# Nástroje a možnosti internetu

Organizační metafory webu 20. 10. 2023

navigační problém & nowness



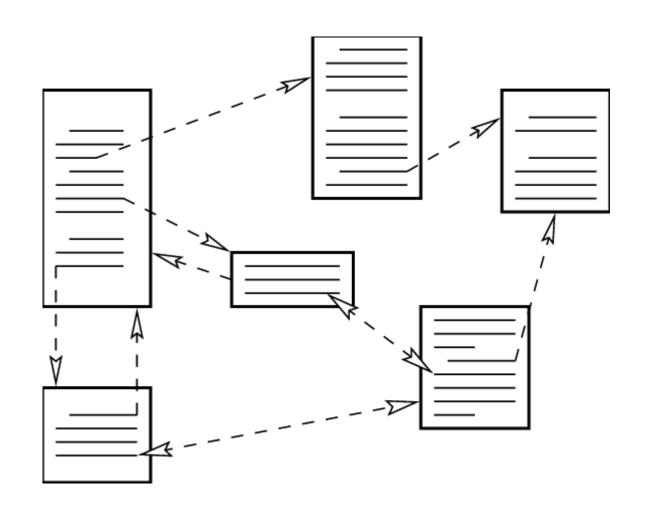








## LATCH



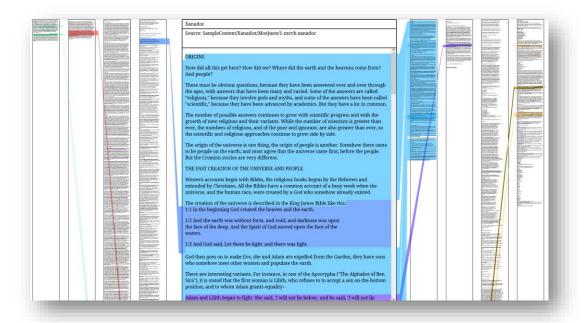
hypertext hypermedia

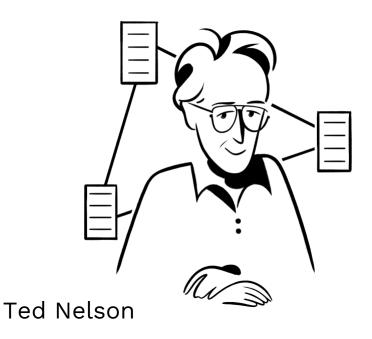
## World's most delayed software released after 54 years of development

However, both of those pale in comparison to "Project Xanadu", which was released without fanfare at an event at California's Chapman University in late April. Development on Xanadu began 54 years ago, in 1960, making it the most delayed software in history.

Xanadu's developer Ted Nelson is the man who coined the term "hypertext" to describe the clickable links that were created for his project: the word lives on most prominently as the "ht" in the internet abbreviation "http".

At its simplest, Xanadu lets users build documents that seamlessly embed the sources which they are linking back to, creating, in Nelson's words, "an entire form of literature where links do not break as versions change; where documents may be closely compared side by side and closely annotated; where it is possible to see the origins of every quotation; and in which there is a valid copyright system - a literary, legal and business arrangement - for frictionless, non-negotiated quotation at any time and in any amount."





## Přístupy k organizaci webu

- Gopher adresářová struktura
- Web propojená hypermédia
- navigation problem
- · harmonie mezi propojováním a řádem

The navigation problem is becoming even more acute with the continuous growth of web sites in terms of their structure, which is becoming more complex, and their size in terms of the vast amount of information they intend to deliver. In contrast, users are not willing to invest time to learn this structure and expect transparent delivery of relevant content without delay. This problem needs to be tackled by orientation and navigation tools which improve user interaction, in analogy to the diverse set of tools ranging from road signs, the compass and map, to global positioning systems (GPS), all of which we use to orient ourselves in physical spaces.

### HYPERTEXT GARDENS

## Hypertext Gardens: Delightful Vistas

Mark Bernstein
Eastgate Systems, Inc.

**Into the Garden** 

Beyond the Navigation Problem
The Limits of Structure

**Gardens and Paths** 

The Virtue of Irregularity
Gates and Signposts

<u>Statuary and Follies: Punctuating the Reader Experience</u>
<u>Planning Pathways</u>

**Seven Lessons from Gardening** 

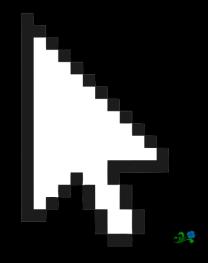
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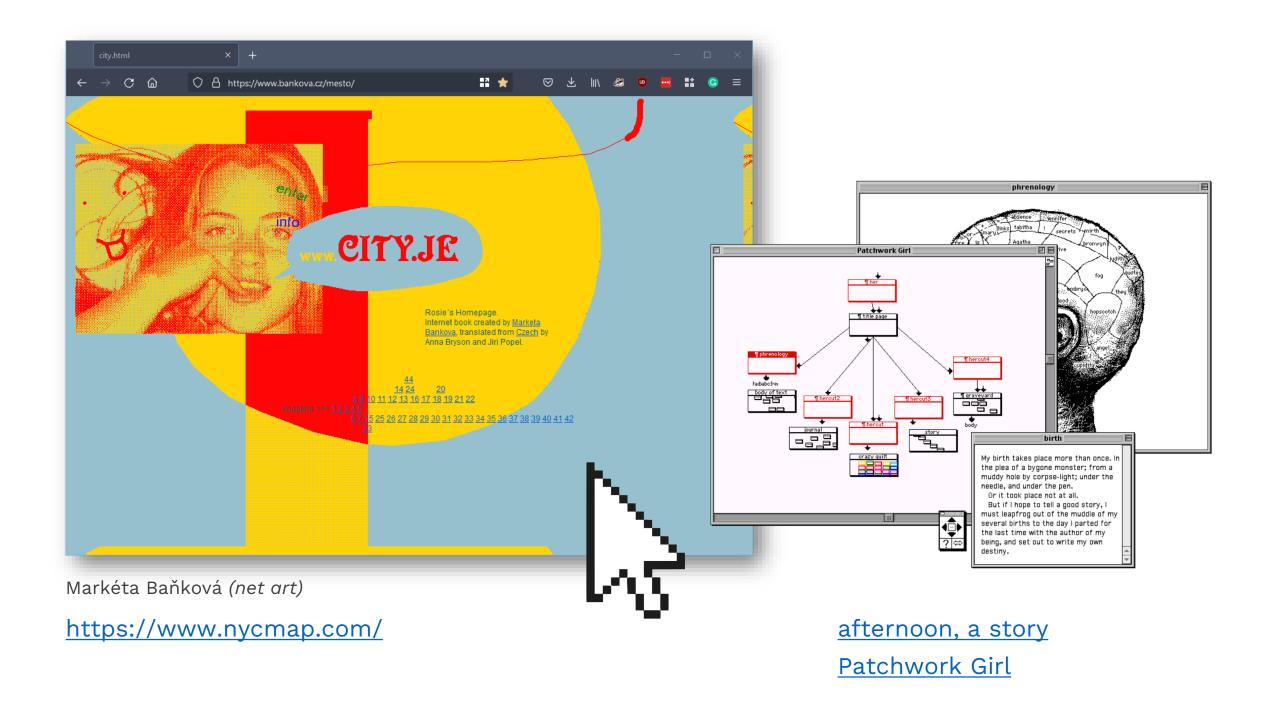
### EASTGATE

