CLARIN and Libraries

9 May 2022 - 10 May 2022



DATA-KBR-BE: Data-level access to digitised collections for digital humanities research

Sally Chambers, KBR, Royal Library of Belgium and Ghent Centre for Digital Humanities @schambers3

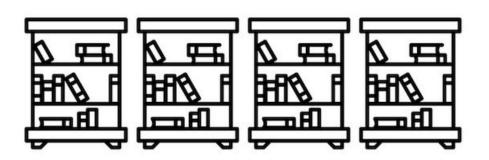


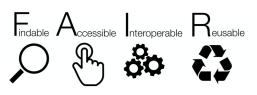






Collections as Data: "Always Already Computational" - Final Report





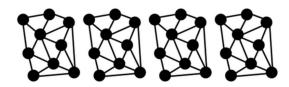
Padilla, Thomas, Allen, Laurie, Frost, Hannah, Potvin, Sarah, Russey Roke, Elizabeth, & Varner, Stewart. (2019, May 22). Final Report --- Always Already Computational: Collections as Data (Version 1). Zenodo.

http://doi.org/10.5281/zenodo.3152935



Always Already Computational: Collections as Data final report and project deliverables: https://osf.io/mx6uk/wiki/home/

Collections as Data: Part to Whole



https://collectionsasdata.github.io/part2whole/

Collections as Data: Part to Whole aims to foster the development of broadly viable models that support implementation *and* use of **collections as data**. This effort is made possible by The Andrew W. Mellon Foundation (**see grant narrative**).

Over a period of three years, *Part to Whole* will fund and programmatically support two cohorts. Cohorts will be comprised of project teams jointly led by librarians and disciplinary scholars. Project teams will develop models that support collections as data implementation and holistic reconceptualization of services and roles that support scholarly use. Collections as data produced by project activity will exhibit high research value, demonstrate the capacity to serve underrepresented communities, represent a diversity of content types, languages, and descriptive practices, and arise from a range of institutional contexts.



Wittmann, R., Neatrour, A., Cummings, R., & Myntti, J. (2019). From Digital Library to Open Datasets. Information Technology and Libraries, 38 (4), 49-61. https://doi.org/10.6017/ital.v38i4.11101

Articles

From Digital Library to Open Datasets: Embracing a "Collections as Data" Framework

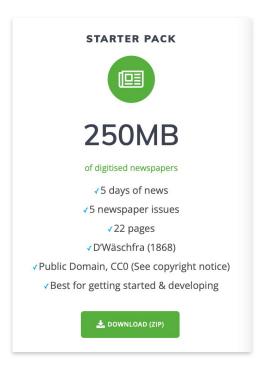
Rachel Wittmann, Anna Neatrour, Rebekah Cummings, and Jeremy Myntti

ABSTRACT

This article discusses the burgeoning "collections as data" movement within the fields of digital libraries and digital humanities. Faculty at the University of Utah's Marriott Library are developing a collections as data strategy by leveraging existing Digital Library and Digital Matters programs. By selecting various digital collections, small- and large-scale approaches to developing open datasets are explored. Five case studies chronicling this strategy are reviewed, along with testing the datasets using various digital humanities methods, such as text mining, topic modeling, and GIS (aeographic information system).

Newspapers as Data







https://data.bnl.lu/data/historical-newspapers/



National Library of Scotland: Data Foundry



Ames, S. (2021) "Transparency, Provenance and Collections as Data: The National Library of Scotland's Data Foundry." LIBER Quarterly 31 (1): 1–13. https://doi.org/10.18352/lq.10371.

https://data.nls.uk

National Library of Scotland data









Open

The National Library of Scotland publishes data openly and in re-useable formats.

