already known but was forward thinking too, making it “one of the most politically significant reference books in history” (105). Wikipedia with its democratic model of open access can be said to have challenged the sphere’s of academia and publishing for the control of knowledge and its dissemination. -Gavin

They are both “special turning point in the history of works of reference” (McArthur 105). Aside from the Hybridity of both publications, they both aim to compile knowledge collectively. As McArthur puts it “they place no necessary limits upon human knowledge” (105). There is more involved then just one man (which is the case with many other publications of the time [i.e. Johnsons Dictionary]). -Ramez



# Then and now...

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## Similarities:

Diderot's Encyclopédie resembles today's Wikipedia, The Free Encyclopedia. For instance, "Encyclopaedias have in truth long been convenient vehicles for unpopular or advanced opinions and ideas" (Collison, 1964:4f). Wikipedia is filled with articles that wouldn't have made it into the Britannica: sex, drugs, taboo topics, or slang terms. Like the Encyclopédie, Wikipedia provides its authors a "privilege of comparative immunity" (Collison, 1964:4f). -Si

The prelude of d'Alembert's Encyclopédie mentions many times the Encyclopédie's aim to form "connections" and to draw a "map" (d'Alembert, 2-3) and "relationships" (d'Alembert, 4-5) between subjects and branches. This, Wikipedia does as well...but with hyperlinks that lead readers from one article to another where editors see fit. In drawing a map, Wikipedia probably does it with the most ease. - Anne C.

A way in which the Encyclopedie is similar to Wikipedia, found in the articles assigned were that as Jean Le Rons d'Alembert states in the Preliminary Discourse to the Encyclopedie, "the function as editors consists principally in arranging materials which for the most part have been furnished in their entirety by others", which is very similar to the task editors have at Wikipedia, they just monitor and verify the information that other people who are knowledgeable in a subject provide. -Monica



## Then and now...

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### **Similarities:**

Moreover, McArthur states that the Diderot's encyclopedia was "mixed fact and fancy, science and supposition" (131), which can also be applied to Wikipedia's articles. -Victoria



# The Encyclopédie



Denis Diderot

First vol. appears in 1751; last in 1772





# The Enlightenment Plan

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Jean d'Alembert

"The tree of human knowledge could be formed in several ways, either by relating different knowledge to the diverse faculties of our mind or by relating it to the things that it has as its object. The difficulty was greatest where it involved the most arbitrariness. But how could there not be arbitrariness? Nature presents us only with particular things, infinite in number and without firmly established divisions. Everything shades off into everything else by imperceptible nuances"



# The "objectivity" of knowledge



Jean d'Alembert

[T]he encyclopedic arrangement of our knowledge ... consists of collecting knowledge into the smallest area possible and of placing the philosopher at a vantage point, so to speak, high above this vast labyrinth, whence he can perceive the principle sciences and the arts simultaneously. From there he can see at a glance the objects of their speculations and the operations which can be made on these objects; he can discern the general branches of human knowledge, ...and sometimes he can even glimpse the secrets that relate them to one another. It is a kind of world map which is to show the principle countries, their position and their mutual dependence, the road that leads directly from one to the other.



# The Tree of Diderot & D'Alembert

ESSAI D'UNE DISTRIBUTION GÉNÉALOGIQUE  
DES SCIENCES ET DES ARTS PRINCIPAUX.

Selon l'Explication détaillée du Système  
des Connaissances Humaines dans le Discours  
préliminaire des Editeurs de l'Encyclopédie  
publiée par M. Diderot et M. d'Alembert,  
À Paris en 1751