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Eastgate Systems, Inc. 134 Main Street, Watertown MA 02472 USA. Email: <u>info@eastgate.com</u>. Phone: (617) 924-9044 (800) 562-1638

http///www.eastgate.com/garden/Enter.html



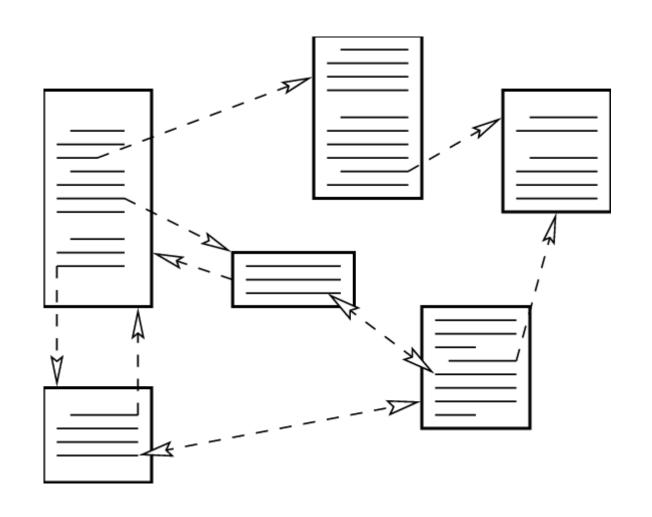




# Hypertext Fiction: The Literary Genre That Was Theorized Before It Was Written

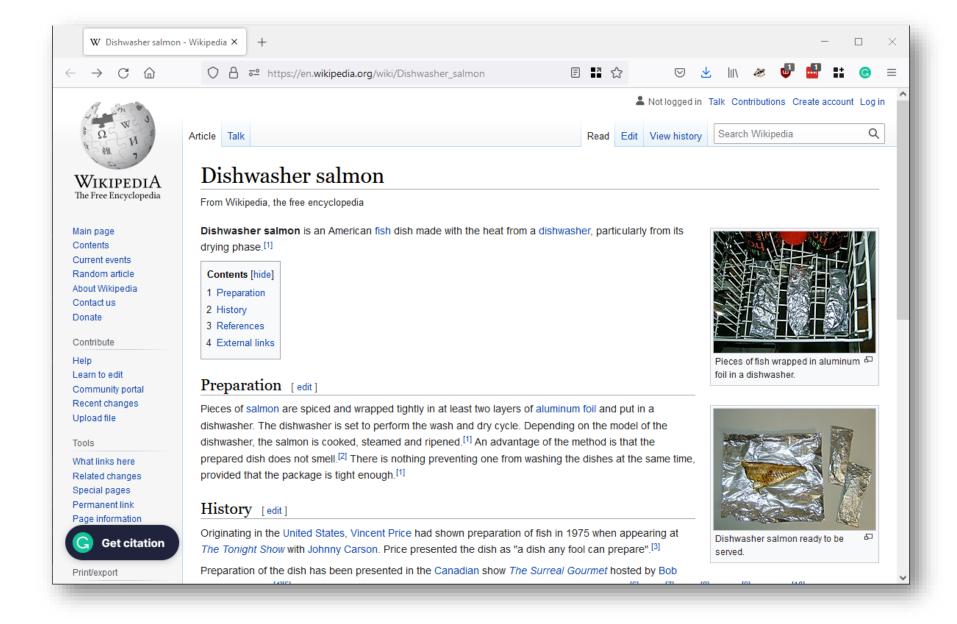
Literary theorist Roland Barthes within his book *S/Z* describes a type of writing weirdly similar to much of the content found on the internet today. The text he describes is one where "the networks are many and interact," where "it has no beginning," and where "we gain access to it by several entrances, none of which can be authoritatively declared to be the main." To any beginning reader, it's nearly obvious that he is describing a text that functions identically to the world wide web. However, there's one small problem: *S/Z* came out over ten years before the first personal computer was even invented.

Barthes wasn't the only one to imagine this kind of writing. Around the 70s and 80s, a new movement called poststructuralism began to gain prominence across various forms of culture, including art, philosophy, and yes, literature. It emphasized skepticism and irony, and in general it sought to push back against the idea that culture can be encapsulated by overarching narratives. Instead, poststructuralist thinkers tried to break apart these narratives, examining their influences and assumptions to learn more about the world as a whole.