Transparent

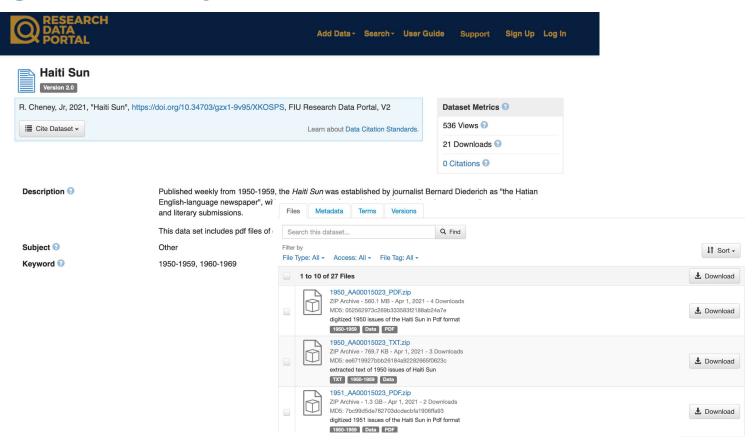
We take the provenance of our data seriously, and are open about how and why it has been produced.

Practical

We present datasets in a variety of file formats to ensure that they are as accessible as possible.

https://data.nls.uk/download/national-library-of-scotlandopen-data-publication-plan.pdf

Digital Library of the Caribbean as Data



https://dataverse.fiu.edu/dataverse/dloc-as-data

CLARIN Resource Families





About V Language Resources V Learn & Exchange V Events News Contact

CLARIN and Ukraine

Q v

Language Resources / Resource Families

Resource families

Resource Families Introduction

The aim of the CLARIN Resource Families initiative is to provide a available language resources in the CLARIN infrastructure for res sciences and human language technologies. The overviews are r the listings are sorted by language.

The listings for each family include the most important metadata size, text sources, time periods, annotations and licences as well concordancers. In addition to the resources found in the CLARIN other existing valuable language resources which have not yet b

Currently, overviews are available for 12 corpora families, 5 families of lexical resources, and 4 tool families. See below. For information about applying for funding for small projects that can help to extend the scope of the initiative, see https://www.clarin.eu/content/clarin-resource-families-project-funding.

Corpora

- Computer-mediated communication corpora
- Corpora of academic texts
- Historical corpora
- L2 learner corpora
- Literary corpora
- Manually annotated corpora
- · Multimodal corpora
- Newspaper corpora
- Parallel corpora
- · Parliamentary corpora
- Reference corpora
- Spoken corpora

Lexical Resources

- Lexica
- Dictionaries
- Conceptual Resources
- Glossaries
- Wordlists

Tools

- Normalization
- Named entity recognition
- Part-of-speech tagging and lemmatization
- Tools for sentiment analysis

https://www.clarin.eu/resource-families

DATA-KBR-BE

Facilitating data-level access to KBR's digitised and born-digital collections for digital humanities research



https://www.kbr.be/en/projects/data-kbr-be/





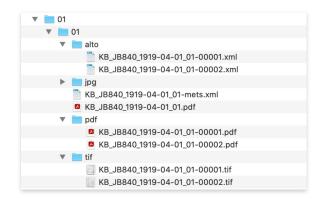
Digitised Historical Newspapers as Data

Collections as Data

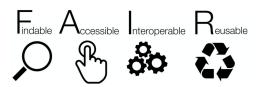
Providing data-level access to digital collections is a primary challenge for undertaking digital humanities research. In the United States, the flagship initiatives, 'Always Already Computational: Collections as Data ²²' and '

Collections as Data: Part to Whole , define 'Collections as Data' as a "conceptual orientation to collections that renders them as ordered information, stored digitally, so that they are inherently amenable to computation". The initiative was established to document, exchange experience and share knowledge to encourage cultural heritage institutions to implement 'collections as data' in their own institutions. DATA-KBR-BE will kick-start the implementation of 'Collections As Data' in Belgium.





https://collectionsasdata.github.io





Providing data-level access to the underlying files of digitised and born-digital cultural heritage resources to facilitate data analysis by means of tools and methods developed in the field of digital humanities

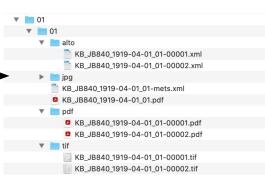
https://www.kbr.be/en/projects/data-kbr-be/

