

Fia:

Fig. 2.

The Organization of Knowledge

History of Information i218 Geoff Nunberg

Feb. 18, 2010

Where We Are



Itinerary: 2/18

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: libraries, museums, encyclopedias, dictionaries



Defining "knowledge"

Defining "knowledge"

individual senses

Oxford English Dictionary:

• The fact of knowing a thing, state, etc., or a person; familiarity gained by experience. 1771 His knowledge of human nature must be limited indeed.

• Acquaintance with a fact; perception, or certain information of, a fact or matter. I know that we're late; She knows all the answers.

• Acquaintance with a branch of learning, a language, or the like; His knowledge of French is excellent.

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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"?

What qualifies something as (collective) knowledge?

- P is collectively significant (to everyone?)
 - "Nunberg's out of paper towels"
 - "Kimberly-Clark closed at \$59.41 yesterday."
 - Paper towel consumption is 50% higher in America than in Europe.
 - Arthur Scott introduced the first paper towel in 1931.



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

Shifting Conceptions of Knowledge, 1500-1800

Renaissance understanding of knowledge

Varieties of knowledge: private/public; scientiae/artes; liberal/ useful, etc.

Burke traces shifts in the "tripod" of the curriculum, library (including the bibliography) and the encyclopedia.

The 15th-Century Curriculum

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

<image>

)

The 15th-Century Curriculum





Scholarship and education exclusively in Latin until the Renaissance

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

The 15th-Century Curriculum



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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"

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*.



corum, T O M V S. Primus. TEMPERAMENTVM BIVS EX Mefue & Galeni Method. 3. Prieta eX Catient Plethod. 5. ene calida Euris In principio terris (loce in feendo : quanquam apparatronundior, non-hifane qued ingerin e de errera qua canuda liabilito, penerandorq. Omne quedy apperiuse opha-refolutiva, anna claus. Siguidem extrahum finas, offa pictum, Cuciequid Infiname rarnifacturi. VIRES BTIV RABENTA Longoris, ex Dioforide. nontro Longa aduerlus angues & uenena, drachmæ pondere in uino bibi = nr & unimur. Pora cum pipere & myrrha, menfes,partus, & omnia uulnerdin o # erat cripie. Eadem efficit,fubdica pelfo. Easem emer, unous peno. Romanda ad cadem poller. Indioper fingulations, fulpring, srigoribus, lieni, consultă laterum dos ribus, posa cum aqua fingulariter antiliatur. Aculeos & fulprilea evrante. Omnes feuamas illica adimit leera punida exeft. ordida expurgat. aua cum iri & melle explet. Gingiuas & denoes extergit. TVVAMENTA CLEMATITIS. Ad grauem febrem efficas eft. Si nidore, fubditis carbonibus, febricitans fuffiatur, febris leuanu Vulnera impolitu fanat. Carcinomatis narium cum Cyprio, & Dracunculi femine, & melle deft Rigoribus medetur, cocta in oleo, aut adipe fuillo, illitacp. EX THEOPHRASTO. Malum terræ perutile ad caput, & ad reliqua pleera, & ad ferpemes, k ad lomnum, & ad alia. Vleeribus in aqua lubactum adhibere præcipiunt : cæteris rafum , in selle, uino, rritum in oleo, vel bibitum acido uino, & morfui infperfum: d'iomnum in uino nigro auftero pertritum . Si uulua prociderit, decosto abbuille tuuabit, Summa product, accoss adminimum, $\gamma_{j,*j,*}$ Artifolochiar radis fiftuis infere, celerice expurga & al diminimum, $\gamma_{j,*j,*}$ Produces, Medic quog fine ex, nhi felicite procurategooillint. F R 1 G O R E E X V S T I S. Herba Artifolochifa vo dio , alcafasoriam guogue unit habet, cum



Opening the world of knowledge





VALERII CORDI SImefufij, Historiæ plantarum, li ber I. qui est de herbis diuersis.

> Prouida quas hominum caufanatura creauit. Pulchrius eftrerum cognitione mbil.