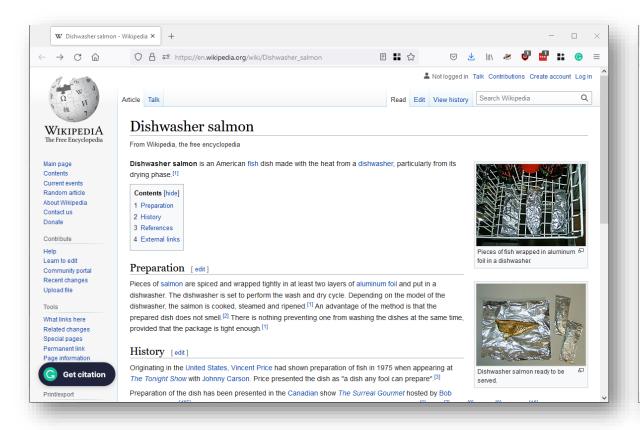


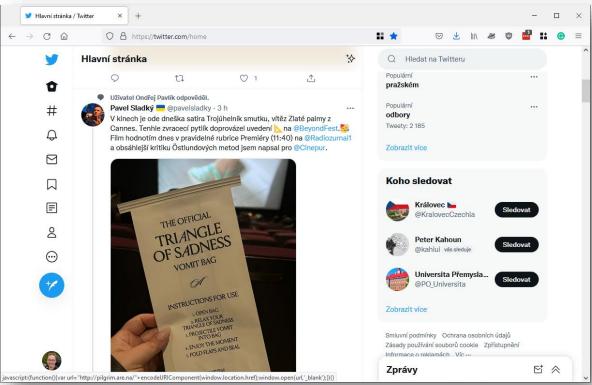
hypertext hypermedia objevování

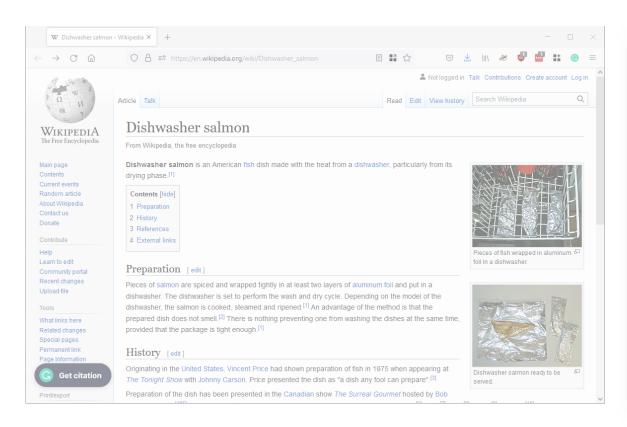
### https://www.wikiverse.io/

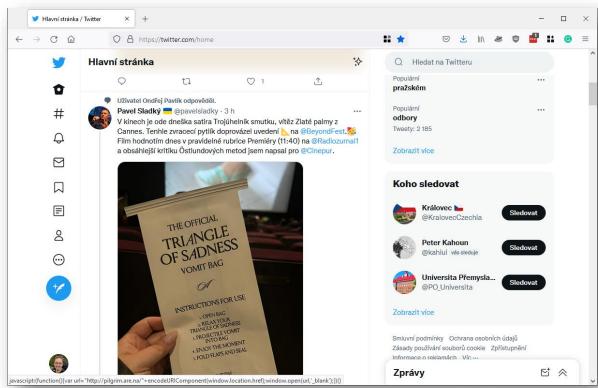


Co je dnes hlavním organizačním hlediskem webu?









### nowness

## Je web v nepořádku?

Hossein Derakhshan: "The web was not envisioned as a form of television when it was invented. But, like it or not, it is rapidly resembling TV: linear, passive, programmed and inward-looking."

- internet jako knihovna -> internet jako televize
- uzavřené ekosystémy -> opravdu chcete odejít z FB?
- chronologie na úkor kurátorství/propojování

## Organizační metafory webu

řeka

táborák

zahrada











# # slack



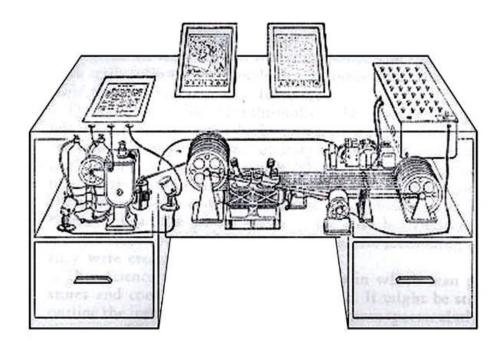




### 11.

web jako druhý mozek

"Consider a future device [...] in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory."



## Organizace webu

- "není třeba si nic pamatovat, všechno je on-line"
- second brain / druhý mozek
- "recollection in the age of forgeting"

- Knowledge Management Systems
- osobní informační management

Záložkujete weby chaoticky nebo si v tom držíte nějaký systém?

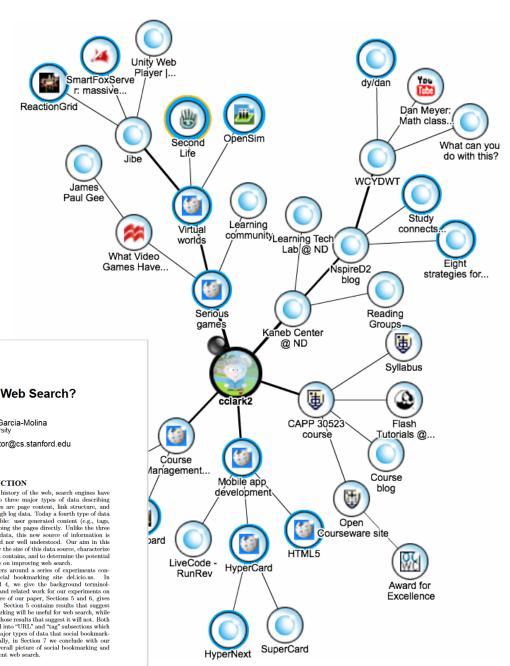


### Záložkování

- social bookmarking
- social tagging
- folksonomie

NASA Webtagger

Del.icio.us (2002)



### Can Social Bookmarking Improve Web Search?

Paul Heymann, Georgia Koutrika, and Hector Garcia-Molina Dept. of Computer Science, Stanford University Stanford, CA, USA heymann@stanford.edu, koutrika@stanford.edu, hector@cs.stanford.edu

### ABSTRACT

Social bookmarking is a recent phenomenon which has the potential to give us a great deal of data about pages on the web. One major question is whether that data can be used to augment systems like web search. To answer this question, over the past year we have gathered what we believe to be the largest dataset from a social bookmarking site yet analyzed by academic researchers. Our dataset represents about forty million bookmarks from the social bookmarking site del.icio.us. We contribute a characterization of posts to del.icio.us: how many bookmarks exist (about 115 million). how fast is it growing, and how active are the URLs being posted about (quite active). We also contribute a characterization of tags used by bookmarkers. We found that certain tags tend to gravitate towards certain domains, and vice versa. We also found that tags occur in over 50 percent of the pages that they annotate, and in only 20 percent of cases do they not occur in the page text, backlink page text, or forward link page text of the pages they annotate. We conclude that social bookmarking can provide search data not currently provided by other sources, though it may currently lack the size and distribution of tags necessary to make a significant impact.