Digitised Historical Newspapers as Data





https://www.kbr.be/en/projects/ digital-research-lab/

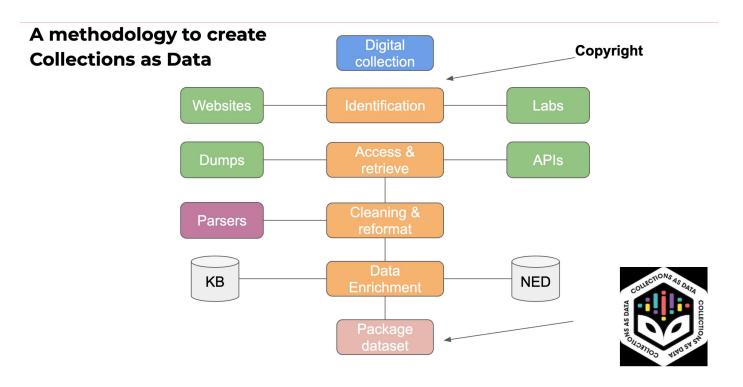


data-kbr-be/



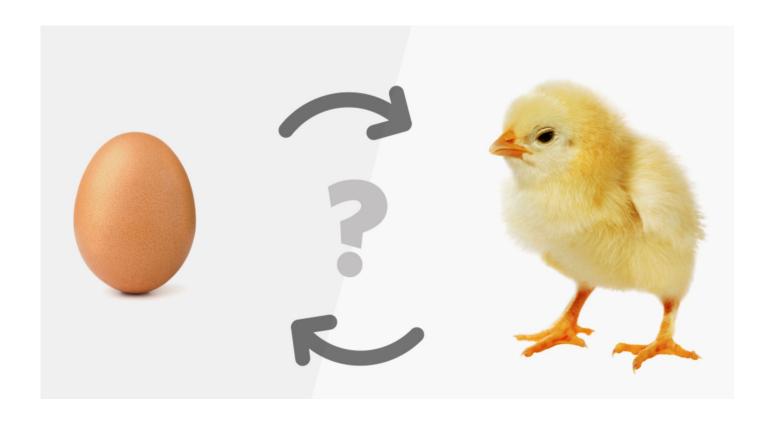


Collections as Data Methodology

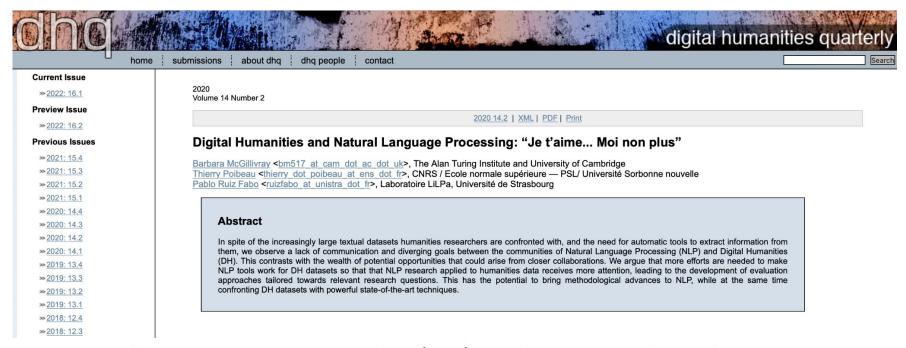


Candela, G., Sáez, M. D., Escobar Esteban, Mp., & Marco-Such, M. (2020). *Reusing digital collections from GLAM institutions*. Journal of Information Science: https://doi.org/10.1177/0165551520950246 & https://rua.ua.es/dspace/handle/10045/109460

Collections or Corpora?

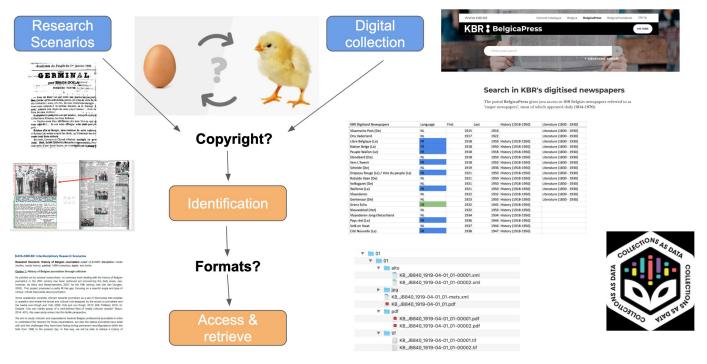


What is a corpus ...?