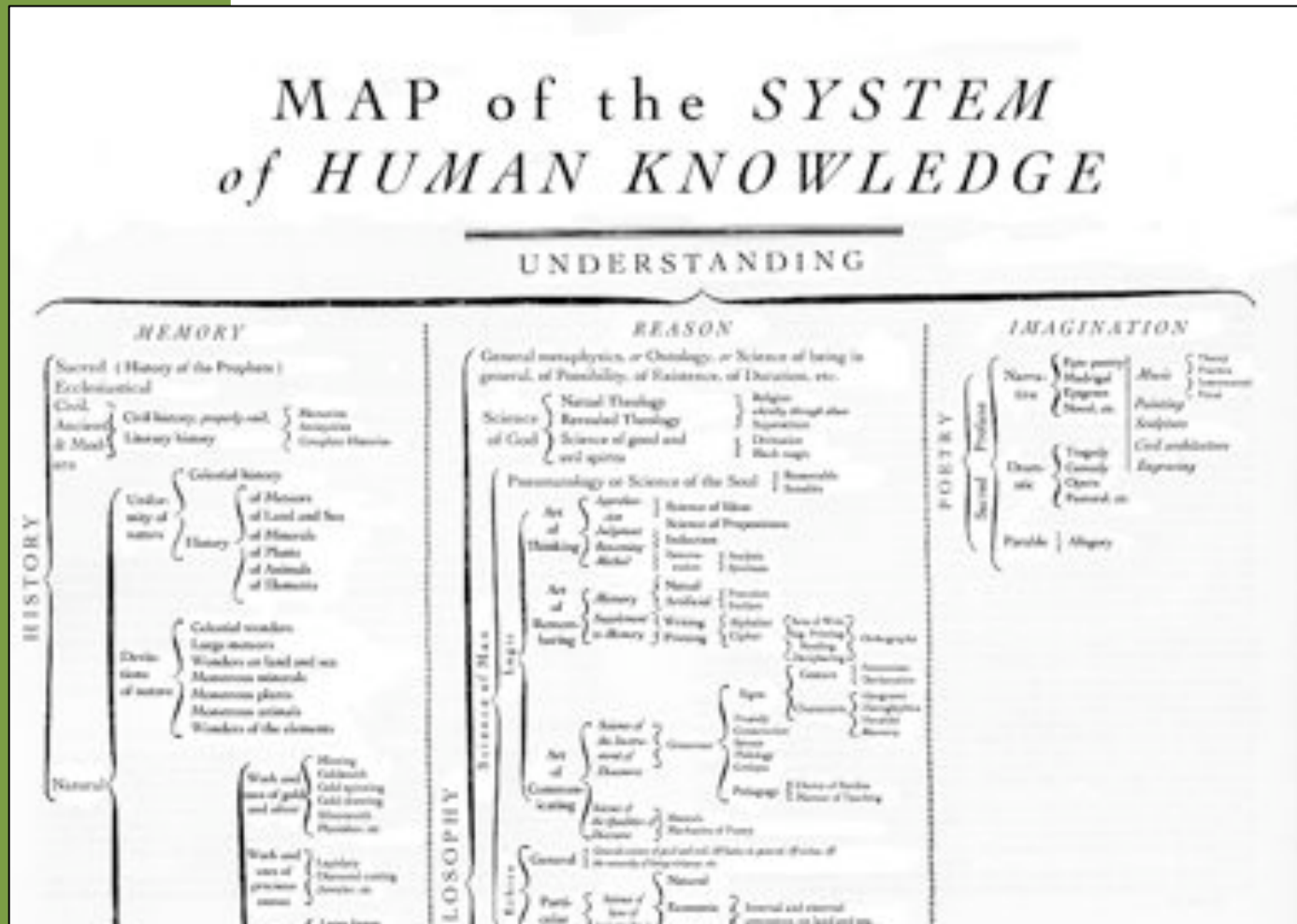
Reduit en cette forme pour  
découvrir la connaissance  
Humaine d'un coup d'oeil.