### Categories and Subject Descriptors

H.3.3 [Information Storage and Retrieval]: Information Search and Retrieval; H.3.5 [Information Storage and Retrieval: On-line Information Services; H.1.2 [Models and Principles |: User/Machine Systems-Human infor-

### 1. INTRODUCTION

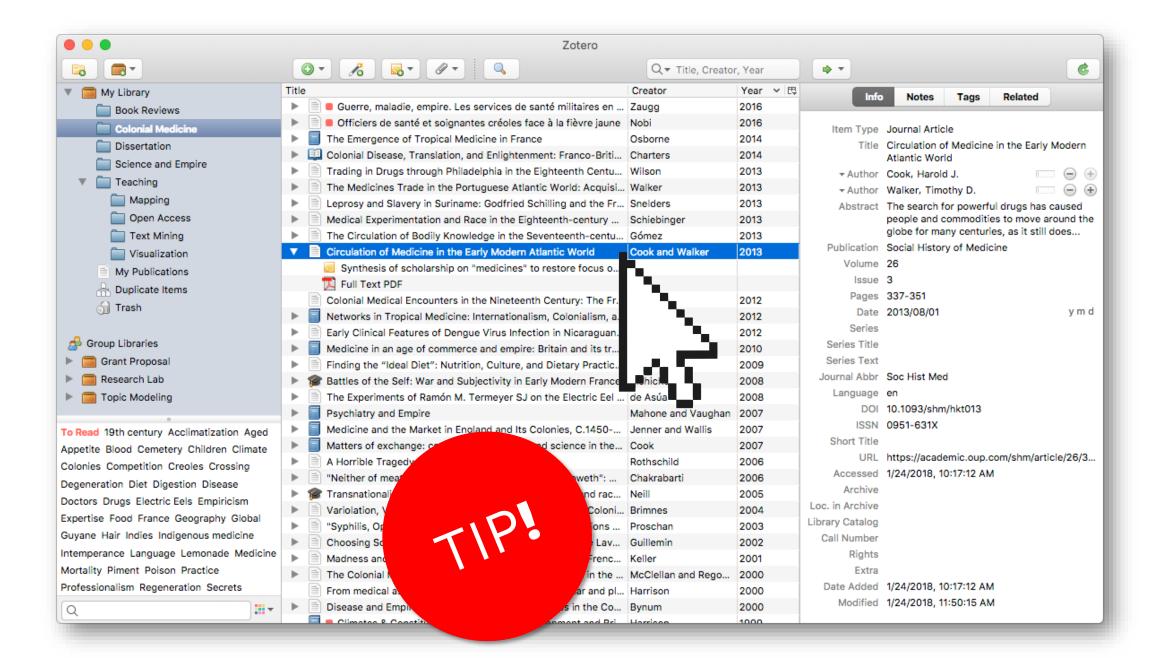
For most of the history of the web, search engines have only had access to three major types of data describing pages. These types are page content, link structure, and query or clickthrough log data. Today a fourth type of data is becoming available: user generated content (e.g., tags, bookmarks) describing the pages directly. Unlike the three previous types of data, this new source of information is neither well studied nor well understood. Our aim in this paper is to quantify the size of this data source, characterize what information it contains, and to determine the potential impact it may have on improving web search.

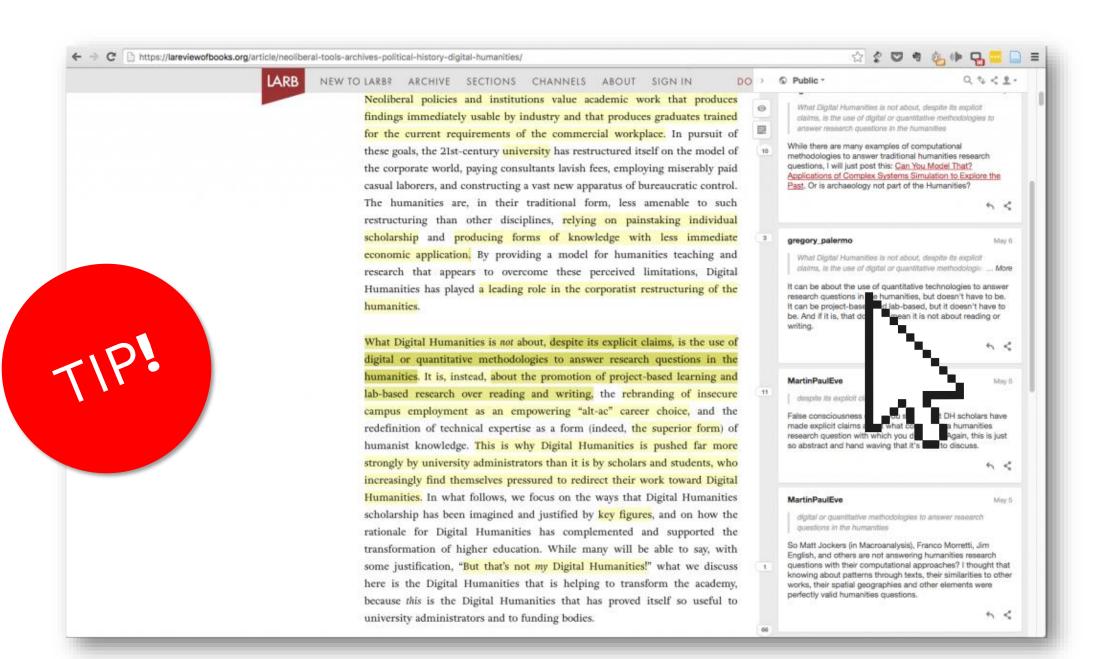
This paper centers around a series of experiments conducted on the social bookmarking site del.icio.us. In Sections 2, 3, and 4, we give the background terminology, methodology and related work for our experiments on del.icio.us. The core of our paper, Sections 5 and 6, gives two sets of results. Section 5 contains results that suggest that social bookmarking will be useful for web search, while Section 6 contains those results that suggest it will not. Both sections are divided into "URL" and "tag" subsections which focus on the two major types of data that social bookmarking provides. Finally, in Section 7 we conclude with our thoughts on the overall picture of social bookmarking and its ability to augment web search.