DE RORELLA SIVE SALSIRORA, [qua abalij: Rot Solis dicitur.] CAP. I.



edlum frectant, concaua & thirfuta, ceu rubensiopillouefitta, coig in medio breutori, in ambituero longiosi : ficcifismis ettant tempoributereu ronis minutifimas guttas eta/pergines bientia: fapore acri, nitent & glabra commino fantex inferiore parte foliola, habento, tota minimicochlearis figuram: è medio uerò folio me, coliculus exit dodrante breutor, grazcilis,

nbefens,&fine ramulis, in fummo paruos & pallidos flofculos fuftinens, radicula haber paucas, breues, & capili modo tenuífsimas. Nafettur uliginofis & palufinbusarenis, Habent folia, caules,&flofculi, acerbum, leniter acetofum & modie aremfaporenj Valerius Cordus, *Historia plantarum* 1561 (1544), published posthumously by Conrad Gesner.

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



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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"

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

Within 200 years, something like the mod, system emerges.
Responses to influences that are:

Pragmatic/material
Philosophical/academic
Symbolic/political
(Not independent...)

The birth of "modern" classification



1735 <u>20</u>

"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 classified according to length and number of stamens; further classified into orders etc.





Child program and a final difference of the second se

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Pragmatic Issues: Early Modern "Information Overload"

Pragmatic Forces: Perceptions of "Information Overload"



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)

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ENCYCLOPEDIE, ou DICTIONNAIRE RAISONNÉ DES SCIENCES, DES ARTS ET DES MÉTIERS, PAR UNE SOCIÉTÉ DE GENS DE LETTRES.

Mix en ordre & publié par M. DIDEROT, de l'Académie Royale des Sciences & des Belles-Leures de Prufie; & quant à la PARTE MATRIXATIQUE, par M. D'ALEMBERT, de l'Académie Royale des Sciences de Paris, de celle de Prufie, & de la Société Royale de Londre.



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



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

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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



Strategies for dealing with information overload

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



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 backdoor. ... 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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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 excerpendi*, 1689





The Classificatory Urge: Thematic Organization



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

... 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

Francis Bacon's scheme puts man at the center: Nature (astronomy, meterology, etc.).

Man (anatomy, powers, actions),

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



The Tree of Bacon


The Tree of Bacon





Survivals of Thematic Organization



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



Denis Diderot

First vol. appears in 1751; last in 1772



The Encyclopédie

The Enlightement Plan



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"

Chamber's Cyclopædia,



The Tree of Chambers



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

le Discours - Chaque me ART parate?. vement de l'amé dit Ci ceron, às on expres. MPRIMER sion naturallo dans Cart de tirer or du papier l'em les traits du virage primte des lettres dana la garle, ob tel caracteres mob dans la voix les jettes en fonte, o na rervene de moute TOMIME or l'appelle autre de mangar & Typo Le nom de Pantomine. CHIFFRER graphique 1/ fin signific imitateur & 'est lart d'ispli Jours chores, fut donno CARA ner un chiffre Car ette aprece de Comediens a de dovinor la HIER ai ronoiont toutes cortes de no d'un dissours ces de Theatre sans rien crit en caracter 1/2 PHIO rononcer; mais en imitant tifferens des ca Qui sont et en explignant toutes racteres ordi Portes de sursts avec du mond airest Lours gastes, soit ad SON CHI TRIRE. turels, soit d'ins " l'are de peindre Veracer over laph ne sur le papier e and do Lonero, des ca riveral propres a) ford conneitre sape pois attach 11, su a conserver gue caracters, s somers de com no combinais on de

