

Mutually dependent : Encyclopedias and their audiences

**or, how much information literacy do
readers need to use an encyclopedia?**

Personal Background

What can you expect from this talk?

Encyclopedias and information literacy

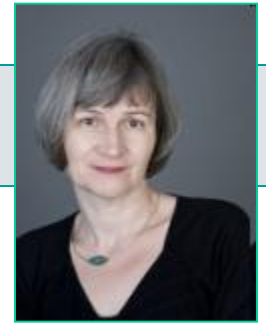
The changing role of the audience – alternating between consumer and prosumer

Summing up – the encyclopedic paradox

My Sources – Further reading ...

Discussion

→ Personal background



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In my teaching and research I try to combine my interest in current questions of knowledge access and accessibility with a historic perspective.

Last year students of my bachelor degree course „User Experience and Usability Evaluation“ had the opportunity to collaborate with the Usability-Evaluation the European Library Portal (TEL-Portal)

... Thank you for inviting me to your conference

→ Agenda

Personal Background

What you can expect from this talk

golden thread

a ‚working definition‘ of encyclopedia

Encyclopedias and information literacy

The changing role of the audience – alternating between consumer and prosumer

Summing up – the encyclopedic paradox

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→ What you can expect from this talk

Going meta



„To know how to use an encyclopedia is better than to be an encyclopedia.“ (Alfred Nobel, 1833 - 1896)

This talk

- firstly, investigates the contribution of encyclopedias to enhance the **information literacy** of their readers as well as the demands on the presumed information competences,
- secondly, sheds light on the ways how encyclopaedias **communicate and collaborate** with their readers,
- thirdly tries to determine whether the concept of information literacy is a suitable **framework for historical analysis** of a the open and fluent genre of encyclopedias.

→ A ‚working definition‘ of encyclopedia

“**encyclopedia, cyclopedia, encyclopaedia, cyclopaedia** (a reference work (often in several volumes) containing articles on various topics (often arranged in alphabetical order) dealing with the entire range of human knowledge or with some particular specialty)”

“**dictionary, lexicon** (a reference book containing an alphabetical list of words with information about them)”

(WordNet 2012-11-08)

dictionary, lexicon

encyclopedia



word

thing

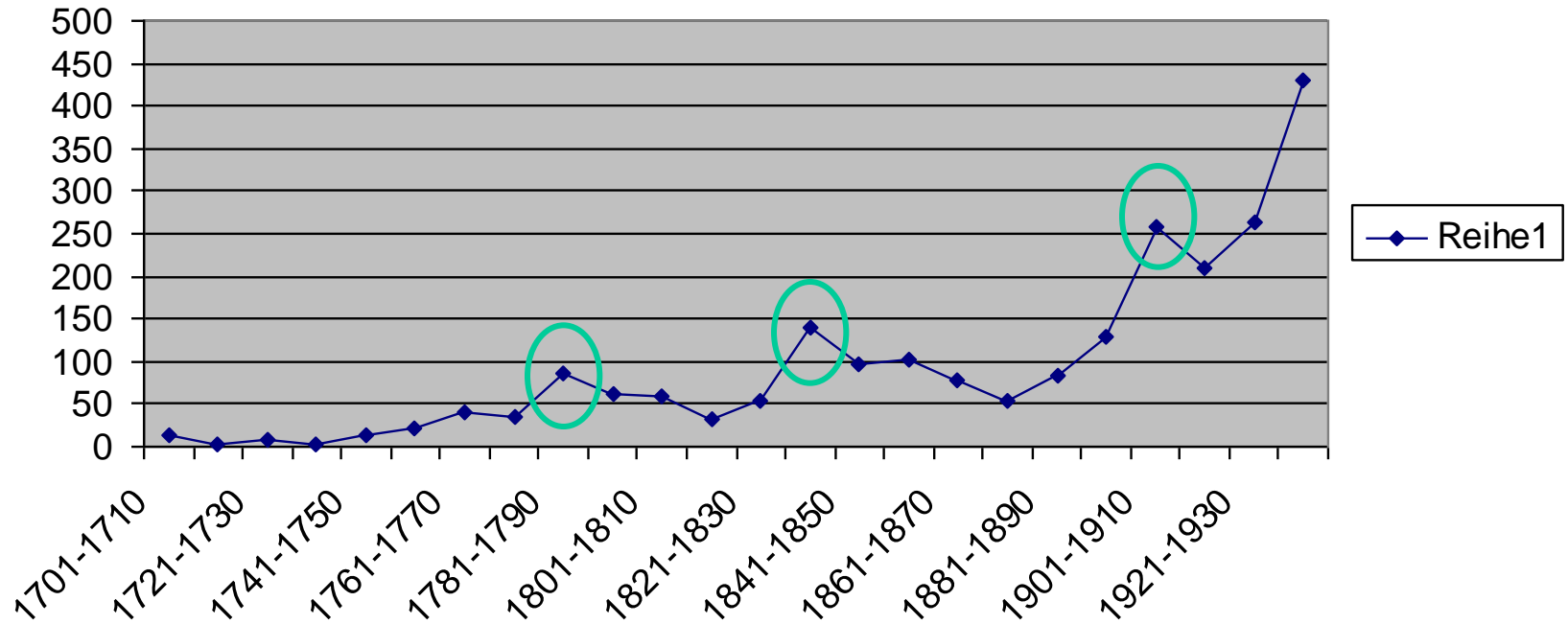
→ A ,working definition‘ of encyclopedia

Dictionary and encyclopedia share the following characteristics:

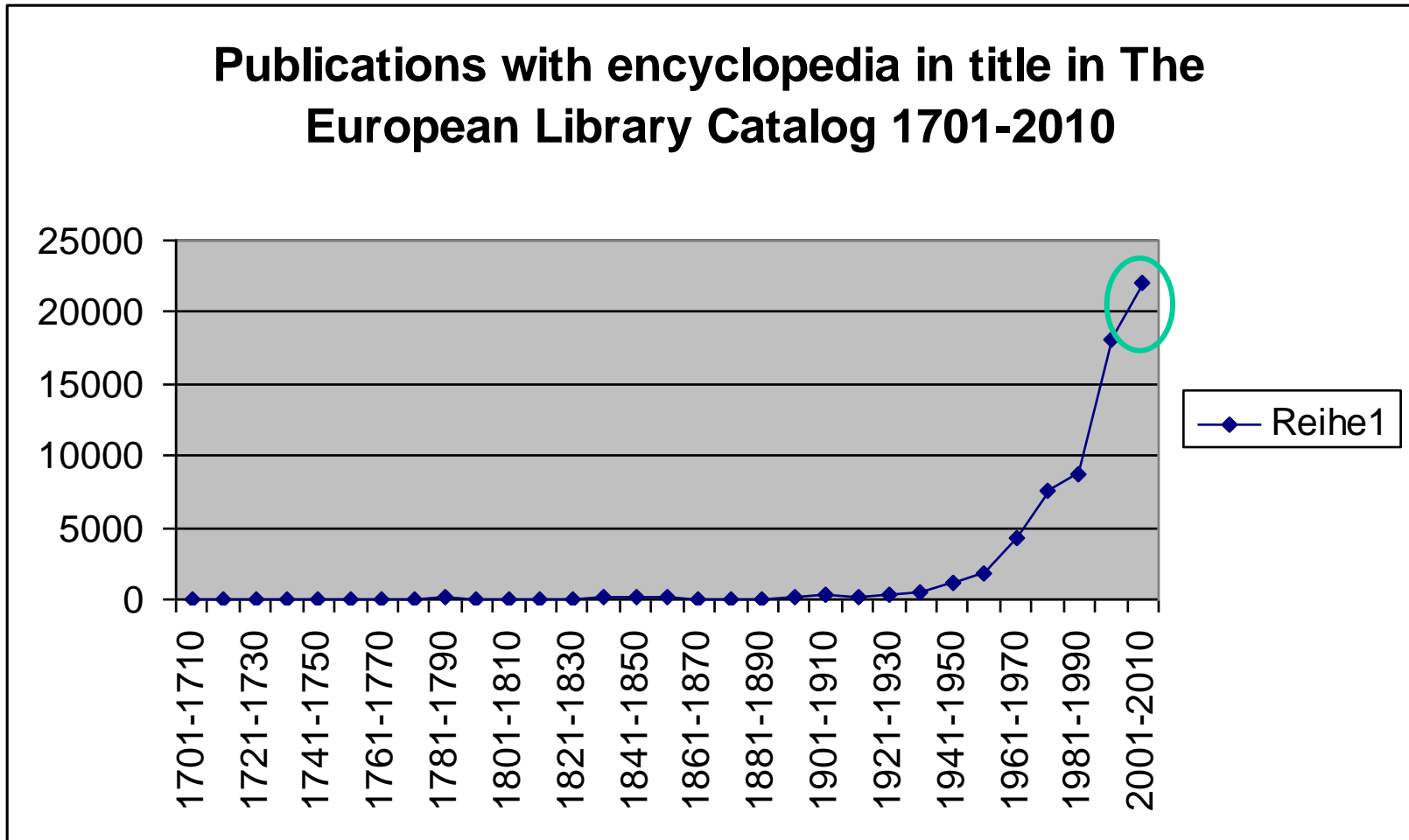
1. A structured arrangement of entries following a given for the target group **obvious ordering principle** that aims to ease the use of the reference work;
2. offering **direct access to factual information** of linguistic and/or encyclopedic character;
3. because of their atomistic approach dictionaries and encyclopedias **favour and encourage a selective access** to information and are usually not meant for linear reading;
4. Dictionary and Encyclopedias are characterized by a primarily practical-informative purpose. They aim to **eliminate doubts** on the readers side **regarding the meaning and use of individual words and concepts.**
5. A dictionary or encyclopedia is usually the **result of a process of negotiating** what is regarded as worth knowing at a certain time in a defined context. (Herren, 2007)