Par Chrétien Frederic Guillaume Roth,  
À Weimar, 1769



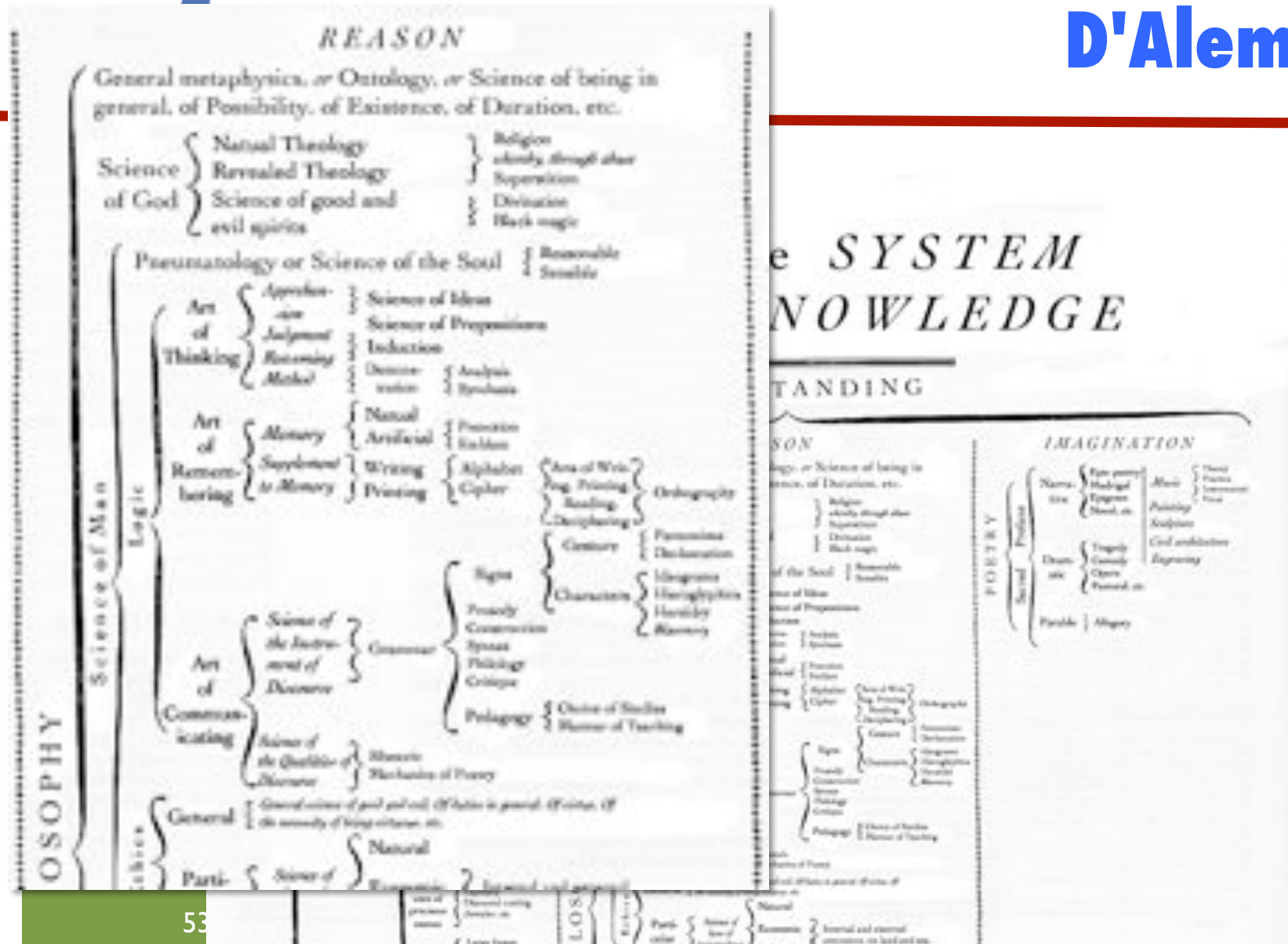


# The Tree of Diderot & D'Alembert





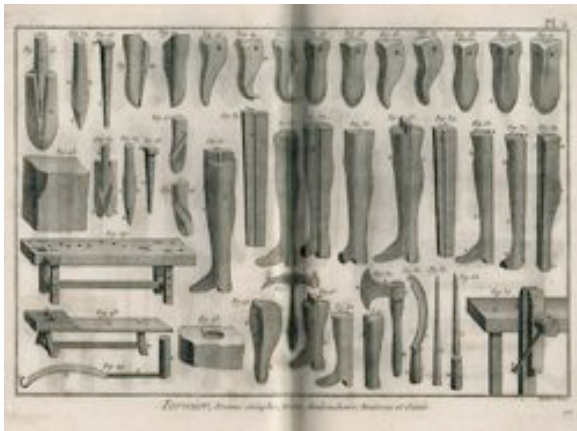
# The Tree of Diderot & D'Alembert



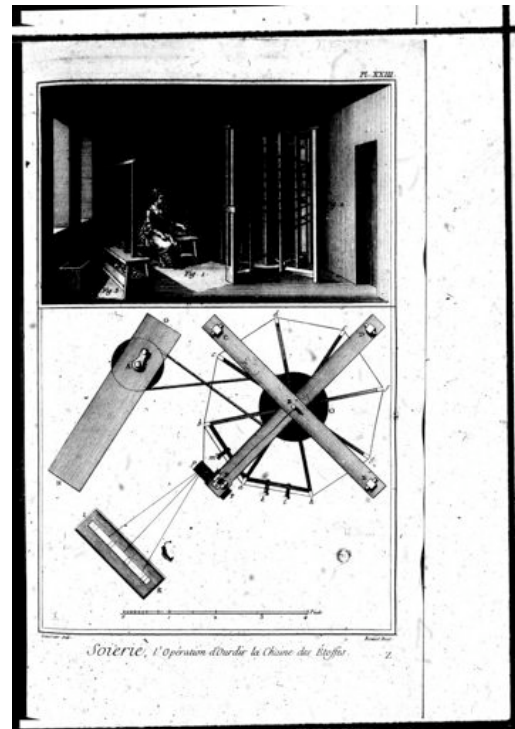




# "Sciences, Arts Libéraux, Arts Mécaniques"



Formier



Economie Rustique (silk-making)



# Survivals of Thematic Organization



*P. M. Roget.*

Peter Marc Roget: 1779-1869

THESAURUS  
OF  
ENGLISH WORDS AND PHRASES

CLASSIFIED AND ARRANGED  
SO AS  
TO FACILITATE THE EXPRESSION OF IDEAS  
AND WORDS IN  
LITERARY COMPOSITION.

PETER MARK ROGET, M.D., F.R.S.

PHYSICIAN OF THE ROYAL COLLEGE OF PHYSICIANS,  
MEMBER OF THE SOCIETY OF THE HISTORY OF MEDICINE,  
OF THE LITERARY AND PHILOSOPHICAL SOCIETIES, ETC. OF BRISTOL, LONDON,  
BIRMINGHAM, GLoucester, NEW YORK, ALBANY, PITTSBURGH, AND PHOENIX.

Author of  
THE "MAGNETIC TREATISE ON SPIRITS AND SPIRITUAL MEDIUMS,"  
Etc.

"It is impossible we should thoroughly understand the nature of the soul, and  