McGillivray, B., Poibeau, T., & Ruiz Fabo, P. (2020). Digital Humanities and Natural Language Processing: "Je t'aime... Moi non plus". DHQ, Digital Humanities Quarterly. 2020, 14.2 http://www.digitalhumanities.org/dhq/vol/14/2/000454/000454.html

Collections as Data @ KBR



Candela, G., Sáez, M. D., Escobar Esteban, Mp., & Marco-Such, M. (2020). *Reusing digital collections from GLAM institutions*. Journal of Information Science: https://doi.org/10.1177/0165551520950246 & https://trua.ua.es/dspace/handle/10045/109460

Interdisciplinary Research Scenarios

- Collective Action Belgium led by GhentCDH , focuses on social history in the Interbellum and World War Two period and aims to trace the dynamics of contention, strikes, demonstrations and other forms of collective action in Belgium as reported in Belgian newspapers;
- The feuilleton in Belgium, led by <u>ACDC</u> focuses on literary studies in the period 1830–1930 and aims to map the publication of literature in Belgian newspapers across the first century of the Belgian nation state;
- **History of Belgian Journalism**, led by <u>ULB</u> and KBR, focuses on media history from 1886 until now and aims to trace the history of Belgian journalism through the lens of critical discourses about journalism as in Belgian newspapers.





From collections to corpora

Year	Date	Title	Cause	Number of strikers	Description
1893	12–18 April	Belgian general strike of 1893	Franchise reform	200,000	Successfully led to the establishment of universal male suffrage with plural votes. ^[9] Thirteen strikers were killed and socialist leaders were briefly arrested. ^[9]
1902	10–20 April	Belgian general strike of 1902	Franchise reform and an end to plural vote	350,000	Failed to achieve the abolition of the plural vote as Catholics and Liberals united to oppose constitutional reform. The Belgian Workers' Party had been reluctant to support the strike and it soon descended into violence in Brussels and parts of Wallonia. 12 workers and one policeman were killed. Union membership dropped sharply in its aftermath, [9]
1913	14–24 April	Belgian general strike of 1913	Franchise reform	400,000	Carefully planned to avoid the same problems as 1902, the strike gained the promise of electoral reform but its proposals were postponed by the outbreak of World War I and the subsequent German occupation. The policy was finally adopted in 1919. ^[386]
1932	7 July–9 September	Belgian general strike of 1932	Pay, working hours and unemployment insurance		Began after a spontaneous strike by coal miners in the Borinage and involved Communist agitation following a severe decrease in living standards and real wages during the Great Depression. Two people were killed during the strike. ^[7]
1936	2 June-2 July	Belgian general strike of 1936	Working hours, paid holiday, union reforms	500,000	Broke out at the port of Antwerp and led to the creation of a National Labour Conference. [7] Although influenced by the French Popular Front and held against the backdrop of the Spanish Civil War, it was also supported by Catholic trade unions. [8]
1950	24 July-3 August	Belgian general strike of 1950	"Royal Question"	700,000	Chiefly active in Wallonia, the strike contributed to the abdication of King Leopold III on 1 August 1950. At least four strikers were killed.

https://en.wikipedia.org/wiki/General strikes in Belgium



Which newspapers are digitised?

	Title	Journ al No.	Digitally availability	1886	1893	1902	1913	1932	1936	1950	Extraction
1	Vooruit: socialistisch dagblad	JB 809	1884-1889; 1901-1902; 1911-1950	Yes	No	Yes	Yes	Yes	Yes	Yes	1913, 1950
2	Het Volk : antisocialistisch dagblad	JB 785	1911-1916; 18 apr. 1918-31 maart 1927; 1931-1950.	No	No	No	Yes	Yes	Yes	Yes	1913, 1950
3	<u>Vaderland</u>	JB 310	16 maart 1910-30 dec. 1913.	No	No	No	Yes	No	No	No	1913, 1950
4	Le Peuple : organe quotidien de la démocratie socialiste	JB837	1885-1907; 1911-1914; 1918-1940; 1944-1950.	Yes	1913, 1950						
5	<u>Le Vingtième Siècle</u>	JB729	6 juin 1895-13 mai 1940	Yes	Yes	Yes	Yes	Yes	Yes	No	1913, 1950
6	La Meuse : journal de Liège et de la Province	JB638	1856; 1858-1882; 1884-5 août 1914; 28 nov. 1918-11 mai 1940; 9 sept. 1944-1950.	No	Yes	Yes	Yes	Yes	Yes	Yes	1913, 1950