→ Painting with numbers

Publications with encyclopedia in title in The European Library Catalog 1701-1940



→ Painting with numbers ...



→ Agenda

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Encyclopedias and information literacy

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→ Encyclopedias and information literacy

Requirements on information literacy

1. The ability to know when there is a need for information
2. Identifying and localizing resources.
3. Selecting and analyzing the usefulness of the information for solving the problem = Evaluating given information critically.
4. Organizing and synthesizing of the selected information in order to develop knowledge and solutions.
5. Creating and presenting the solution of the problem to the appropriate audience

Searching

Evaluating -
Reflecting

Adopting –
Knowing

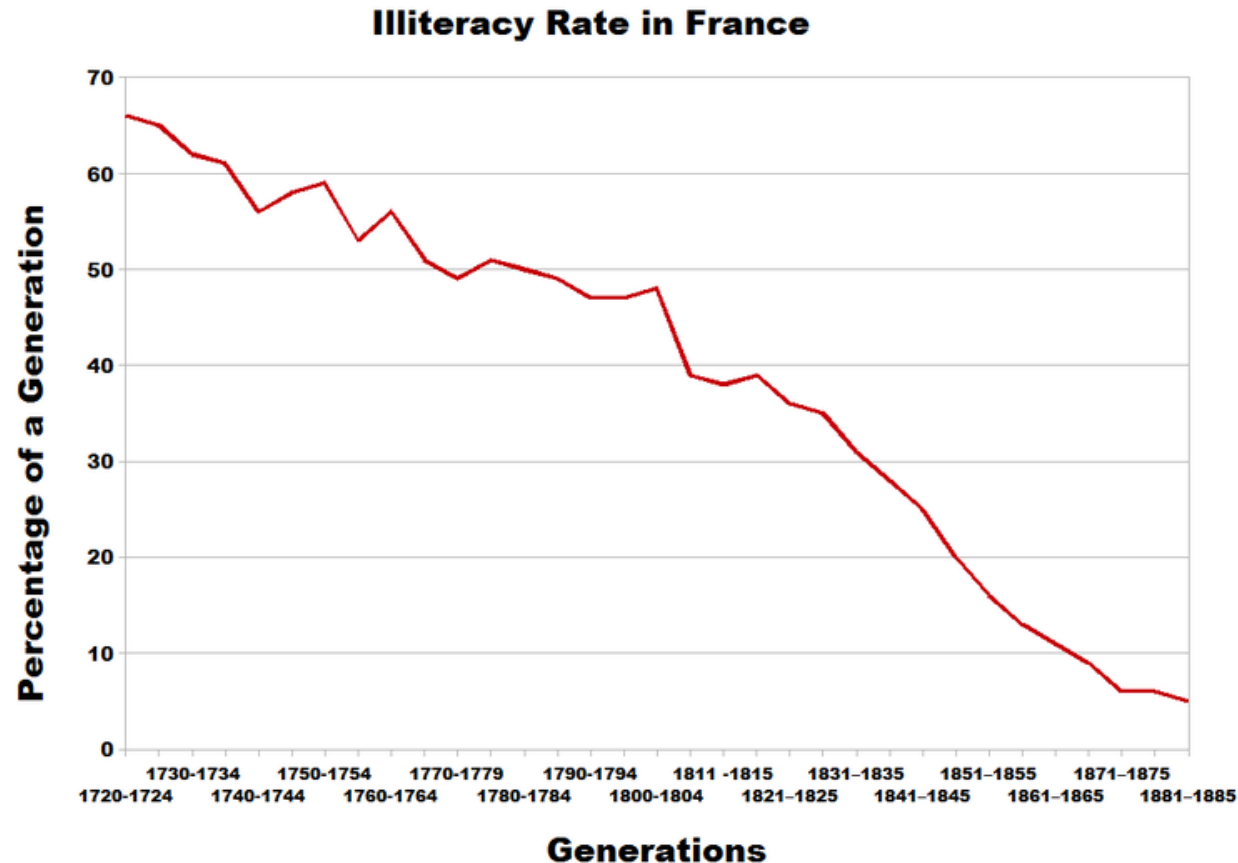
Representing
– sharing

(based on Big6, NFL, Referenzrahmen IK)

→ Encyclopedias and information literacy

Social historical Disclaimer

- illiteracy rates in Europe did not fall below 20% before 1850
- literacy rates varied widely not only between social classes but also regionally



Evolution of the illiteracy rate in France as a function of 5-year long generations, born from 1720 to 1885. Data from J. Houdailles et A. Blum, "L'alphabétisation au XVIIIe et XIXe siècle. L'illusion parisienne", *Population*, n°6, 1985, based on a 1985 INED survey and on the 1901 census. Wikimedia cc-by. http://upload.wikimedia.org/wikipedia/commons/a/ad/Illiteracy_france.png

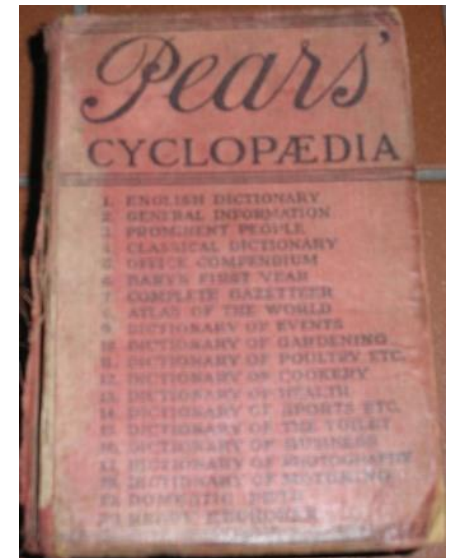
→ Encyclopedias and information literacy



1. The ability to know when there is a need for information

- The development of various types of systems of knowledge as such may serve to indicate a lack of information for the reader and encourage learning and study (*Encyclopédie, Britannica*).
- Selling/advertising information products and the “The Diffusion of Useful Knowledge” were always closely connected (*Penny Cyclopedia, Meyers Konversationslexikon*).