the property essential and proper to the human structure." — "The Encyclopedia

FOURTH EDITION, ENLARGED AND IMPROVED.

PLAN OF CLASSIFICATION.

	Sect.		Nos.
I. ABSTRACT RELATIONS	1. EXISTENCE	- -	1 to 8
	2. RELATION	- -	9—24
	3. QUANTITY	- -	25—57
	4. ORDER	- -	58—83
	5. NUMBER	- -	84—105
	6. TIME	- -	106—139
	7. CHANGE	- -	140—152
	8. CAUSATION	- -	153—179
II. SPACE	1. GENERALLY	- -	180—191
	2. DIMENSIONS	- -	192—239
	3. FORM	- -	240—263
	4. MOTION	- -	264—315
III. MATTER	1. GENERALLY	- -	316—320
	2. INORGANIC	- -	321—356
	3. ORGANIC	- -	357—449
IV. INTELLECT	1. FORMATION OF IDEAS	- -	450—515
	2. COMMUNICATION OF IDEAS	- -	516—599
V. VOLITION	1. INDIVIDUAL	- -	600—736
	2. INTERSOCIAL	- -	737—819
VI. AFFECTIONS	1. GENERALLY	- -	820—826
	2. PERSONAL	- -	827—887
	3. SYMPATHETIC	- -	888—921
	4. MORAL	- -	922—975
	5. RELIGIOUS	- -	976—1000



# The Emergence of Alphabetical Order

## **Alphabetical order already in use**

Catholic index of prohibited books; Erasmus's proverbs, etc.