Importance of historical context

"The newspaper was founded in Ghent in 1884 with the support of the socialist cooperative Vooruit. When the Parti ouvrier belge - Belgische Werkliedenpartij ("Belgian Workers Party", POB-BWP, 1885) was founded, it was recognised as its official organ for the Flemish part of the country. The Ghent socialist leader Edward Anseele was editor-in-chief, but he also worked as a typographer. Vooruit was published under German censorship during the two world wars. Having reached its peak in the 1950s, it began a slow decline. It was succeeded by the daily De Morgen in 1978."

Vooruit: socialistisch dagblad

DATA-KBR-BE Data Extraction 1

KBR Where time is treasured

DATA-KBR-BE: Data Extraction 1 - June 2021

The table below outlines the first 'Data Extraction' for DATA-KBR-BE. This initial extraction will be used to support all three research scenarios: a) Feuilleton in Belgium; b) History of Belgiam Journalism and c) Collective Action Belgium which includes training models for image clustering (a.k.a. The 'labelling exercise').

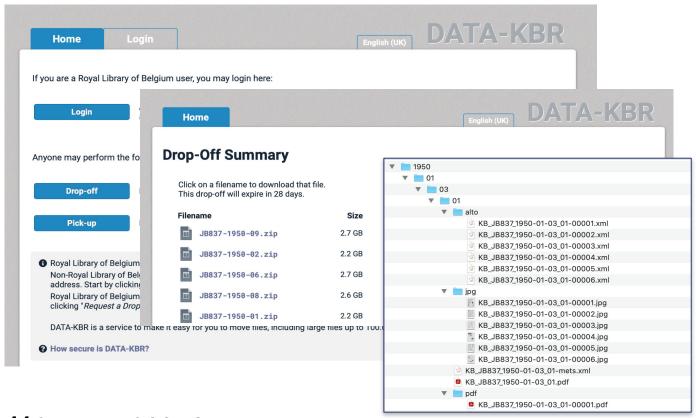
For the KBR, the 'cut-off date' for freely accessible content (see: <u>KBR's Copyright Page</u>) is 1918. Most of the selected newspapers are prior to 1918. However, for the 'labelling exercise' we use 6 newspapers from 1950 as this is the latest date for which a wide range of newspapers are available containing images which are needed to train the image clustering models. Additionally, for the History of Belgium Journalism research scenario the full run of <u>Le Vingtième Siècle</u> is used which extends to 1940.

	Title	Journal No.	Research Scenario	Extraction
1	La Meuse : journal de Liège et de la Province	JB638	Feuilleton in Belgium	1885
			Collective Action Belgium	1913, 1950
2	<u>La Gazette de Charleroi</u>	JB527	Feuilleton in Belgium	1885
3	ĽÉcho du Parlement	JB92	Feuilleton in Belgium	1885
4	Het Handelsblad (van Antwerpen)	JB549	Feuilleton in Belgium	1885

- 3 Research Scenarios
- 12 Newspaper Titles
- 3 years: 1885, 1913, 1950
- 18 'drop offs'