Searching



Cover of Pears' Cyclopaedia, 1913

http://www.alpha2omegabooks.com/?page=shop/flypage&product_id=5899&CLSN_3442=12907404283442ec7746f61ad6f32952#

→ Encyclopedias and information literacy



1. **The ability to know when there is a need for information**
 - In the tradition of the enlightenment the alphabetical text presupposed an independent autonomous reader.
 - From 1890 onwards encyclopedias assumed an independent consumer who would know when to check fact and figures, e. g. of consumer products

Searching



DN-0089336, Chicago Daily News negatives collection, Chicago History Museum, 1929.

→ Encyclopedias and information literacy



Searching

2. Identifying and localizing resources

- The history of encyclopedias offers an abundance of innovations in structuring knowledge.
- Contemporary digitisation projects often carve out the potential of these structuring aids.

Reference/Link Structure:

References from encyclopedic data to other (internal or external)

Access Structure:

data- and/or userdefined Access (Alphabet, category system, index, search, visualisations e. g. map, tree, timeline, ...)

Framework Structure:

Proportion and distribution of paratexts and lemmata (lemmalist, preface, introduction, list of abbreviations, list of contributors, maps, ...)

Macro Structure:

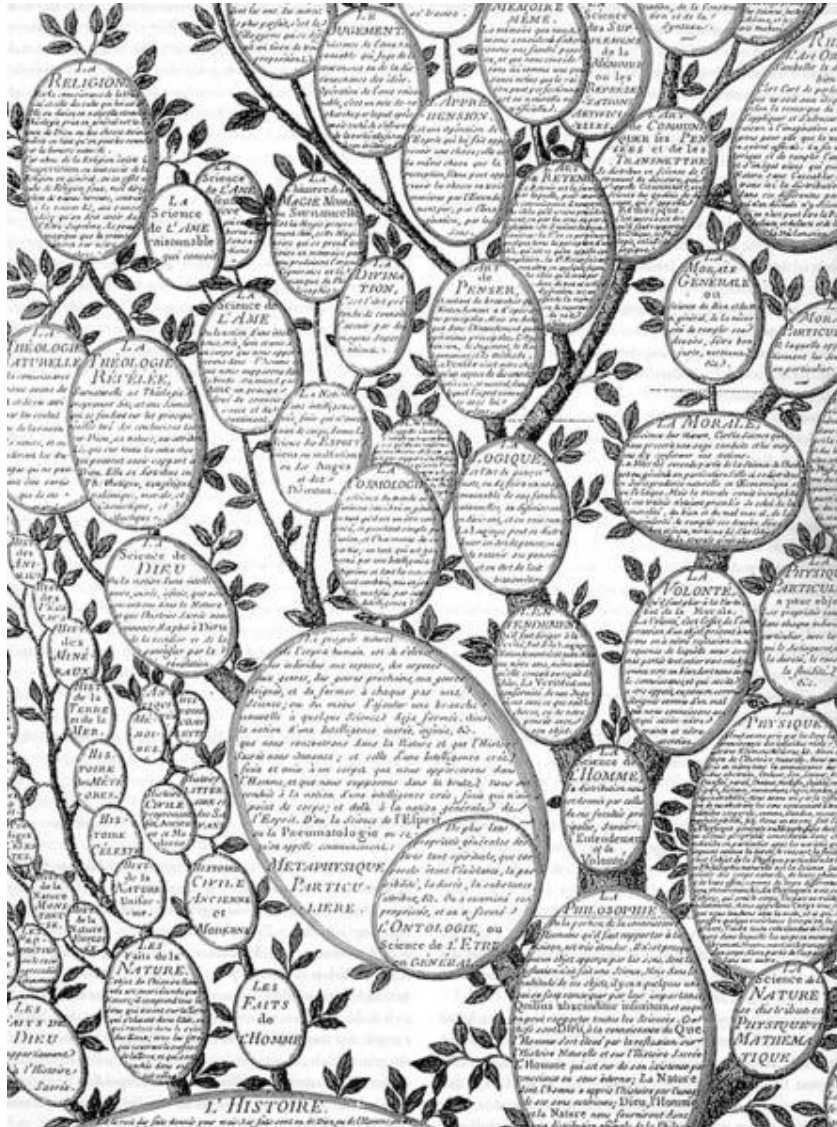
Lemmatisation (order of articles), Sorting strategy, sort key (alphabetical, systematical, date, relevance)

Micro Structure:

Determination and order of structure elements inside an encyclopedic entry/article (semantic comment, definition, collocation, form comment, wordclass, valence, ...)

→ Example: Macro Structure

Tree of knowledge



Aus: Encyclopédie
Figurative System of
Human Knowledge.jpg

[http://commons.wikimedia.org/wiki/Image:
Encyclop%C3%A9die_Figurative_System
_of_Human_Knowledge.jpg#file](http://commons.wikimedia.org/wiki/Image:Encyclop%C3%A9die_Figurative_System_of_Human_Knowledge.jpg#file)

Tree of Knowledge

→ Example: Macro Structure



Frontispiz Encyclopédie

Diderot / d'Alembert, Encyclopédie (1772)

Charles-Nicolas Cochin (1715–1790); Bonaventure-Louis Prévost (1747–1804?)