Practical advantages:

Facilitates access to particular entries (assuming a certain mode of reading)

Philosophically modest

"It might be more for the general interest of learning, to have the partitions thrown down, and the whole laid in common again, under one undistinguished name." Ephraim Chambers

## Pop

- Adult contemporary music
- Adult oriented pop music
- Adult standards
- Afiropop
- Arab pop
- Austropop
- Baroque pop
- Britpop
- Bastard pop
- Brazilian pop
- Bubblegum pop
- Chinese pop
- Contemporary Christian
- Country pop
- Dance-pop
- Disco
- Disco pops
- Dream pop
- Electropop/Technopop
- Eurobeat
- Euro disco
- Europop
- Experimental pop music
- French pop
- Greek Laiko pop
- Hind pop
- Hong Kong and Cant
- Hong Kong English p
- Hot Adult Contempor

# Wikipedia: The logical end of destructuring?

**Ilma Julieta Urrutia Chang** was Guatemala's national representative for the major beauty pageants in 1984.

**The N battery is a type of battery.** It has a battery. It has a diameter of 12 mm and a height of 30.2 mm. For a typical alkaline battery, the N size weighs 9 grams.

**A System Requirements Specification (SRS)** is a document where the requirements of a system that is planned to be developed are listed.

**Protestants in Eritrea** are about 91,232, which are 2% of the population.

Categories: 1926 births | 1991 deaths | African American musicians | American jazz bandleaders | American jazz composers | American jazz trumpeters | American songwriters | Avant-garde trumpeters | Bebop trumpeters | Cool jazz trumpeters | Deaths from stroke | Deaths from respiratory failure | People with sickle-cell disease | Grammy Award winners | Grammy Lifetime Achievement Award winners | Columbia Records artists | Capitol Records artists | Hard-bop trumpeters | Musicians from Illinois | Juilliard School of Music alumni | Miles Davis | Modal jazz trumpeters | People from Madison County, Illinois | People from St. Clair County, Illinois | Rock and Roll Hall of Fame inductees | St. Louis music | Third Stream trumpeters | Deaths from pneumonia | Burials at Woodlawn Cemetery (The Bronx) | Infectious disease deaths in California





# Material Representations of Knowledge

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# Material Representations of Knowledge