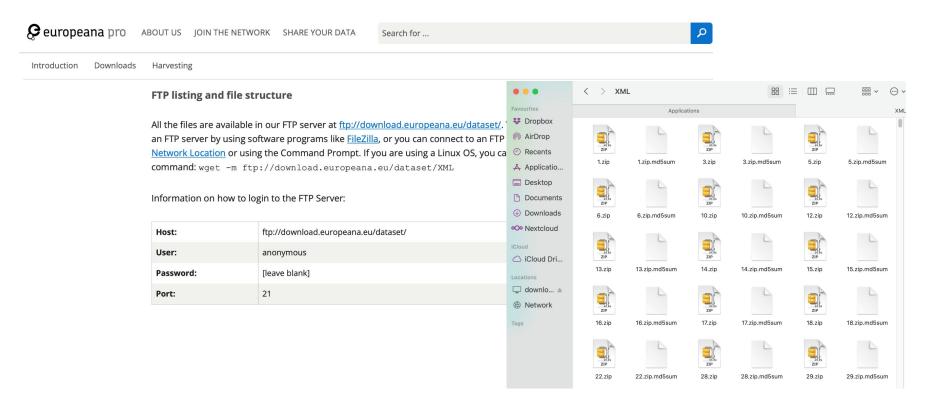
<u>list of titles for extraction</u>

Methods for Data Sharing: KBR Send Data



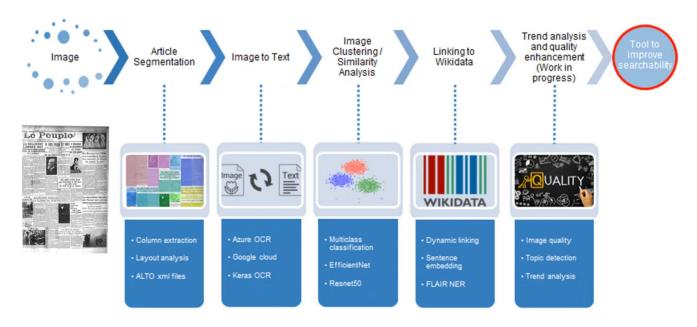
https://datasend.kbr.be

Methods for Data Sharing



https://pro.europeana.eu/page/harvesting-and-downloads#downloads

Interdisciplinary collaboration with data scientists



Dilawar Ali, Kenzo Milleville, Alec Van de Broeck & Steven Verstockt, IDLab, UGent





NewspAlper Demonstrator

Dilawar Ali, Kenzo Milleville, Alec Van de Broeck & Steven Verstockt, IDLab, UGent



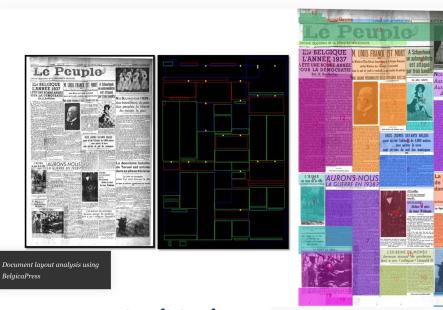


NewspAlper Demonstrator: Document Layout Analysis & Article Separation

Page Viewer

Click on an article/image to show the recognized text and related articles/images









NewspAlper Demonstrator: Named Entity Recognition & Linking

Page Viewer

Click on an article/image to show the recognized text and related articles/images

Le Peuple: Thursday, 24 February 1938, page 1



Most similar articles

Samedi matin, devant de nombreux délégués réunis à la Maison du Peuple de 'Bruxelles le camarade D.

TROISIÈME JOURNÉE DE DISCUSSION sur la Politique étrangère au Conseil Général du P.O.B. CORNEILLE ME

DEVANT LE PARLEMENT Dans un discours vivement acclamé Paul-He Spaak souligne les mérites de la po

Article text:

Au Conseil Général du P.O.B. Buset
Paul-Henri Spaak ont introduit un large
débat sur LA POLITIQUE EXTÉRIEURE
DE LA BEL GIQUE Les délégués ont
salué la mémoire d'Edouard Anseele
LA DISCUSSION SERA POURSUIVIE
MERCREDI PROCHAIN





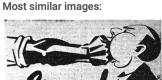


NewspAlper Demonstrator - Image similarity

Page Viewer

Click on an article/image to show the recognized text and related articles/images Le Peuple: Tuesday, 1 March 1938, page 1









Most similar images:











Computer Vision and Machine Learning Approaches to Improve Searchability and Building Corpora using Historical Newspapers

DILAWAR ALI, KENZO MILLEVILLE, STEVEN VERSTOCKT, IDLab, Ghent University-imec, Ghent, Belgium

SALLY CHAMBERS, JULIE M. BIRKHOLZ, Ghent Centre for Digital Humanities, Ghent University, Ghent, Belgium and KBR- the Royal Library of Belgium, Belgium

Historical newspaper collections provide a wealth of information about opportunities for not only broadening the access of these collections in engineering techniques to enhance the extraction of information such These research domains are, however, dependent on the quality of layout analysis (e.g. for automatic article segmentation and image depending on the techniques used by cultural heritage institutions constantly re-digitize collections in line with the improvements of the only in computer engineering but also in the (digital) humanities, to vision and machine learning approaches to these challenges.