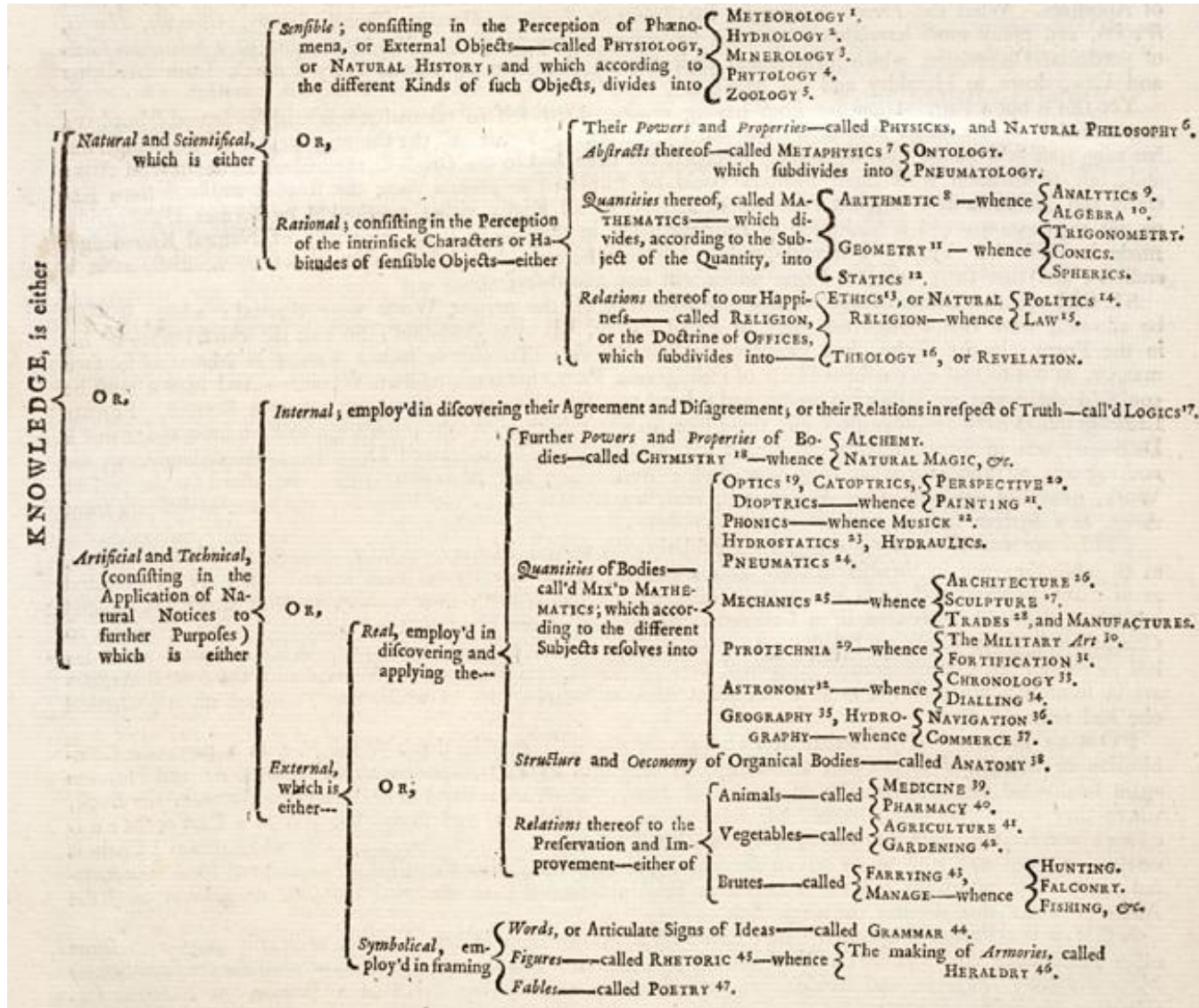
Allegoric presentation of knowledge

http://www.enzyklopaedie.ch/fronti/frontispizien_hauptseite.html

→

<http://www.enzyklopaedie.ch/fronti/enzy.html>

→ Example: Macro Structure



Chambers's Cyclopaedia, Vol. 1, 1728, Preface, p. ii, View of Knowledge

Binary distribution of knowledge

→ Example: Access Structure

Systematisches Verzeichniß sämtlicher Artikel,
nach den Wissenschaften, Künsten und Gewerben
übersichtlich geordnet und gegliedert.

Reihenfolge des Inhalts.

	Seite		Seite
Geschichte	1— 31	Physik	210-
Kulturgeschichte	31— 36	Chemie	212-
Geographie	37—111	Astronomie und Meteorologie	219-
Geographen und Reisende	111—113	Mineralogie und Geologie	222-
Mohammedanisches und Judenthum	113—116	Botanik	229-
Literatur	116—130	Zoologie	246-
Philologie und Alterthumskunde	130—138	Anthropologie	
Mythologie	138—143	Anatomie und Physiologie }	259-
Theologie	144—154	Medicin	263-
Philosophie	154—158	Thierheilkunde	272-
Pädagogik	159—160	Pharmacie	273-
Bildende Künste	161—171	Land- und Forstwirtschaft	275-
Musik	171—177	Bergbau und Hüttenkunde	278-
Theater	177—179	Technologie	279-
Rechtswissenschaft	179—197	Kriegswesen	296-
Volkswirtschaft	198—206	Seewesen	302-
Mathematik	206—208	Verschiedenes	

Meyers
Konversations-
lexikon , 1880

From
knowledge
disciplines to
topics

→ Example: Macro structure – category system digital

Nombriil de Vénus, (*Hist. nat. Bot.*) [Class: Histoire naturelle , Botanique] [Author: Jaucourt] {Machine Class: Histoire naturelle}.
NOMENCLATEUR, (*Hist. nat.*) [Class: Histoire naturelle] [Author: Jaucourt] {Machine Class: Histoire naturelle}.
NORRKA, (*Hist. nat. Minéralogie.*) [Class: Histoire naturelle , Minéralogie] [Author: d'Holbach] {Machine Class: Histoire naturelle}.
NORWEGE, terre rouge de, (*Hist. nat.*) [Class: Histoire naturelle] [Author: d'Holbach] {Machine Class: Histoire naturelle}.
NOYA, (*Hist. nat.*) [Class: Histoire naturelle] [Author: unknown] {Machine Class: Histoire naturelle}.
Noyau, (*Hist. nat. Minéral.*) [Class: Histoire naturelle , Minéralogie] [Author: d'Holbach] {Machine Class: Histoire naturelle}.
NSQSSI (*Hist. nat.*) [Class: Histoire naturelle] [Author: unknown] {Machine Class: Histoire naturelle}.

NORWEGE, terre rouge de, (*Hist. nat.*) espece de terre bolaire, d'un rouge jaunâtre, qui se trouve près de Bergen, en Norwege; elle n'est point onctueuse, est très - légère, ce qui doit faire soupçonner qu'elle est calcaire. On la regarde comme un absorbant & alexipharmaque. Wormius l'appelle *terra anti - scorbutica*.

Encyclopédie,
[...]. University
of Chicago:
ARTFL
Encyclopédie
Project
(Spring 2011
Edition),
Robert
Morrissey
(ed),
<http://encyclopedie.uchicago.edu/>.

→ Example: Macro Structure – added DDC

Modern adaptations of macro structures in digitized versions

Suche im DDC-Baum nach

Copyright
DDC, Dewey, Dewey
eingetragene Warenze
Die Dewey-Dezimalkla
©2003-2004 OCLC Or

000 Informatik,
100 Philosophie
200 Religion (2
300 Sozialwiss

301 Soziologie und Anthropologie (57)
302 Soziale Interaktion (338)
303 Soziale Prozesse (66)
304 Das Sozialverhalten beeinflussende Faktoren (258)
305 Soziale Gruppen (1090)
306 Kultur und Institutionen (1480)
307 Gemeinschaften (246)
320 Politikwissenschaft (Politik und Regierung) (661)
330 Wirtschaft (5177)
330.09 (15)
331 Arbeitsökonomie (1334)
332 Finanzwirtschaft (1637)
333 Boden- und Energiewirtschaft (86)
335 Sozialismus und verwandte Systeme (3)
336 Öffentliche Finanzen (526)
338 Produktion (1479)
338.00 (4)

Kartoffel (3)
Käse (2)
1. Kiefer

Kartoffel **DDC DDC DDC**, eine ursprünglich amerikanische Erdfrucht, welche seit 50 bis 60 Jahren wegen der

Mays
Melioration
Meliorations=Pachter
Pfeffer, (spanischer)
Pfennigbrot
Pferdebauer
Pistacie
Prämie
Produktenkarte
Rambouillet
Registertitel
Reichthum
Remission

Artikelstichwort suchen

Krünitz
online
<http://www.kruenitz1.uni-trier.de/home.htm>

→ Example: Micro structure

C R U

191

C R U

and destined to admit of the occurrence of motions of flexion and extension. The tegumentary membrane which fills it never becomes enorusted or calcareous, but always continues soft and flexible.

‘The tegumentary skeleton supplies the apparatus of locomotion with fixed points of action as well as with the levers necessary to motion. The immediate or *active* organs of this apparatus are the muscles, the colour of which is white, and the structure of which presents no peculiarity worthy of notice. They are attached to the pieces which they are required to move either immediately or by the intermedium of horny or calcareous tendons, which are implanted upon the edge of the segment to which they belong. To the fixed point they are most commonly attached immediately. Their structure is simple, and each segment in fact, as has already been said, being contrived to move in one fixed and determinate plane, the muscles which communicate motion to it can constitute no more than two systems antagonists to each other, the one acting in the sense of *flexion*, by which the segment moved is approximated to that which precedes it, the other in the sense of *extension*, by which the segment is brought into the position most remote from the centre of motion. The muscles that produce these opposite effects, as might have been concluded, are found implanted into the opposite arms of the lever upon which their energy is extended.

‘The motions in flexion tend universally to bring the extremities and the different rings towards the ventral aspect of the body; it is consequently upon this aspect that the flexor muscles are inserted, and these are in general the more powerful. On the contrary, and in accordance with the nature of the motion produced, it is upon the superior or dorsal aspect of the segments that the exterior muscles are attached. In the trench the two orders of muscles generally form two distinct layers, the one superficial, the other deep; the former thin and sometimes absent, the second, on the contrary, very powerful wherever powerful motions are required. The muscles generally extend from the arc above to the one immediately below, passing

generally upon this head. The motion of translation or from place to place, the only kind upon which it seems necessary to say anything here, are effected in two modes, either by the alternate flexion and extension of the trunk, or by the play of the limbs.