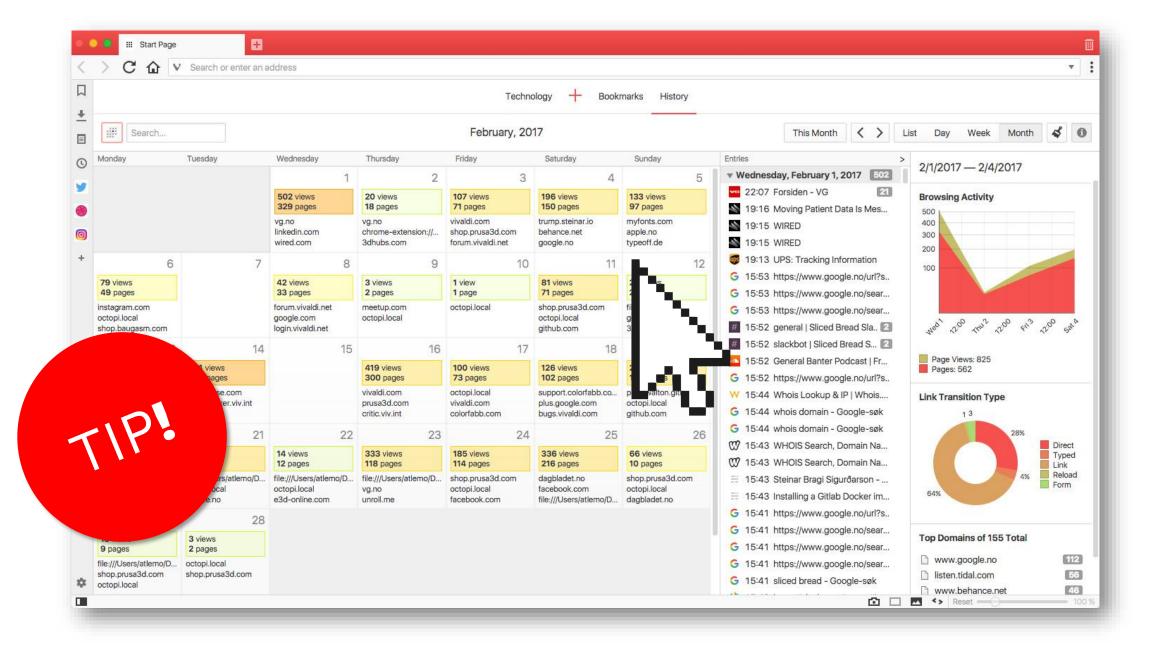
We differentiate social bookmarking from other social sites involving shared bookmarks, like social news sites. The two major social bookmarking sites are del.icio.us and Stumble"And many people become ,infovores", forcefeeding themselves endless books, articles, and courses, in the hope that something will stick. [...] How do I make what I'm consuming right now easily discoverable for my future self?" zdroj

## Příklady služeb

- záložkovací nástroj <u>Memex</u>
- sociální referenční nástroj <u>Hypothes.is</u>
- historie v prohlížeči <u>Vivaldi</u>
- archivace webu s Conifer
- referenční nástroje **Zotero** a **BibSonomy**







## Hypertextové poznámky

- Zettelkasten, wiki, Markdown atp.
- -> jiné přístupy k *rozpomínání* na webu

"The Garden is the web as topology. The web as space. It's the integrative web, the iterative web, the web as an arrangement and rearrangement of things to one another. Things in the Garden don't collapse to a single set of relations or canonical sequence, and that's part of what we mean when we say "the web as topology" or the "web as space". Every walk through the garden creates new paths, new meanings, and when we add things to the garden we add them in a way that allows many future, unpredicted relationships" – Mike Caulfield

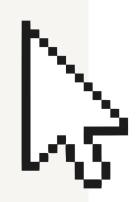
## 100 The Garden

A collection of essays, notes, and half-baked explorations I'm always tending to.

TOPICS | Web Development Illustrated Notes Design Anthropology JavaScript The Web Digital Gardening
SHOW MORE

All Growth Stages 

All Types



★ Squish Meets Structure: Designing with Language Models

EVERGREEN NOTE • 29 DAYS AGO

Computational Notebooks

 Reverse Outlining with Language Models

**BUDDING NOTE • 9 MONTHS AGO** 

◆ The Dark Forest and the Cozy Web

**BUDDING NOTE • 11 MONTHS AGO** 

◆ A Digital Anthropology Reading List  ↓ Language Model Sketchbook, or Why I Hate Chatbots