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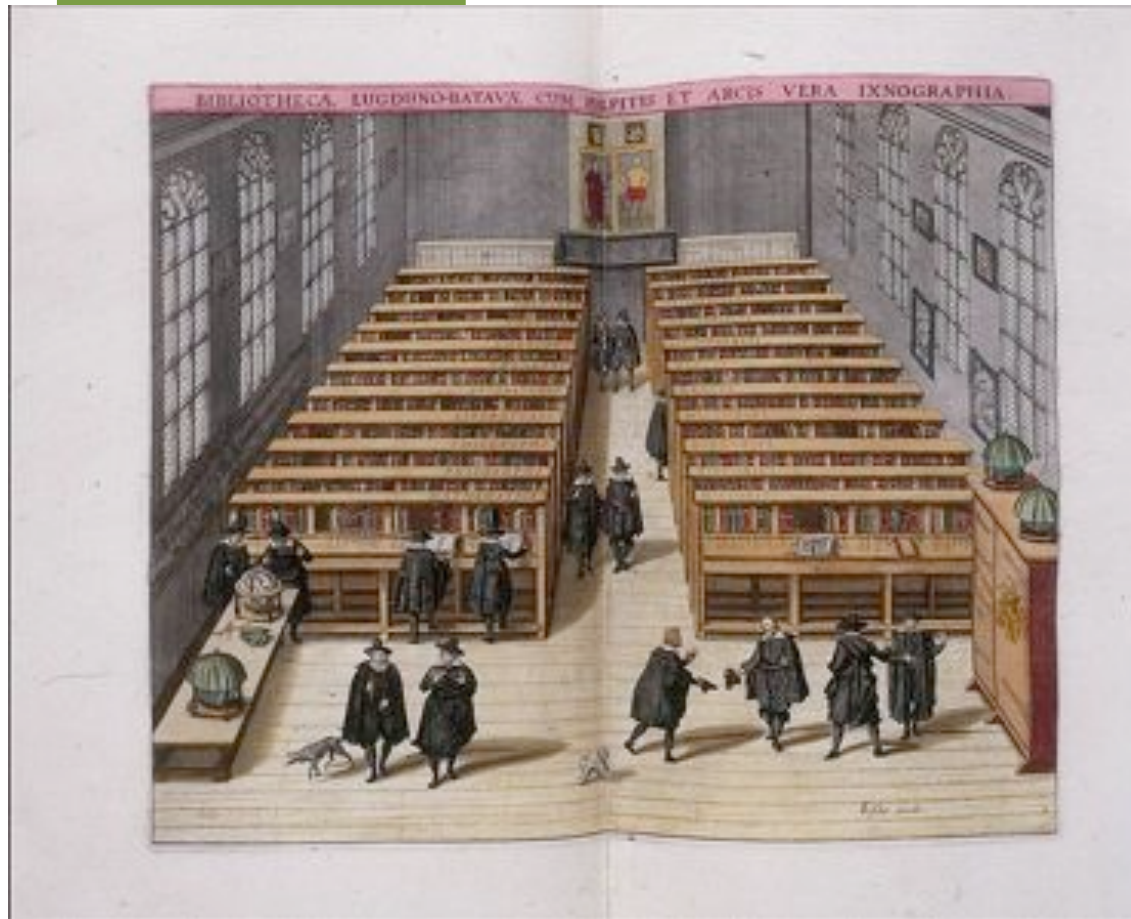
## Knowledge and the role of the "trésor"

Libraries, anthologies, dictionaries, in a word "treasuries" [trésors], alongside of encyclopedic collections, delimit a vast territory on which are cast the signs required for knowledge, the expression of identities, and communication among the members of the group.

-Alain Rey, "Les trésors de la langue," 1986



# Material Representations of Knowledge



Curriculum mirrored in form of library (bibliographies)

"Il faut qu'une bibliothèque soit une encyclopédie" Leibniz



# Material Representations of Knowledge



Curriculum mirrored in form of library (bibliographies)



Leiden University Library 1610,





## The Birth of the Museum

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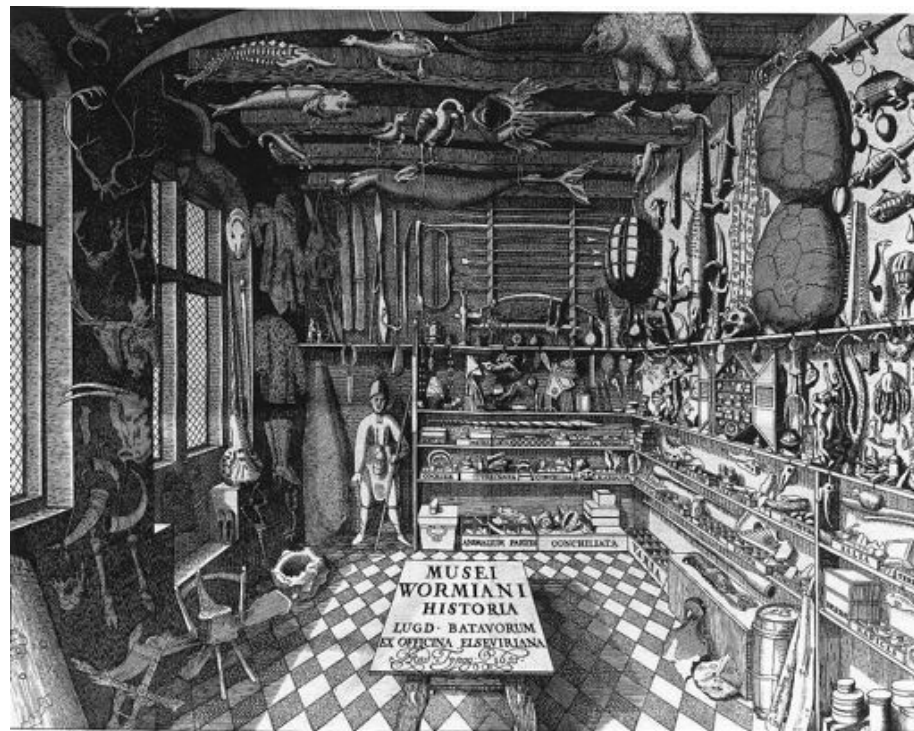
"He Trafficks to all places, and has his Correspondents in every part of the World; yet his Merchandizes serve not to promote our Luxury, nor encrease our Trade, and neither enrich the Nation, nor himself. A Box or two of Pebbles or Shells, and a dozen of Wasps, Spiders and Caterpillers are his Cargoe. He values a Camelion, or Salamander's Egg, above all the Sugars and Spices of the West and East-Indies. (Mary Astell, "*Character of a Virtuoso*," 1696)