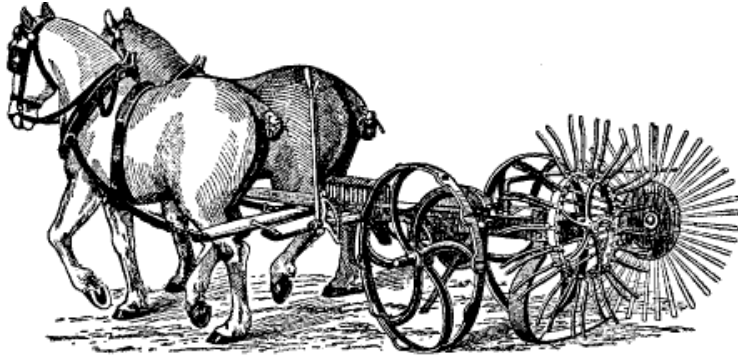
‘In those Crustacea which are formed essentially for swimming, the posterior part of the body is the principal agent in enabling the animal to change its place; but here the motions, instead of being lateral, are vertical; and instead of causing the creature to advance they cause it to recede; it is by bending the abdomen suddenly downwards, and bringing it immediately under the sternum, that it strikes the water, and consequently by darting backwards that the animal makes its way through the liquid. (ASTACUS, vol. ii., p. 513.) From what has now been said it may be imagined that the Crustacea whose conformation is the best adapted for swimming have the abdomen largely developed, and this is in fact what we always observe; the Amphipoda and Decapoda Macroura are examples; whilst in the walking Crustacea, such as the crabs, the Caprella, the Oniscus, &c., this portion of the body attains but very insignificant dimensions. In the swimming Crustacea, the appendages of the penultimate segment of the abdomen also become important organs of locomotion, inasmuch as they for the most part terminate in two broad horizontal plates, which, with the last segment, also become lamelliform, constitute an extensive caudal fin arranged in the manner of a fan. We have already said that the thoracic extremities alone constitute true ambulatory limbs. When destined for swimming only, their segments are lamelliform, and the palp, as well as the stem, contributes to form the kind of oar which each of them then constitutes.

‘To conclude, the stemmatous portion of the thoracic extremities, whilst it still preserves the general form which we have assigned it, is modified in some cases to serve for walking as well as swimming, or to aid the animal as an instrument for burrowing with facility, and making a cavity for shelter among the sand. Thus in the Decapoda that burrow, the last segment of the tarsus assumes a lanceolated

Penny
Cyclopaedia,
1833

„Bleiwüste“
(lead dessert)

→ Example: Micro structure



Potetoplager.

her afbildede form, som løsner poteterne, ryster dem ud af jorden og lægger dem ovenpaa, saa de er lette at plukke op.

Potetplanten (*solanum tuberosum*) hører til søtviderfamilien, den er ca. $\frac{1}{2}$ m. høj, har kantet eller svagt vinget stængel, som kun er lidet grenet, og stærkt delte blade. Blomsterne er samlet i skjærme i skudspidserne, frugterne, som i Norden ikke faar anledning til at modnes, er kuglerunde, gulgrønne bær med talrige frø. Den af mennesket nyttiggjorte del af planten er knoldene,

sweet-willow @ pors.

swell @ svulme, svelle ud (op), trutne, hovne; øges, stige; være opblæst; bugne; bryste sig, spanke; (for)øge; forsterke, tilføie; forhøie; (mus.) spille, syngende crescendo.

swell @ svulmen; udsvelling, trutnen; øgning; (ud)bugnen; stigning, hævnning; (lydens, sprogets) styrke, intensitet; bakke, haug;

bølge(gang), (mus.) crescendo og decrescendo; (dagligtale) matador; flot kavaler, laps.

swell @ fin, fornem, lapset.

swelling @ svulmende, bugnende; opstyttet, svulstig; ophøiet sted; (med.) hævelse; (elve)flom; (fig.) opbrusning, udbrud. **white s.** ledesvamp.

swellish @ flot.

Illustreret norsk
konversationsleksikon
(Seks bind, 1907–
1913),

Vol. 5, 1912

Included dictionary

encore, anglofrz., frz., **ancora**, antora, ital., abermals, noch einmal.

encouragiren, angfranzösisch, frz., Muth einsprechen, ermuntern, antreiben; **Encouragement**, angfranzösisch, frz., Aufmunterung.
encyklisch (v. gr. kyklos, Kreis, f. I, 1052). einen Kreis durchlaufend; davon: **encyklischer Brief**, die **Encyklika**, **Rechtsacht: Encykliken**, enzyklika. Rundschreiben, urprüngl. der Bischöfe an einen Kreis von Kirchen; jetzt heißen diese E.: **Girtensbriefe**, und nur die Rundschreiben des Papstes an die Bischöfe **Encykliken**; **Encyklopädie**, enzyklopädia. w. (v. gr. en-kyklos u. paideia, d. h. Erziehung, Unterricht, Bildung, also: Bildungskreis), Wissenschaftskunde; im allgemeinen die umfassende Lehre aller Künste u. Wissenschaften in ihrem Zusammenhange oder von einem begrenzten Wissenszweige im Zusammenhange: ferner: die Werke, welche das gesammte menschliche Wissen oder einen Wissenszweig im Zusammenhange darstellen. Das erste encyklopädische Werk soll der Grieche **Zenoxypus** (303–334 v. Chr.), ein Schüler des Plato, verfaßt haben; es ist verloren. Ähnliche Werke schrieben die Römer **Varro***) und **Plinius****); die encyklopädische Bildung des Mittelalters begründete **Martianus Capella*****); auch **Isidorus**†) u. **Maurus**††) werden hochgeschätzt. Das Wissen des Mittelalters sammelte im 13. Jahrh. der gelehrte Dominicanermönch **Vincent von Beauvais** (schwand. geist. im Kloster zu Beauvais (Frankreich) 1264; sein *speculum quadruplex* (vierfacher Spiegel), den er auf Veranlassung des Königs Ludwig IX. verfaßte, gibt eine gute Uebersicht über den damaligen Stand der Theologie und Philosophie. 1541 gab der Schweizer **Ringelberg** zu Basel eine „Cyklopaedia“ heraus, 1559 der Schweizer **Scalich** ebendort die

*) Marcus Terentius Varro, geb. 116 v. Chr., Feldherr und Gelehrter, Freund des Pompejus, 43 von Antonius geachtet, starb 27 v. Chr.; verfaßte 41 Bücher: *Rorum humanarum et divinarum antiquitates*. Uebersämer der menschlichen und göttlichen Dinge, welche das gesammte politische und religiöse Leben der Römer seit den ältesten Zeiten schilderten, ferner 9 Bücher *Disciplinae*, eine Encyklopädie der zur damaligen allgemeinen Bildung gehörenden Wissenschaften: Grammatik, Dialektik, Rhetorik, Geometrie, Arithmetik, Astronomie, Musik, Architektur, Medicin; diese u. andere Werke gingen verloren; erhalten sind nur 3 Bücher über Landwirtschaft und 10 Bücher über die lateinische Sprache.

**) Gaius Plinius Secundus, der ältere (major), geb. 23 u. Chr., von 45–52 in Germanien als römischer Ritter, 67 Procurator in Hispanien, besuchte Afrika, kam 79 beim Ausbruch des Vesuvius ums Leben, als er diese Erscheinung beobachtete. Er hatte ein sehr umfangreiches Wissen u. schrieb über fast alle Wissenszweige seiner Zeit; erhalten sind nur 37 Bücher seiner *Historia naturalis*, Naturgeschichte, deren Inhalt er aus mehr als 2000 Bänden schöpfte.