BUDDING NOTE • 4 MONTHS AGO

EVERGREEN NOTE • 7 MONTHS AGO



★ Talk: The Expanding Dark Forest and Generative AI

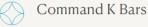
**EVERGREEN NOTE • 5 MONTHS AGO** 

 Teenage Skeuomorphic Desktop Designs

BUDDING NOTE • 9 MONTHS AGO

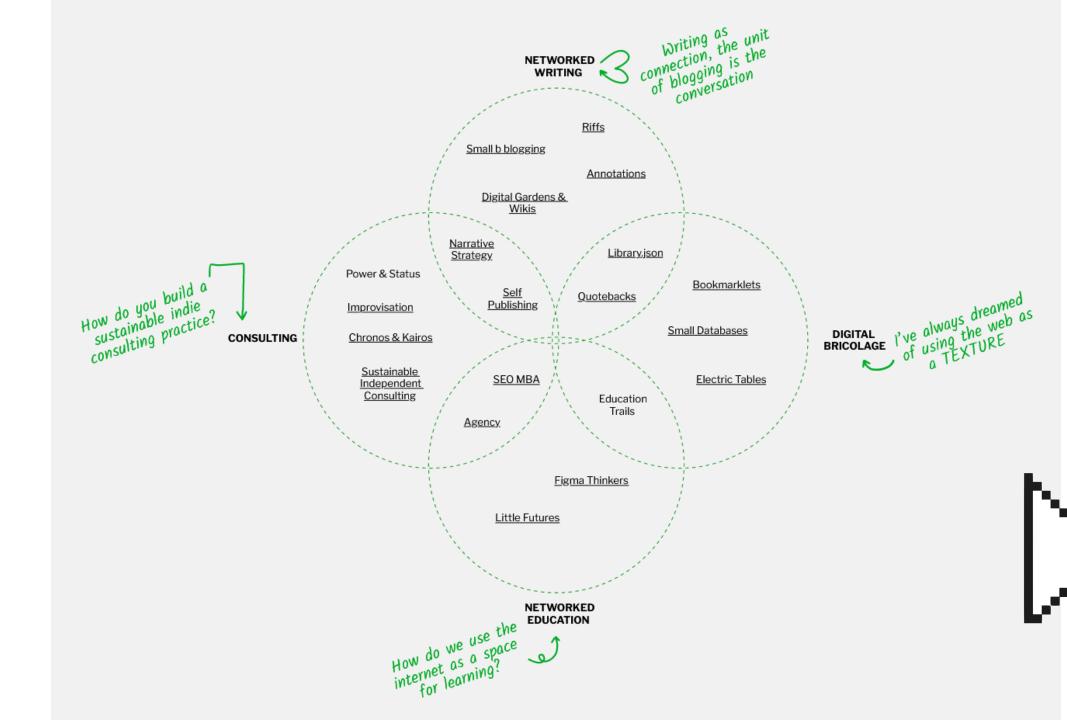
★ Empty Pointers and Constellations of AI

**EVERGREEN NOTE • 10 MONTHS AGO** 



PATTERN • 11 MONTHS AGO







SITE ME CHANGES

† NEWS REDDIT

THIS IS THE WEBSITE of Gwern Branwen. I write about psychology, statistics, and technology. I am best known for work on the darknet markets & Bitcoin, blinded self-experiments, dual n-back & spaced repetition, and anime neural networks.

For information about my site's philosophy, method, traffic statistics, and implementation, see the About page; for information about myself, my use of other websites, and contact information, see the Links page; for information about new pages, see the Changelog; to receive updates, news, & reviews, subscribe = to the newsletter (archives).

#### NEWEST

- August 2020 newsletter
- Sidenotes In Web Design
- July 2020 newsletter
- ♦ GPT-3 & The Scaling Hypothesis
- June 2020 newsletter
- GPT-3 Creative Writing
- "PALM Anime Hands Model/Dataset"
- "Holy Wars are Coordination Problems"
- May 2020 newsletter
- Prototype anime GAN
- Danbooru2019 Figures dataset
- April 2020 newsletter
- ♦ Generating MIDI Music With GPT-2

### **POPULAR**

- ♦ Silk Road 1: Theory & Practice
- DNM Archives (2013-2015)
- DNM Arrests (2011-2015)
- Modafinil
- LSD microdosing self-experiment
- Zeo sleep self-experiments
- Dual N-Back FAQ
- Spaced repetition
- Death Note: L, Anonymity & Entropy
- Commoditize Your Complement
- Google survival analysis
- Banner Ads Considered Harmful
- This Waifu Does Not Exist (details)
- Neural Net/Tank Urban Legend
- Time-lock cryptography
- Archiving URLs
- Terrorism is not about Terror
- Melancholy of Subculture Society



#### NOTABLE

- ♦ Why Correlation ≠ Causation
- When Should I Check The Mail?
- Why Tool AIs Want to Be Agent AIs
- Complexity no Bar to AI
- Making Anime Faces w/Neural Nets
- Death Note script authenticity
- The Existential Risk of Math Errors
- Iodine & Adult IQ meta-analysis
- The Melancholy of Kyon
- In Defense of Wikipedia Inclusionism
- Bitcoin is Worse is Better
- Are Sunk Costs Fallacies?
- Book reviews



#### **STATISTICS**

- ♦ Why Correlation Usually ≠ Causation
- When Does The Mail Come? Decision Analysis
- Predicting Google service closures

### **CRYPTO/BITCOIN**

- Time-lock encryption
- Bitcoin is Worse is Better
- ♦ A Silk Road 1 Guide

- Danbooru2019 Anime Dataset
  - PALM: Hand Detection/Crops
- Figures

 $\mathbf{AI}$ 

### **GARDENS** private classic notes blog posts 0 cozy web B books & groups research twitter papers 6 LEARNING IN PUBLIC