# Representations of Knowledge: The Kunstkammer

Organization of knowledge mirrored in form of  
Kunstkammer, cabinets of curiosities,  
Wunderkammer, etc.



Museum Wormianum, 1655



# Representations of Knowledge: The Kunstkammer

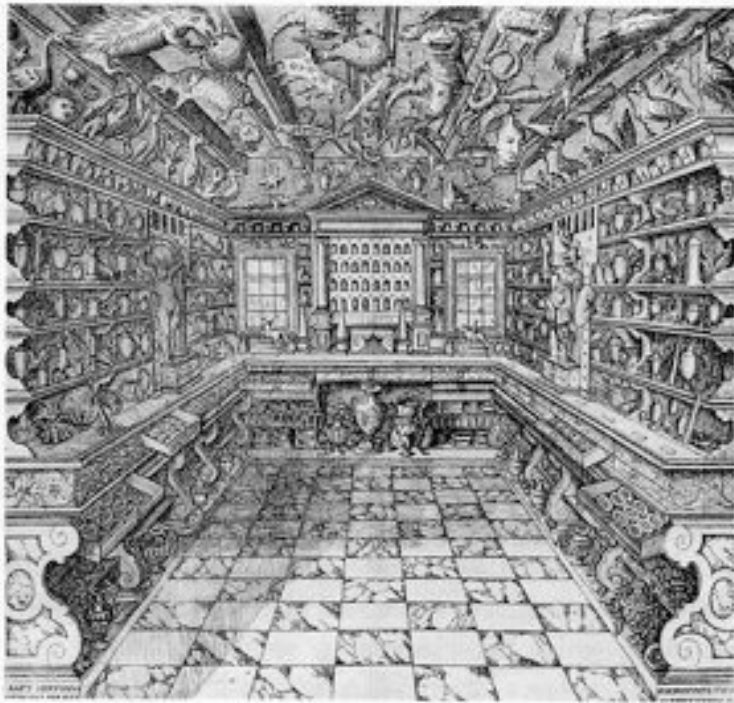


Natural History Cabinet, Naples, 1599





## Representations of Knowledge: The Kunstkammer



...a carefully organized "museum" articulated through an understanding of the world... Its contents were organised to exhibit a world picture, with objects that symbolised all aspects of nature and art, as conceptualized by the occult philosophers... This organisation depended on the concept of resemblance, where the objects and their proximities suggested macrocosmic microcosmic links.