***) Martianus Capella, lat. Schriftsteller in der ersten Hälfte des 5. Jahrh., geboren zu Madaura in Afrika, in Carthago erzogen, lebte als Sachwalter, schrieb mit Benutzung des Varro, f. o., ein aus Prosa und Versen zusammengesetztes Werk über die sieben freien Künste.

†) Isidorus Hispaniensis oder I. von Sevilla (Isidorus hispaniensis), geb. um 560 zu Cartagena in Spanien, seit 600 Bischof von Sevilla, starb 633, schrieb: *Originum seu etymologiae libri XX* eine lateinische Encyklopädie des gesammten Wissens jener Zeit; ferner kirchliche und historische Schriften.

††) Gratianus Maurus (baba), geb. 776 zu Mainz, ward Benedictiner zu Fulda, leitete von 808 ab die dortige Klosterhufe, wurde 822 Abt des Klosters, 847 Erzbischof v. Mainz, starb 856; hat große Verdienste um das Schulwesen, schrieb eine *Concordantia* und viele kirchliche Schriften.

Micro structure

Example: Emanuel Wurm (delegate of German Reichstag), *Volks-Lexikon*, Vol. II, 1894

- different fonts for different meanings (foreign and German words)
- Pronunciation
- Word meaning
- historical background in smaller fontsize
- jump labels for skimming and scanning
- footnotes for more detailed information

→ Example: Access structure – linking system

Knollen zur Ausfaat ist Haupterforderniß. Ein Hauptbeförderungsmittel der Vegetation und der Vermehrung der Peronospora ist die Feuchtigkeit. In der That tritt die K. in nassen Jahren und feuchten Lagen am heftigsten auf, der Landwirt aber kann ihr durch Wahl eines trocknen und leicht trocknenden Bodens und freier Lage des Ackers wenigstens einigermaßen vorbeugen. S. Tafel »Pflanzenkrankheiten«, Fig. 7—10. Vgl. de Bary, Die gegenwärtig herrschende K., ihre Ursache und ihre Verhütung (Leipz. 1861); Kühn, K. (»Zeitschrift des landwirthschaftl. Centralvereins der Provinz Sachsen« 1871 und »Berichte aus dem physiologischen Laboratorium des landwirthschaftlichen Instituts der Universität Halle« 1872); Sorauer, Handbuch der Pflanzenkrankheiten (2. Aufl., Berl. 1886). Über neuere Untersuchungen de Barys vgl. »Journal of botany« 1876; Frank, Die Krankheiten der Pflanzen (Bresl. 1880); Jensen, Die K. kann besiegt werden (a. d. Dän., Leipz. 1882). Über andre Krankheiten der Kartoffelpflanze vgl. die Artikel: »Kräuselkrankheit«, »Grind der Kartoffeln«, »Naßfäule« und »Rhizoctonia«.

Kartoffelkrieg wurde der bayerische Erbfolgekrieg (s. d.) von den Soldaten genannt, weil sich dieselben, statt Schlachten zu schlagen, in den böhmischen Standlagern und Quartieren hauptsächlich bloß um die Kartoffeln stritten.

Meyer, 4. ed. 1885-1892

A network of links -
reference structure

- reference to table

-bibliographic references

-references to other articles
expressed in various way

→ Encyclopedias and information literacy



2. Identifying and localizing resources. Searching

- Every new structural device needs to be learned by the reader/user.
- Simplifying access reduces the understanding of the internal structure of a knowledge resource
 - Finding aids are simply overlooked,
 - Users may no longer build a cognitive model of an information system

Find examples for people who were killed by the devices they invented?

http://en.wikipedia.org/wiki/Main_Page --

> <http://en.wikipedia.org/wiki/Portal:Contents/Portals>

→ <http://en.wikipedia.org/wiki/Portal:Contents/Lists>

→ http://en.wikipedia.org/wiki/Portal:Contents/Lists#History_and_events

→ http://en.wikipedia.org/wiki/List_of_inventors_killed_by_their_own_inventions



Helpdesk support. Original taken from the show „Øystein og jeg" on Norwegian Broadcasting (NRK) in 2001. With Øystein Backe (helper) and Rune Gokstad (desperate monk). Written by Knut Naerum

<http://www.youtube.com/watch?v=pQHx-SjgQvQ>

→ Encyclopedias and information literacy



3. Selecting and analyzing the usefulness of the information for solving the problem.

Evaluating -
Reflecting

-Besides the already mentioned structural tools (alphabetic keys, category systems, internal reference systems) encyclopedia articles may provide practical information (how-to) as well as moral guidance (*early editions of EB, encyclopedias directed to the ,lower orders‘ (Volkslexika)*)

POTATO (*Solanum tuberosum*), a well-known plant which owes its value to the peculiar habit of developing underground slender leafless shoots or branches which differ in character and office from the true roots, and gradually swelling at the free end produce the tubers (potatoes) which are the common vegetable food. The nature of these tubers is further rendered evident by the presence of "eyes" or leaf-buds, which in due time lengthen into shoots and form the haulm or stems of the plant. Such buds are not, under ordinary circumstances, formed on roots. The determining cause of the formation of the tubers is not certainly known, but Professor Bernard has suggested that it is the presence of a fungus, *Fusarium solani*, which, growing in the underground shoots, irritates them and causes the swelling; the result is that an efficient method of propagation is secured independently of the seed. Starch and other matters are stored up in the tubers, as in a seed, and are rendered available for the nutrition of the young shoots. When grown under natural circumstances the tubers are relatively small and close to the surface of the soil, or even lie upon it. In the latter case they become green and have an acrid taste, which renders them unpalatable to human beings, and as poisonous qualities are produced similar to those of many *Solanaceae* they are unwholesome. Hence the recommendation to keep the tubers in cellars or pits not exposed to the light. Among the nine hundred

- Making common things interesting
- Inspiring the pursuit of knowledge
- Recommendation how to keep potatoes



3. Selecting and analyzing the usefulness of the information for solving the problem.

Evaluating -
Reflecting

„You had been told one lie on the top of another. And all the time the truth was there, in the Encyclopaedia Britannica.“ (from the novel „Mary Olivier“ by May Sinclair, 1919)

Users need to:

- understand layout conventions
- understand and interpret rhetorical conventions / hidden allusions
- understand intentions of a text – read a text critically

→ Encyclopedias and information literacy



4. Organizing and synthesizing of the selected information in order to develop knowledge and solutions.

Adopting -
Knowing

- a) Discriminating between fact and opinion
 - Up to the 1860s most British and German encyclopedias openly revealed that the articles reflected the bias of the eminent authors,
 - facts were backed by bibliographical footnotes
- b) Noticing various interpretations of data
 - encyclopedias are far less consistent than we generally assume and a attentive reader is bound to detect contradictions (*Encyclopédie; EB; Wikipedia?*)

→ Encyclopedias and information literacy



4. Organizing and synthesizing of the selected information in order to develop knowledge and solutions.

Adopting -
Knowing

- c) Finding additional information if needed
 - Bibliographical references,
 - References to other articles
- d) Organizing ideas and information logically
 - encyclopedia articles are structured and topical and could be used model for text production (definition, historical development, secured facts, open questions ...)



- Do the users discover, understand and use the offered tools?
- The chances are less good if help was outsourced in paratexts

→ Encyclopedias and information literacy



5. Creating and presenting the solution of the problem to the appropriate audience

Representing
– sharing

- the process of encyclopedic text production was only rarely laid open before Wikipedia (Wie ein Konversationslexikon gemacht wird 1879; Tomlinson 1986)
- based on high division of labor (fact checkers, researchers, editors, authors, external experts in local and national authorities, knowledge organizers (indexing, classifiers, layout, proof-reading, ...))
- set of written or orally transmitted guidelines of good practice like the famous Wikipedia Five Pillars (http://en.wikipedia.org/wiki/Wikipedia:Five_pillars)

→ Encyclopedias and information literacy



5. Creating and presenting the solution of the problem to the appropriate audience

- Encyclopedias are and were used in text-production
- Their authoritative tone always invited to copy and paste

Do you remember the critic of the "Eatanswill Gazette"? He had to review for that admirable journal a work on Chinese Metaphysics. Mr. Pott tells the story of the article.