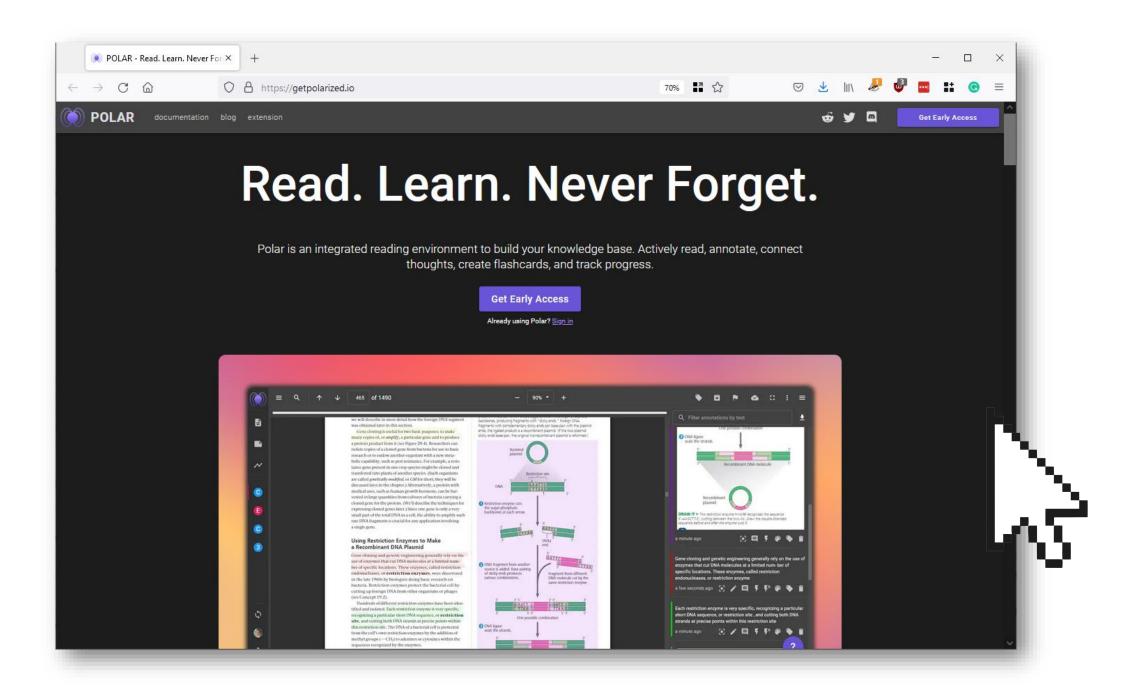
DIGITAL

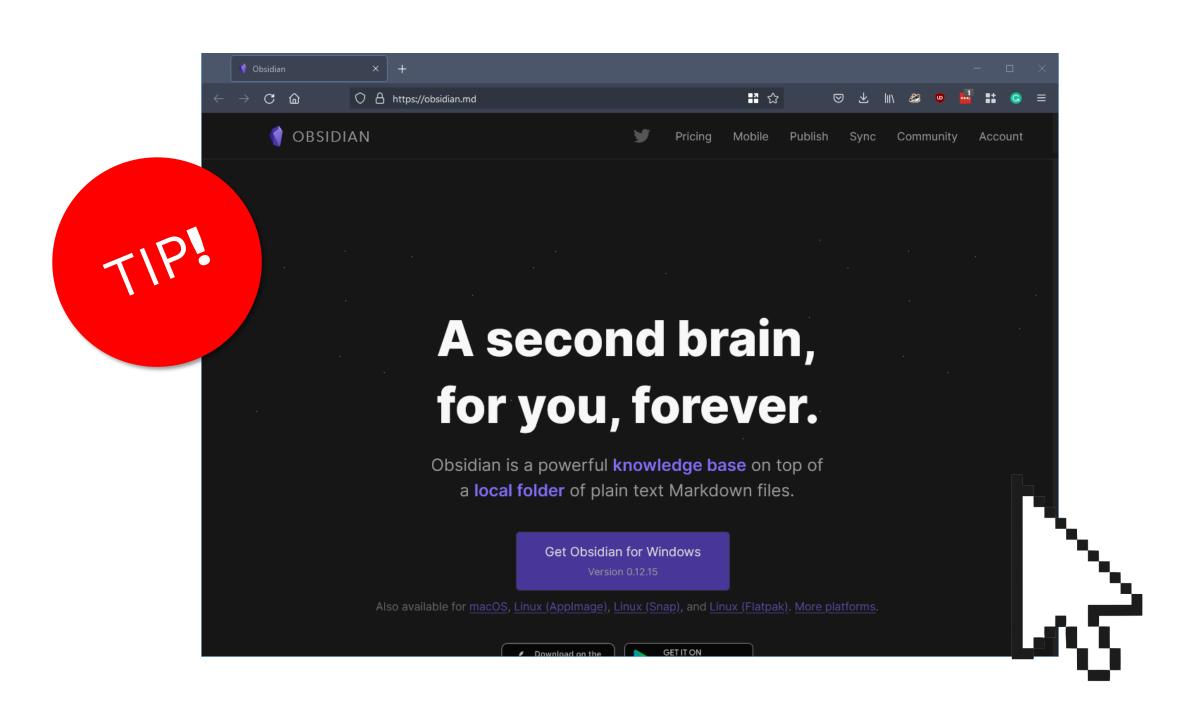
CHAOS STREAMS CULTIVATED PERFORMANCE

## Digitální zahrady

- předchůdci: osobní wiki
- např. <u>Tiddlywiki</u>
- bliki blog a wiki (cca 2003)

- double loop
- <u>Digital Gardeners</u>
- Awesome Knowledge Management







Welcome! You are now browsing a Digital Garden. This is my personal space for Learning In Public. I am a lifelong learner so everything is a Work-In-Progress like me, but I do not let perfectionism get in the way. That means that what you read here is not authoritative or complete, and is not representative of my best work. However, it is representative of my interests and current state of knowledge, and if you have the same interests, then this space is also yours to use as a reference. Feedback and social sharing is welcome...

I have a right to be wrong or incomplete in my Digital Garden, either due to paucity of time or knowledge. You will not hold this, or my readership, against me because I will keep learning, with your help. Everything in the Digital Garden is a living document and I will retract or rephrase things I no longer agree with.

I will report how strongly I hold my beliefs, always reserving the right to be wrong and change my mind.

I will report how much experience I have in the topic, by disclosing how much work I have done so far on it and linking to others who will know more.

I will link to further resources so that readers can discover influencing and contrasting opinions from the original source.

I will not get discouraged if I don't receive feedback. I plant ideas in my Digital Garden for my own use, not solely to get visitors.

I will reward feedback by listening and immediately correcting things I got wrong.

I do not promise to agree with or respond to all feedback.