The Tree of Diderot & **D'Alembert** MAP of the SYSTEM of HUMAN KNOWLEDGE UNDERSTANDING REASON IMAGINATION MEMORY General metaphysics, or Ontology, or Science of being in Narra- SEpic poets Madrigal Sacred (History of the Prophets) general, of Possibility, of Existence, of Duration, etc. Music) Instrume Vocal Ecclesiastical tive Epigram Novel, etc. Religion whereby, through abuse Natual Theology Painting Civil, Ancient Civil history, properly said, S Memories Science) Revealed Theology POETRY Sculpture Superstition & Mod-Complete Histories of God) Science of good and Divination Civil architectury S Black magic Dram- Comedy (evil spirits ern Engravin Celestial history Pneumatology or Science of the Soul { Reasonable Sensible Opera atic of Meteors Unifor-Pastoral, etc C Apprehen- { Science of Ideas of Land and Sea mity of sim Science of Propositions of Judgment nature) of Minerals Induction Parable & Allegory × History Thinking | Reasoning of Plants TOI Demons- 5 Analysis tration 2 Synthesis (Method of Animals of Elements Natual Art of Memory Artificial Prenotion HIS' Remem-bering Lo Memory Printing Alphabet Cipher CArts of Writ-Celestial wonders ing, Printing, Reading, Science of Man Large meteors Devia Wonders on land and sea Gesture { Declamatio tions Monstrous minerals of nature Monstrous plants Characters S Hieroglyphia Monstrous animals Wonders of the elements Science of the Instru-Syntax Art mrnt of Philolog of Discours Work and Goldsmith Pedagogy S Choice of Studies Natural Commun ses of gold ΡΗΥ Gold drawing icating and silver Science of Silversmith Planisher, etc. the Qualities of Mechanics of Poetry Discourse Work and 7 Lapidary 0 5 General science of good and will. Of duties in general. Of eirtue. Of General Diamond cutting Jeweler, etc. 0 Ethics Natura precious 0 stones Parti- S Science of Economic 7 Internal and external laws of cular momence on land and se

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Material Representations of Knowledge



Material Representations of Knowledge

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

Leiden University Library 1610,

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Material Representations of Knowledge



The Birth of the Museum



"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 Wormiamum, 1655



Natural History Kabinet, 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





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

Representations of Knowledge: The Kunstschrank

The Kunstschrank (art cabinet or art shrine)



Representations of Knowledge: The Kunstschrank

The Kunstschank

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



From Cabinets to Museums

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

Public museums in 18th 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



23 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





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, the points that separate or unite them; 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.

Knowledge and the role of the "trésor"

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



That vast aggregate of words and phrases which constitutes the Vocabulary of English-speaking men presents... the aspect of one of those nebulous masses familiar to the astronomer, in which a clear and unmistakable nucleus shades off on all sides, through zones of decreasing brightness, to a dim marginal film that seems to end nowhere, but to lose itself imperceptibly in the surrounding darkness....

James Murray, "General Explanation" to the OED



knowledge



AANCE

The"canonicity" of knowledge.

Canonicity \rightarrow All elements of all subdomains are ordered with regard to "centrality" of membership (i.e., discursive space is metrical, not just topological)

Canonicity defines a "reference book":

words: civet > panther > cat
authors: Michael Crichton > John Updike > Herman Melville
news events: rescued cat > school budget vote > earthquake
tourist attractions (*** >** > *)
.

<u>artists etc.</u>



INGLISH

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The"canonicity" of knowledge.

Canonicity \rightarrow All elements of all subdomains are ordered with regard to "centrality" of membership (i.e., discursive space is metrical, not just topological)

What defines a "reference book":

words: civet > panther > cat authors: Michael Crichton > John Updike > Herman Melville news events: rescued cat > school budget vote > earthquake Also: tourist attractions (travel guides), artists (national collections), etc.

Uncanonized domains: world records: ??Most hot dogs eaten> largest waistline > longest kiss

Slang Dictionary Jonathon Green ZOODY Interdiscont Clinit 2 what sweptings clinit 2 what sweptings are number of the system face like Ship years are a gener

Chambers



Canonicity, cont.