Eilean Hooper-Greenhill, *Museums and the Organisation of Knowledge*, on the Kunstkammer of Rudolph II



# Representations of Knowledge: The Studiolo



Studiolo of Francesco I  
Florence (1570)



Kunstkammer, 1636



# Representations of Knowledge: The Studiolo



Studiolo of Federico da Montefeltro  
Urbino (ca. 1460) with wood intarsia  
(inlay)





# Representations of Knowledge: The Kunstschränk

The Kunstschränk (art cabinet or art shrine)





# Representations of Knowledge: The Kunstschränk

The Kunstschränk

Presentation of the  
Pomeranian Kunstschränk  
to Duke Philip II of  
Pomerania-Stettin, 1615)





# From Cabinets to Museums

Kunstkammers first made available for public viewing in mid-17<sup>th</sup>. C (Kunstmuseum Basel, 1661)

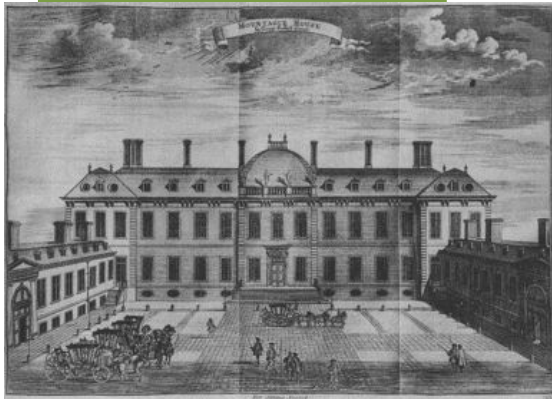
Public museums in 18<sup>th</sup> c:

British Museum, 1759, containing cabinet of curiosities assembled by Hans Sloan, ms collections, Royal Library. Later: collections of antiquities, etc.

Uffizi Gallery, Florence, 1765

Belvedere Palace, Vienna, 1781

Louvre Palace opened to public in 1793 with royal collections; augmented by Napoleon



Montague House, home of original British Museum in Bloomsbury





## 17th c. Galleries



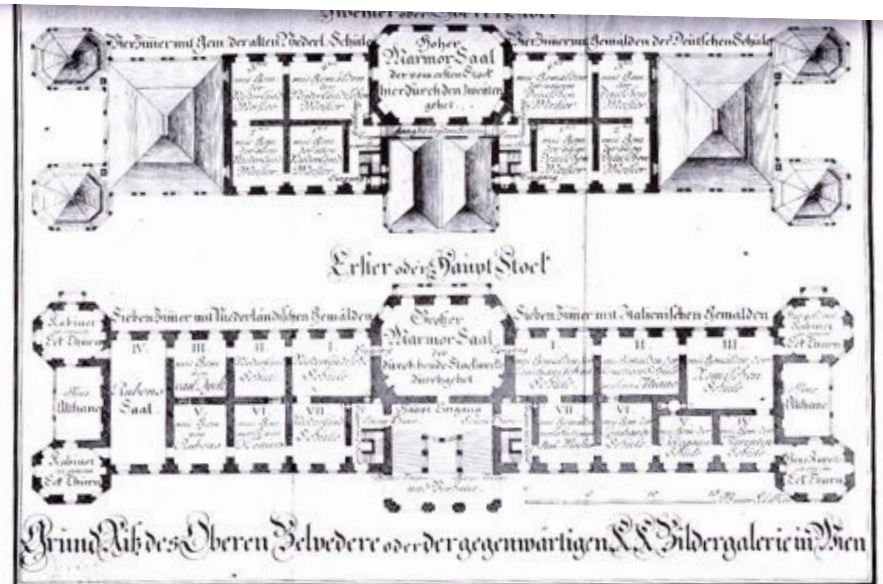
21. *The Imperial Gallery in Prague*, by Johann Bretschneider, 1714. The paintings are arranged according to the visual and decorative effect.





# 18th c. Galleries

Painting  
Galleries,  
Schloss  
Belvedere,  
Vienna, 1781



29 Histories of Art were created in many of the galleries of Europe. This plan of the paintings gallery in the Schloss Belvedere in 1778, shows how the works were grouped by country, and within that, by date, by (geographical) school, or by individual artist. This is in marked contrast to the form of display shown in Plate 23.



Rationalizing the organization of the trésor