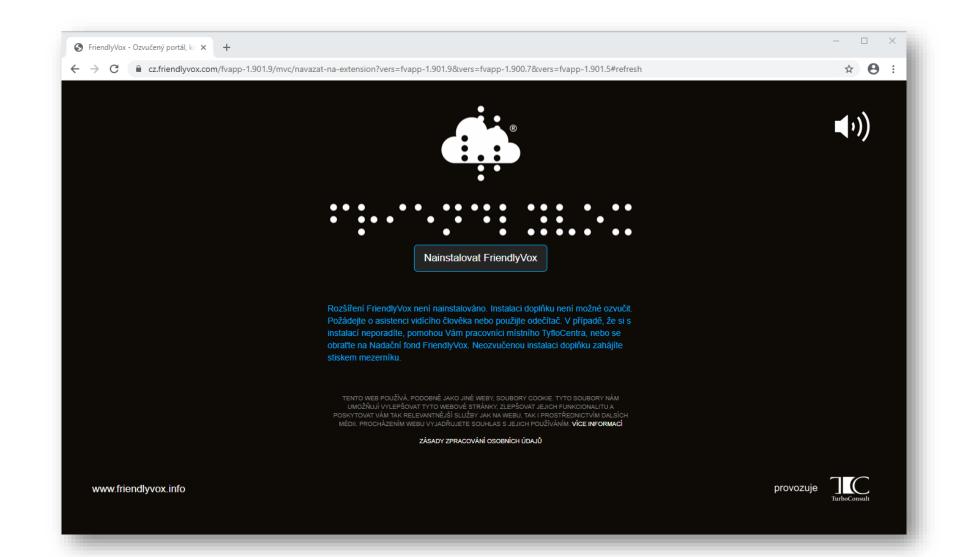
## Doplnění: přístupnost webu

dobrý web je přístupný

Google -> Tab

- mnoho bariér
- musí to řešit i knihovny!
- je to dané i zákonem
- WCAG 2.2

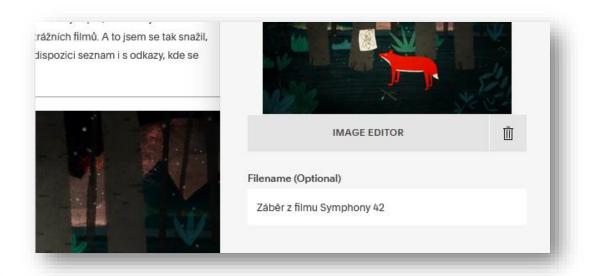
"Access by everyone regardless of disability is an essential aspect."

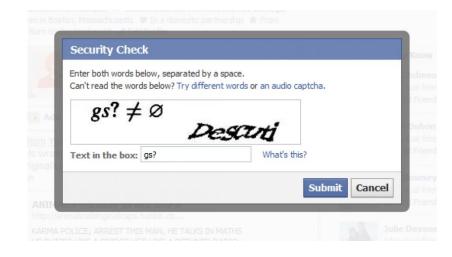


## Textová alternativa

# Alternativní text × Jak byste tento objekt a jeho kontext popsali někomu, kdo je nevidomý? (Doporučujeme napsat 1 až 2 věty.) Obsah obrázku pes, exteriér, tráva, hnědá Popis byl vytvořen automaticky Označit jako dekorativní ①

### <img src="obrazek.jpg" alt="Pejsek">





## Přístupnost webu

- možná automatizace
- ale co třeba grafy?



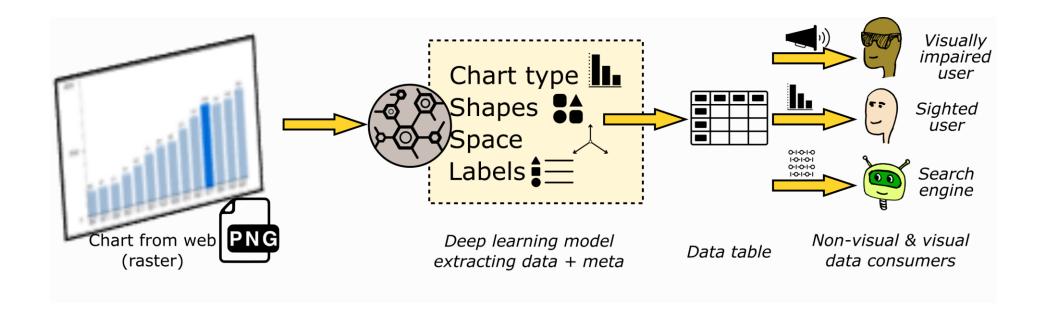
### R-číslo: ukazatel, jakou rychlostí se epidemie šíří

R-číslo udává průměrný počet dalších osob, které přímo nakazí jeden nakažený pacient. Čím vyšší je reprodukční číslo, tím se nemoc rychleji šíří. Pokud je R-číslo menší než jedna, počet nakažených v populaci klesá.

Jak uvádí ministerstvo zdravotnictví, model pro výpočet R-čísla pracuje s počty nově nakažených osob, které prozatím nevykazují příznaky, průběhem jejich onemocnění včetně infekčního období, nástupem příznaků onemocnění, přesunem pacienta do izolace a potvrzením onemocnění laboratorním testem.

Vývoj hodnoty R-čísla v Česku od začátku epidemie





Eurographics Conference on Visualization (EuroVis) 20 (Guest Editors) Volume 38 (2019), Number 3

### Visualizing for the Non-Visual: Enabling the Visually Impaired to Use Visualization

J. Choi, O S. Jung, O D. G. Park, O J. Choo, O and N. Elmqvist

<sup>1</sup>Korea University, Seoul, South Korea, <sup>2</sup>University of Texas at Arlington, TX, USA, <sup>3</sup>University of Maryland, College Park, MD, USA

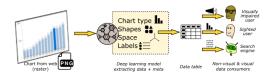


Figure 1: Overview of our pipeline enabling visualizing data for visually impaired users. A barbant stored as a raster itself of from the web. Our pipeline automatically detects the cheart pope, extracts the shapes, recovers the substrate, and parses the lades it is extracted as a data table. This data table can then be used for several purposes (from the top): with a screen reader for a visually impaired person, re-visualized for a sighted person, or as raw data for a robot (search engine).

#### Abstract

The majority of visualizations on the web are still stored as ruster images, making them inaccessible to visually impaired users. We propose a deep-neural-network-based approach that automatically recognizes key elements in a visualization, including a visualization type, graphical elements, labels, legends, and most importantly, the original data conveyed in the visualization we leverage such extracted information to provide the reading of the extracted information to visually impaired people. Based on interviews with visually impaired users, we built a Google Chrome extension designed to work with screen reader software to automatically decode chars on a webpage using our pipeline. We compared the performance of the back-end algorithm with existing methods and evaluated the utility using quilitative feedback from visually impaired users.