Packer Reference Library



"If the lexicon of a language is indeed something like that of a circle, then... if one moves away from the center in concentric circles, the result should be a faithful image of the total lexicon." Henri Béjoint, *Tradition and Innovation in English Dictionaries*, 1992

i.e., In theory, every large dictionary contains every small dictionary

Pop

- Adult contemporary music
 - Adult oriented pop music
 - Adult standards
 - Afropop
 - Arab pop
 - Austropop
 - Baroque pop
 - Britpop
 - Bastard pop
 - Brazilian pop
 - Bubblegum pop
 - Chinese pop
 - Contemporary Christian
 - Country pop
 - Dance-pop
 - Disco
 - Disco polo
 - Dream pop
 - Electropop/Technopop
 - Eurobeat
 - Euro disco
 - Europop
 - Experimental pop municip
 - French pop
 - Greek Laïkó pop
 - Hindi pop
 - Hong Kong and Cante
 - Hong Kong English pr
 - Hot Adult Contempora

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



The Creation of the Modern Dictionary

The Emergence of the Vernacular

Concerns that the vernacular (i.e., ordinary spoken) language is not an adequate vehicle for philosophy, history, etc.

Besyde Latyne, our langage is imperfite, Quhilk in sum part, is the cause and the wyte [fault], Quhy that Virgillis vers, the ornate bewte In till our toung, may not obseruit be For that bene Latyne wordes, mony ane That in our leid ganand [suitable language], translation has nane.... Gawin Douglas, 1553

Shall English be so poore, and rudely-base As not be able (through mere penury) To tell what French hath said with gallant grace, And most tongues else of less facunditie? John Davies, 1618
Refining the Vernacular



"Inkhorn words" -- learned words coined from Greek or Latin: absurdity, dismiss, celebrate, encylopedia, habitual, ingenious (but also eximious, "excellent"; obstetate, "bear witness"; adnichilate, "reduce to nothing")

Among all other lessons this should first be learned, that wee never affect any straunge ynkehorne termes, but to speake as is commonly received: neither seeking to be over fine or yet living over-carelesse, using our speeche as most men doe, and ordering our wittes as the fewest have done. Thomas Wilson, Arte of Rhetorique, 1553



Refining & Codifying the Language

To the Reader.



Advertisement to Cawdrey's Table Alpabeticall

Cawdrey, 1604:

Some men seek so far for outlandish English, that they forget altogether their mothers language, so that if some of their mothers were alive, they were not able to tell, or understand what they say, and yet these fine English Clearks, will say they speak in their mother tongue; but one might well charge them, for counterfeyting the Kings English. Also, some far journied gentlemen, at their returne home, like as they love to go in forraine apparrell, so they will pouder their talke with over-sea language.... Doth any wise man think, that wit resteth in strange words, or els standeth it not in wholsome matter, and apt declaring of a mans mind? Do we not speak, because we would have other to understand us? or is not the tongue given for this end, that one might know what another meaneth?



Early dictionaries are usually bilingual (e.g., Latin-Cornish), organized thematically.



of hard English words.
extinguilh, put out, oz quench.
extinct, put out.
extirpate, to pull by by the rotes.
extoll, aduance, oz praife highly, to lift bp.
extort, to wing out, to wielt from by bios
lence.
extract, brain out.
extrauagant, wandzing out of ozder.
extraordinarie, befides, og moge then com
mon cultome.
exuberancy, plenty. addition of boundarial
exult, bragge, triumph, or leape for top.
exulcerate, to make fore, or corrupt.
en unional facto en databales activities
F Alia
- minimized one
CAbricate, make, fathion.
fabulous, fained, counterfaited, much tal
ked of.
facete, merry conceited.
fact bebe.
facilitic, cafines.
faction, deution of people into funday parts and opinions.
factious, that maketh deution, contentious.
factor, one that both brifineffe foz another.
facultie, licenie, power, aptnelle,abiittie.
fallacie

First monolingual dictionaries appear in early c. 17. with Robert Cawdrey's Table Alphabeticall of Hard Usual English Words, 1604 (" for the benefit and helpe of Ladies, Gentlewomen, or other unskillful persons")

The Growing Sense of Crisis

John Dryden (1693): "we have yet no prosodia, not so much as a tolerable dictionary, or a grammar, so that our language is in a manner barbarous.

William Warburton (1747): the English language is "destitute of a Test or Standard to apply to, in cases of doubt or difficulty.... For we have neither Grammar nor Dictionary, neither Chart nor Compass, to guide us through this wide sea of Words."

