Circuit Bending, Hardware Hacking, Performance Technology

Digital curation and information retrieval
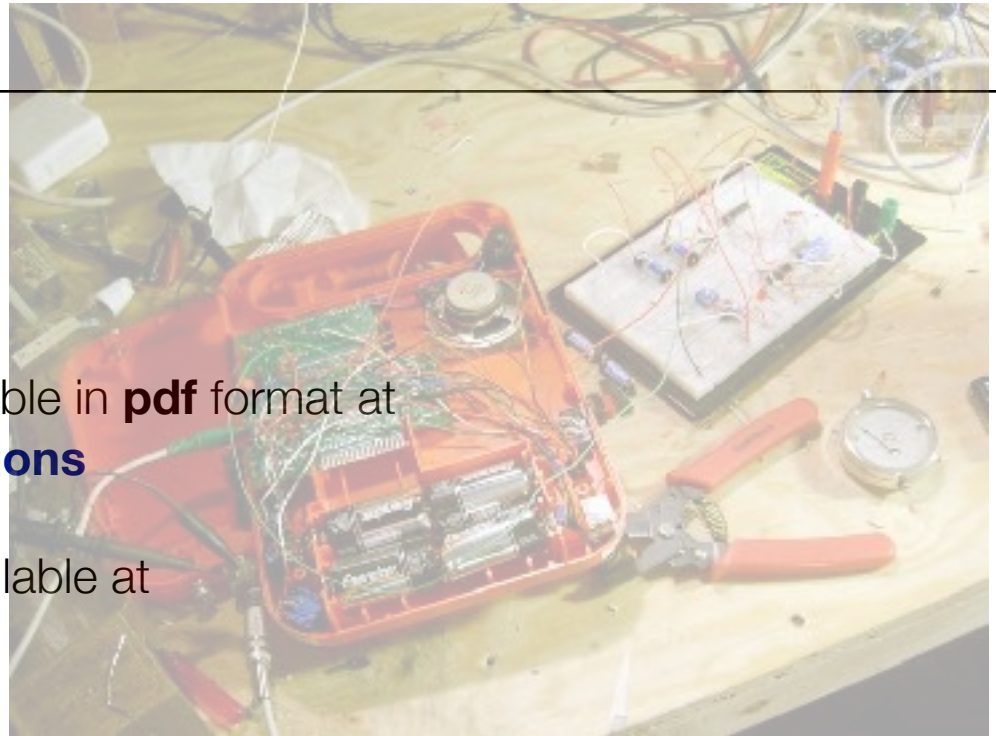
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v0.02

Note

This presentation is available in **pdf** format at
rhoadley.net/presentations

Further information is available at
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The **Dewey** System

500 Natural sciences and mathematics
510 Mathematics
516 Geometry
516.3 Analytic geometries
516.37 Metric differential geometries
516.375 Finsler Geometry

More information:

https://mypages.iit.edu/~smart/halsey/lesson1.htm

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Dewey

Each number stands for a special topic. Every book is given a number and is put on the shelf in number order. Books with the same number are put in alphabetical order by the author's last name. There are three summaries of the DDC. The first summary contains the ten main classes. The first digit in each three-digit number represents the main class. For example, 500 represents natural sciences and mathematics. The second summary contains the hundred divisions. The second digit in each three-digit number indicates the division. For example, 500 is used for general works on the sciences, 510 for mathematics, 520 for astronomy, 530 for physics. The third summary contains the thousand sections. The third digit in each three-digit number indicates the section. Thus, 530 is used for general works on physics, 531 for classical mechanics, 532 for fluid mechanics, 533 for gas mechanic. A decimal point follows the third digit in a class number, after which division by ten continues to the specific degree of classification needed. A subject may appear in more than one discipline. For example, "clothing" has aspects that fall under several disciplines. The psychological influence of clothing belongs in 155.95 as part of the discipline of psychology; customs associated with clothing belong in 391 as part of the discipline of customs; and clothing in the sense of fashion design belongs in 746.92 as part of the discipline of the arts.

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- Digitisation has been very influential, possibly as important as the printing press?

- It has enabled many useful things to have developed: it is now much easier to get hold of source material from books, journals, videos, films, etc.

- When there is so much digital information, how do we find any of it?

Seminar activity: discuss which of these technologies has affected you. Present your conclusions.

But... when there is so much digital information, how do we find any of it? What is there to find?

Jorges Luis Borges, from *Labyrinths* (first two pages....)

Text here: **http://www.arts.ucsb.edu/faculty/reese/classes/artistsbooks/The%20Library%20of%20Babel.pdf**

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Daniel Dennett **Darwin's Dangerous Idea**, Chapter 5
The Library of Mendel, p108…

You might want to read the opening passage of Richard Dawkin's **Unweaving the Rainbow** as well.

The **Sound Archive** of Babel

http://rhoadley.net/software/babel/realbabel.html

Identity

What is it that makes something 'the same'

- plagiarism and copying...
- "beam me up, scotty"

Shazam

An Industrial-Strength Audio Search Algorithm (Shazam)

https://gizmodo.com/5647458/how-shazam-works-to-identify-nearly-every-song-you-throw-at-it

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https://www.google.com/insidesearch/howsearchworks/crawling-indexing.html

3:15

Google algorithms

https://www.youtube.com/watch?v=KyCYyoGusqs

6:20

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SCMIR: A SUPERCOLLIDER MUSIC INFORMATION RETRIEVAL LIBRARY

https://composerprogrammer.com/research/scmir.pdf

The SuperCollider Music Information Retrieval (SCMIR) library is an extension set for the SuperCollider audio programming language that facilitates automatic analysis of audio files. The framework supports common music in-formation retrieval technologies, including for batch processing across sound file collections. The library takes advantage of scsynth's Non-Real-Time mode and machine listening plug-ins for fast feature extraction, as well as SuperCollider language invocation of auxiliary native ex- ternals for some intensive calculations. Features can be normalized/standardized, grouped by detected beat and onset locations as well as arbitrary imposed segmenta-tions. Similarity matrices support multiple distance met- rics, novelty curve calculation through checkerboard kernel, and dynamic time warping best match path discovery. Applications include automatic structure analysis of pieces, inter-piece comparison, and as a front-end to ma- chine learning operations via SC classes or Weka.

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Data mining: the extraction of patterns and 'knowledge' from large amounts of data.

Discuss: is this what 'knowledge' or 'understanding really is? Patterns in data?

Bang Goes the Theory, Big Data episode

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