"He read up for the subject, at my desire, in the Encyclopædia Britannica ... he read for metaphysics under the letter M, and for China under the letter C, and combined his information!" (The Secret Glory. By Arthur Machen. 1922)

**Representing
– sharing**

→ Encyclopedias and information literacy



5. Creating and presenting the solution of the problem to the appropriate audience

SPIEGEL ONLINE

„An dieser Stelle stand ein Text, der so nicht auf SPIEGEL ONLINE hätte erscheinen dürfen. Er erläuterte die Hintergründe zum Völkermord in Ruanda und bestand in wesentlichen Teilen aus Passagen, die wörtlich dem Online-Lexikon [Wikipedia](#) entnommen wurden, ohne die Quelle zu nennen.“ Spiegel online 2005-02-24

**Representing
– sharing**

→ Encyclopedias and information literacy

Prerequisite of information literacy - Access to adequate information resources

- Not mentioned in the concepts of information literacy
 - However, prerequisite to become information literate

 - Dictionaries and Encyclopedias allow a structured access to factual information.
 - They offer storage and structure.
 - In this respect they can always be seen as a contribution to make factual resources accessible to an increased audience
- The discourse of new types of encyclopedias with new methods of making information accessible to (new) audience has always to be seen as a re(negotiation) how access to information should be controlled and funded

→ Encyclopedias and information literacy

Wikipedia ist gemeinnützig und erhebt keine Gebühren. Sie ist die Nummer 6 der am häufigsten besuchten Webseiten der Welt. Wir verfolgen kein kommerzielles Interesse. Unser Ziel ist der freie Zugang zu Wissen für jeden.

Google und Yahoo haben tausende Server und Angestellte. Wir haben nur 641 Server und weniger als 200 Angestellte. Um unabhängig zu sein, schalten wir keine Werbung.

450 Millionen Menschen nutzen Wikipedia im Monat. Für viele ist sie im Alltag selbstverständlich geworden. Wenn jeder nur einen kleinen Beitrag leistet, wäre unsere Spendenkampagne in einer Stunde vorüber.

Eine Bitte vom Wikipedia-Gründer



Ich bin ein Freiwilliger.

Weder ich noch tausende andere freiwillige Autoren werden für die Arbeit an Wikipedia bezahlt. Als ich die Wikipedia gründete, hätte ich sie zu einem gewinnorientierten Unternehmen mit Werbung machen können, aber ich habe mich anders entschieden.

Kommerz ist in Ordnung, Werbung ist nicht böse – aber sie gehört nicht hierher, nicht in die Wikipedia.

Wikipedia ist etwas Besonderes. Sie ist wie eine Bibliothek oder ein öffentlicher Park. Sie ist ein Ort, den wir alle aufsuchen können, um zu denken, zu lernen, und unser Wissen mit anderen zu teilen. Wikipedia ist ein einzigartiges Projekt, das erste seiner Art in der Geschichte der Menschheit. Sie ist ein gemeinnütziges Projekt, um jedem einzelnen Menschen auf diesem Planeten eine freie Enzyklopädie zur Verfügung zu stellen.

Jedem einzelnen Menschen.

Wenn jeder der 450 Millionen Wikipedia-Nutzer 1 Euro spenden würde, hätten wir mehr als zwanzigmal so viel Geld wie wir benötigen. Wir sind eine kleine Organisation, und ich habe die letzten Jahre hart gearbeitet, um uns schlank und effizient zu halten. Wir erfüllen unsere Aufgabe. Verschwendung überlassen wir anderen.

Um dies ohne Werbung zu schaffen brauchen wir Sie

Wenn jeder Leser nur einen kleinen Beitrag leistet, wäre unsere Spendenkampagne in einer Stunde vorüber.

Ich spende

- einmalig monatlich vierteljährlich
 halbjährlich jährlich

einen Betrag von

- 5 € 15 € 25 € 50 €
 75 € 100 € 250 €

und bezahle per

- Lastschrift Überweisung Kreditkarte
 Paypal

Jetzt spenden

**Jimmy Wales: Call for donations,
Wikipedia 2012-11-06**

→ Encyclopedias and information literacy : Résumé

The concept of ,informations literacy‘ could be applied as an analytical tool for analysis and periodization of encyclopedias revealing continuities as well as changes.

→ Agenda

Personal Background

What can you expect from this talk

Encyclopedias and information literacy

**The changing role of the audience –
alternating between consumer and prosumer**

Summing up – the encyclopedic paradox

My Sources – Further reading ...

Discussion

→ The (changing) role of the audience

“ [...] a book like this one ought to be shaped not only by a body of contributors but by a body of readers, ”



Edward Blishen, educator, Radio moderator,
editor of Junior Pears Encyclopedia, 1964
(Source: <http://www.garyede.com.au/blishen-edward-1978>)

→ The (changing) role of the audience

Fast motion: intended and real audiences of General Encyclopedias (1700 – 1880)

	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880
Milestones Reading											upsurge of newspaper reading			Beginning of reading for the people campaigns					
Prototypes (en)				Chambers's Cyclopaedia			Britannica							Penny Cyclopaedia			Chambers's Encyclopaedia		
Prototypes (de)				Zedler							Brockhaus	Pierer		Meyer					
prosumer																			
BUT				As external experts, through letters to the editor, members of the civil society readers always influenced the content															
educated reader																			
BUT				the model of the consulting reader was challenged by the reader who thought communication an entertainment															
consulting reader																			
BUT				encyclopedia authors came from social groups who never made it to the University															
learned reader																			
	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880

→ The (changing) role of the audience

Fast motion: intended and real audiences of General Encyclopedias (1890 – 2010)

1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	
														Milestones Reading
										1993 Encarta	2001 Wikipedia / 2007 Citizendium			Prototypes (en)
														Prototypes (de)
														prosumer
														BUT
														educated reader
														BUT
														consulting reader
														BUT
														learned reader
1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	

→ The (swaying) role of the audience

The reader is in various aspects part of the encyclopedic process

- Social nearness between producers and readers
- Readers contributed as external experts (academics, diplomats, military people, travellers, ...)
- New reading audiences provoked new ideas for lexicographic products (Zeitungslexika, Konversationslexikon, factual information)
- ... and as diligent writer of letters to the editor

→ The (swaying) role of the audience

„Anerkannte Autoritäten der Geschichtswissenschaft haben es wiederholt ausgesprochen, daß keine Geschichtsdarstellung auch entlegener Zeiten durchaus objektiv und unparteiisch sein könne und auch nicht sein solle, ...“

(Transl. Respected authorities repeatedly confirmed that no historical presentation can be objective and unbiased.)