The real concern: How to coordinate public opinion via an impersonal print discourse between people who are anonymous to one another, in the absence of context...

The Growing Sense of Crisis



Continuing desire to fix the language:

"Suffer not our Shakespear, and our Milton, to become two or three centuries hence what Chaucer is at present, the study only of a few poring antiquarians, and in an age or two more the vicitms of bookworms." Thomas Sheridan

Cf Alexander Pope, "Essay on Criticism" Short is the date, alas! of modern rhymes, And 'tis but just to let them live betimes. No longer now that Golden Age appears, When partiarch wits survived a thousand years: Now length of fame (our second life) is lost, And bare threescore is all ev'n that can boast: Our sons their fathers' failing language see, And such as Chaucer is shall Dryden be.

An academy to "ascertain" the language?





1712: Swift writes "A Proposal for Correcting, Improving, and Ascertaining the English Tongue in a Letter to Lord Harley

In order to reform our Language, I conceive, My Lord, that a free judicious Choice should be made of such Persons, as are generally allowed to be best qualified for such a Work, without any regard to Quality, Party, or Profession. These, to a certain Number at least, should assemble at some appointed Time and Place, and fix on Rules by which they design to proceed.

Reactions to Swift's Proposal

I should rejoice with him [Swift] if a way could be found out to fix our language for ever, that like the Spanish cloak, it might always be in fashion. John Oldmixon, on Swift's Proposal...

If an academy should be established for the cultivation of our stile, which I, who can never wish to see dependance multiplied, hope the spirit of English liberty will hinder or destroy... Samuel Johnson, Preface to the *Dictionary*

Contrast the role of the state in French....

Johnson to the Rescue



1746: J. approached by "conger" of booksellers to make dict. for 1500 guineas

Johnson installs himself and his amenusenses in Gough Square to begin work on the Dictionary

1747: The "Plan of an English Dictionary" appears





Johnson to the Rescue

1755 appearance of Johnson's Dictionary of the English Language.



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He adulters ftill: his thoughts lye with a whore. B. Fohnf. ADU'LTERANT. n. f. [adulterans, Lat.] The perfon or thing which adulterates.

To ADU'LTERATE. v. a. [adulterer, Fr. adultero, Lat.]

I. To commit adultery.

But fortune, oh! Adulterates hourly with thine uncle John ; And with her golden hand hath pluckt on France. Shakefp. King John.

2. To corrupt by fome foreign admixture ; to contaminate. Common pot-afhes, bought of them that fell it in fhops, who are not fo foolifhly knavifh, as to *adulterate* them with faltpetre, which is much dearer than pot-afhes. Boyle. Could a man be composed to fuch an advantage of conftitu-L tions

81

The Success of the Dictionary



Talk of war with a Briton, he'll boldly advance, That one English soldier will beat ten of France, Would we alter the boast from the sword to the pen, Our odds are still greater, still greater our men ... First Shakspeare and Milton, like Gods in the fight, Have put their whole drama and epick to flight; In satires, epistles, and odes, would they cope, Their numbers retreat before Dryden and Pope; And Johnson, well-arm'd like a hero of yore, Has beat forty French, and will beat forty more!"

David Garrick

The Success of the Dictionary



The Dictionary being now at length published... the world contemplated with wonder so stupendous a work atchieved by one man, while other countries had thought such undertakings fit only for whole academies. James Boswell, Life of Johnson

The English Dictionary appeared; and, as the weight of truth and reason is irresistible, its authority has nearly fixed the external form of our language; and from its decisions few appeals have yet been made. Robert Nares, 1782

Did the Dictionary really fix the language?

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Alter, T. at. Takes, Let. Growth up put for for ego of neutrino advantation of the factor space lambdres, as cal-ter the second state of the latter space lambdres, and the neutrino state of the state of the states of the state state and the the system interiminating to put latter of the state of the state of the states of the states of the state state of the state of the states of the sta

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The Persistence of Form



The dictionary: the most conservative it a fræftere, can bet hilden, whoft bases det. Sivey, fate of bying afuk, Dift. and conventionalized of literary genres.