3.3 General Workflow

In this research project, we focused on metadata enrichment approaches using traditional computer vision and machine learning approaches. The general workflow is shown in figure 1.

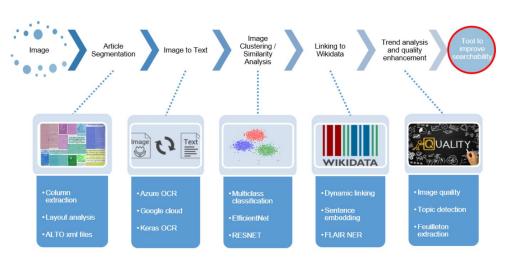
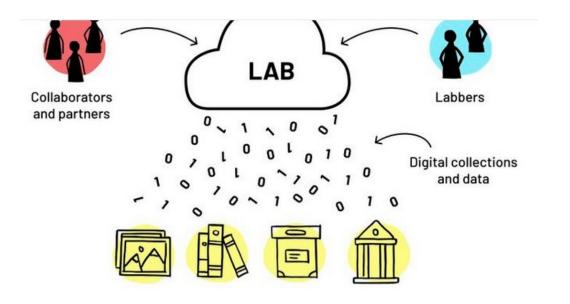


Fig. 1. General workflow: Pipeline for developing a tool to improve searchability

International GLAM Labs Community





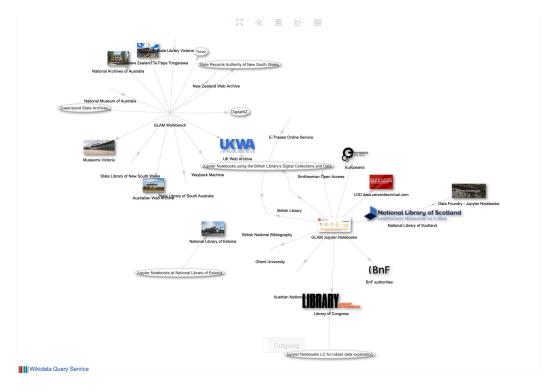
Chapter: Rethinking Collections as Data:

https://glamlabs.io/books/

https://glamlabs.pubpub.org/pub/urhm68yr/release/1

Computational access to digital collections

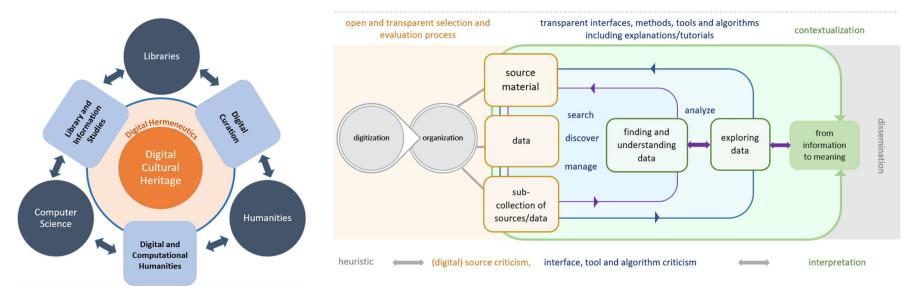
International GLAM Labs Community



International GLAM Labs Community: Computational Access to Digital Collections https://glamlabs.io/computational-access-to-digital-collections/

Corpus Building: an interdisciplinary digital hermeneutics workflow





Oberbichler, S. et al. (2021) Integrated interdisciplinary workflows for research on historical newspapers: Perspectives from humanities scholars, computer scientists, and librarians. JASIST, August 2021. https://doi.org/10.1002/asi.24565





Historical Data Analysis using Jupyter Notebooks

NLP Notebooks for Newspaper Collections

A collection of notebooks for Natural Language Processing

The following notebooks are aimed particularly at digital humanities scholars who use newspapers as a source. The focus lies on (topic-specific) collection building, a field that is becoming increasingly interesting with better article separation. Very specific research problems are addressed, such as building up collections with ambiguous keywords or working with certain genres. In order to best meet the needs of digital humanities scholars, NLP methods are adapted in new ways, the output is human-readable and the processed newspaper articles can be exported in the form of the original file. In addition, the notebooks allow the users to control the single steps and to choose what is best for their collection. While the NewsEye demonstrator offers the possibility to create datasets quickly and effectively, these notebooks offer possibilities to work on these collections according to specific questions.