Ein mittelparteilicher Standpunkt hat immer noch den Vorzug, bei den Extremen am wenigsten anzustoßen. Es wird daher das beste sein, bei der bisherigen Richtung zu bleiben und nach Vollständigkeit, Richtigkeit, Gerechtigkeit und Milde im Urtheil zu streben. (Meyer, Korrespondenzblatt zum 17. Band)

„Dieses wissenschaftliche Urteil auszusprechen ist das Konversations-Lexikon berechtigt, ja verpflichtet. Eine "Parität" gibt es bei wissenschaftlicher Beurteilung nicht.“ Meyer, Korrespondenzblatt zum 17. Band)

„Einen Artikel über die „Problemkunst“ finden Sie im Register- und Supplementband, Korrespondenzblatt zum 15. Band)

Example: Korrespondenzblatt 3. ed. Meyers Konversationslexikon

→ The (swaying) role of the audience

Wikipedia, Version History + Discussion lemma „Kartoffel“ (Potato)

391 changes between 2003-11-4 and 2012-10-3

„Ich find schon, dass die Kartoffelgerichte in der einen oder anderen Form reingehören - immerhin ist es eine "typisch" mitteleuropäische Küche“ (2003)

„Ich kenn zwar das Buch nicht, aber die Annahme "wissenschaftliches Buch = richtig" muss nicht unbedingt stimmen. (2007)

„Ich bin seit nun mehr 20 'Jahren Kartoffelbauer und ich muss sagen dass es bei weitem kein Problem mit der Schale gibt. Wenn deine Oma alles so viel besser weiß warum ist sie dann kein studierter Kartoffelexperte? Meine Oma isst sie mit Schale und ist fit! Ps: Die besten Kartoffeln gibts bei mir! (2010)

→ The (swaying) role of the audience

Wikipedia, Version History „Kartoffel“ (Potato)

391 changes between 2003-11-4 and 2012-10-3

Topics:

- Content: recipes with potatoes, poisonousness, cultural history (origin, geographical dissemination)
- Fact checking: historical facts, statistics on dissemination
- Article structure: ‚outsourcing‘ of content in new articles
- Deleting typos and grammatical mistakes
- Small talk e.g. on health issues

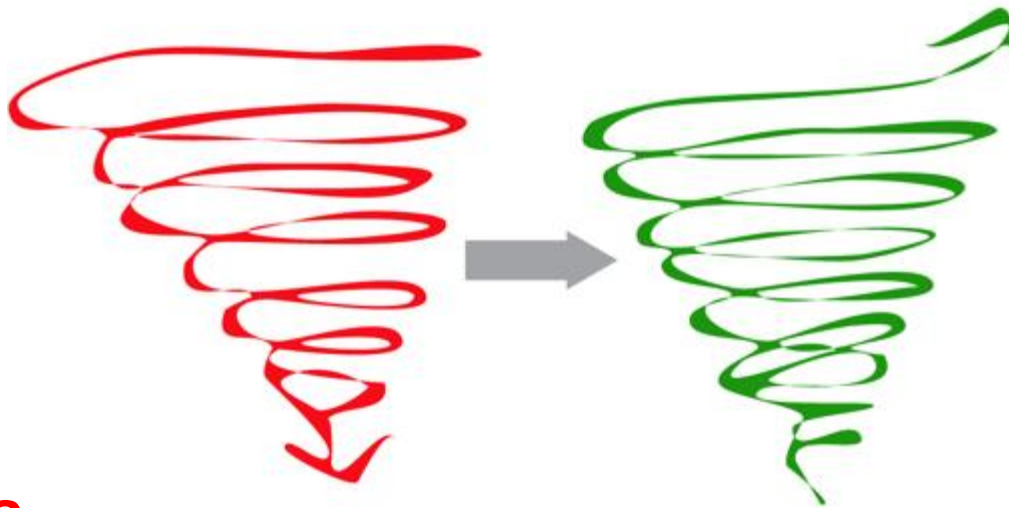
→ The (swaying) role of the audience

How do readers communicate with an encyclopedia?

- adding details (e. g. on foreign countries),
- making suggestions for improvement (layout, pronunciation),
- negotiating what content should be included and excluded,
- demanding more information / updated information,
- claiming a (neutral) point of view

→ The (swaying) role of the audience

Upwards
spiral?



Downwards
spiral?

Encyclopedias and their users are mutually dependent –
this can either cause a downwards or upwards spiral

→ The (swaying) role of the audience

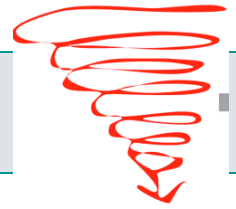
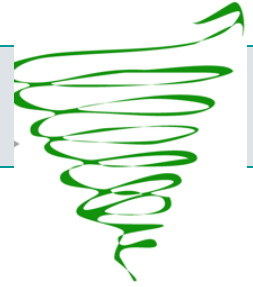


Figure: Information-cycle (Satirical magazine Titanic 2008)

→ The (swaying) role of the audience



Readers feel responsible for an encyclopedia and

- develop a common practice (e. g. for verification – facts need to be verified by bibliographic resources)
- learn and accept common rules
- Identify with the product and report mistakes

→ Outlook: From consumer to prosumer

Experiences from 2 seminars at HAW-Hamburg



Writing a
Wikipedia article

Foto: Paula Markert.

→ Outlook: From consumer to prosumer

Experiences with writing the article:

- students underestimated the effort for research and verification and the writing of good definitions,
- guidelines – although difficult to find – were perceived as helpful,
- felt gratefully motivated by immediate response on their article,
- were slightly disappointed that most responses dealt with formal questions like quotations,
- had expected more discussion of the content itself,
- most students modelled their article against a similar example,
- experience boosted respect for Wikipedia.

→ Outlook: From consumer to prosumer?

Alexandra: „Werde ich ein Wikipedianer? Ich glaube nicht, da ich genügend eigene Projekte in meiner Freizeit verfolge, die für mich persönlich höhere Priorität haben. Ich schätze allerdings die Erfahrung sehr, da ich jetzt das Gefühl habe, ein „Recht“ zu haben, über Wikipedia zu urteilen und Kritik zu üben.“

Isabelle: „Sollte mir allerdings ein Fehler bei der Recherche in einem Wikipediaartikel auffallen, so werde ich in Zukunft darauf hinweisen bzw. eine Änderung vornehmen.“

→ Agenda

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The changing role of the audience – alternating between consumer and prosumer

Summing up – the encyclopedic paradox

My Sources – Further reading ...

Discussion

→ Summing up – encyclopedic paradox(es)

1. Every improvement in accessibility and usability bears the danger of decreased attention on the user's side.
2. General encyclopedias are directed towards 'the general reader', however central lexicographic tasks like selection of content, providing the appropriate depth of information, deciding on methods to ensure objectivity and verification are impossible without defining types of usage and user roles.
3. The quality debate on encyclopedias needs to be complemented by a debate on the amount of transparency and agency an encyclopedia grants and offers their users
4. Information literacy needs to be actively practiced.

Suggestion for the discussion: **Encyclopedias get the audience they deserve versus audiences get the encyclopedia they ask for**

→ Agenda

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Discussion

→ My sources – further reading

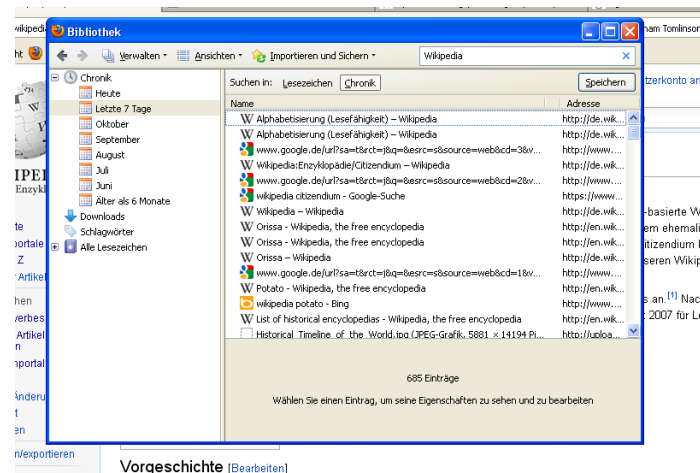
Many thanks to:

My students from my master courses „Online Encyclopedias“ in 2011/2012

The website and publication of the Swiss Research-project »Allgemeinwissen und Gesellschaft«, URL: www.enzyklopaedie.ch, Retrieved: 2012-11-08

Reagle, Joseph Michael: Good Faith Collaboration : The Culture of Wikipedia. Cambridge, Massachusetts: MIT Press, 2011

Numerous consultations of Wikipedia



→ Agenda

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Discussion

→ Discussion and questions