> Cf Adam Makkai: "Nothing significantly new has happened in lexicography since the first printed dictionaries after Gutenberg invented the printing of books."

Naturalizing the Dictionary

"The dictionary" like "the Periodic Table": Form answers to structure of represented domain + user needs...





Features of Johnson's Dictionary

Meanings illustrated by citations from English writers: "The book written by books"

He adulters ftill: his thoughts lye with a whore. B. Johnf. ADU'LTERANT. n. f. [adulterans, Lat.] The perion or thing which adulterates. To ADU'LTERATE. v. a. [adulterer, Fr. adultere, Lat.] I. To commit adultery. But fortune, oh ! tud weiv storteldo of Adulterates hourly with thine uncle John; And with her golden hand hath pluckt on France. Shakefp. King John. 2. To corrupt by fome foreign admixture; to contaminate. Common pot-ashes, bought of them that fell it in shops, who are not fo foolifhly knavifh, as to adulterate them with faltpetre, which is much dearer than pot-afhes. Boyle. Could a man be composed to such an advantage of constitued to be united intr The lump, the cold does not caule tions any real union or advaatian, but only hardening the aqueous parts

The Symbolic Function of the Dictionary

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Pg.B-7, 800	<mark>t-Gazette</mark> , February 9, 2003 Su words, TOP OF THE CHARTS; T ADVICE FOR WRITERS	

Defining "The Language"

Why include 'all the words'? Why bother to define simple words? Cf defs in Nathan Bailey's dict., 1721: *cat*: "a creature well known" *black*: "a colour"

DIUCK: a COlour

strawberry: "a well known fruit"

Defining the Compass of the Language

Let any man of correct taste cast his eye on such words as denominable, opionatry, ariolation, assation, clancular, and comminuible, and let him say whether a dictionary which gives thousands of such items, as authorized English words, is a safe standard of writing. Noah Webster on Johnson's Dictionary

Words have been admitted in the language that are not only disreputable in origin, not only offensive in all their associations, not only vulgar in essence, but unfit at all points for suvival. The *New York Herald* (1890) on Funk & Wagnall's inclusion of *chesty* "bold"

"...that most monstrous of non-words." Life Magazine on Webster's Third International's inclusion of irregardless

Symbolism of the dictionary's form

There is in [Johnson's *Dictionary*] a kind of architectural nobleness; it stands there like a great solid square-built edifice; you judge that a true builder did it." (Thos. Carlyle)







The Form of Collections, 1





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



Labrouste, Bibliothèque Ste. Geneviève, 1851

Library of the Escorial, 1543



The Form of Collections, 2: The classical version

Smirke, British Musem Reading Room, 1851







Pelz/Casey Reading Room, LOC, ca 1898

Labrouste, Bibliothèque Nationale 1868



Asplund, Stockholm City Library, 1928

Circumscription of Knowledge: Brutalist Interpretations



D. Perrault, Bibliothèque Nationale de France, 1994

The Americanization of the Dictionary



Noah Webster

You have corrected the dangerous doctrines of European powers, correct now the languages you have imported... The American language will thus be as distinct as the government, free from all the follies of unphilosophical fashion, and resting upon truth as its only regulator. William Thornton, 1793.

From the changes in civil policy, manners, arts of life, and other circumstances attending the settlement of English colonies in America, most of the language of heraldry, hawking, hunting, and especially that of the old feudal and hierarchical establishments of England will become utterly extinct in this country; much of it already forms part of the neglected rubbish of antiquity. Noah Webster, 1806



Reading for Tuesday, Feb 23

Required reading:

- Sun Tzu. nd. "The Use of Spies,"ch. 13 of *The Art of War*, Lionel Giles, trans.
- Hann, John H. "Cloak and Dagger in Apalachicole Province in Early 1686," *Florida Historical Quarterly* 78(1): 74-93.

Additional material:

• Warner, Michael. 2006. "TheDivine Skein: Sun Tzu on Intelligence." Intelligence and National Security 21(4): 483-492.