- 1. Text classification for topic-specific newspaper collections
- 2. Group similar newspaper articles
- 3. Discover a newspaper collection with diachronic Ngram clouds
- 4. Discourse in Spanish flu coverage
- 5. Topic Modeling and Uses of the Term Telegraph in the Context of Journalism

Oberbichler, S. (2020) NLP Notebooks for Newspaper Collections. https://github.com/NewsEye/NLP-Notebooks-Newspaper-Collections DIGITAL METHODS FOR CORPUS BUILDING:
TRACING MIGRATION DISCOURSES
IN HISTORICAL NEWSPAPERS

Sorrch Oberbichler

universität
innsbruck
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Digital Humanities Hangout: Dr Sarah Oberbichle

Oberbichler, S. (2021) Digital Methods for Corpus Building: Tracing Migration Discourses in Historical Newspapers, DH Hangout (Lancaster, Ghent, Lisbon), June 2021: https://www.youtube.com/watch?v=5w8X0gXP67M







Europeana Research Community Café - Collections as Data



Europeana Research Community Café - Collections as Data

Join the kick-off of the Europeana Research Community Cafés, where guest speaker Thomas Padilla (Center for Research Libraries, Chicago, USA) will encourage attendees to think about collections as data.





https://pro.europeana.eu/event/europeana-research-community-cafe-collections-as-dat



2

Thomas Padilla's presentation

https://docs.google.com/presentation/d/1XM71isRXEjKesaWPZjSrZiKytq2XC2QJ-gqKWZF

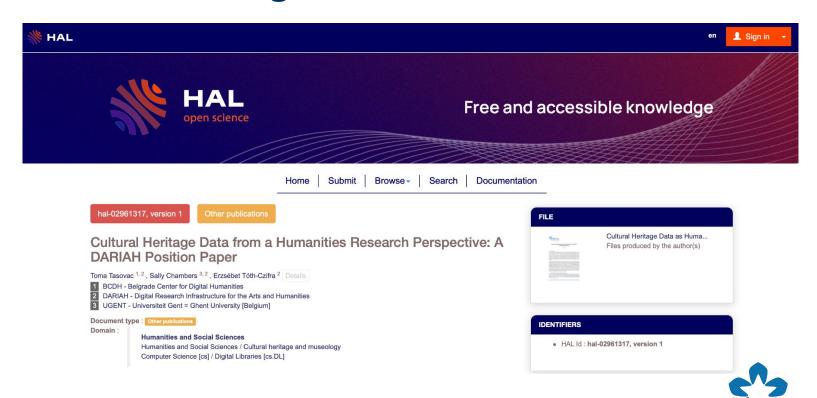
A European data space for cultural heritage





https://digital-strategy.ec.europa.eu/en/news/commission-proposes-common-european-data-space-cultural-heritage

Cultural Heritage Data is Humanities Research Data



DARIAH-EU

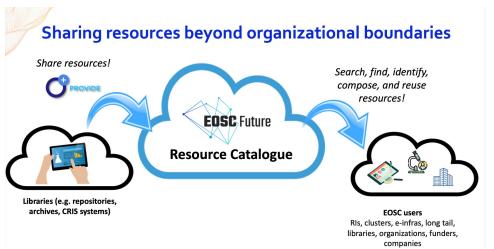
Digital Research Infrastructure for the Arts and Humanities

Tasovac, T., Chambers, S. and Tóth-Czifra, E. (2020) Cultural Heritage Data from a Humanities Research Perspective: A DARIAH Position Paper.

https://hal.archives-ouvertes.fr/hal-02961317

European Open Science Cloud (EOSC) and Libraries





Libraries as EOSC providers

How and why libraries should become EOSC providers – Inge Van Nieuwerburgh, University of Gent Current and upcoming functionalities for libraries – Paolo Manghi, OpenAIRE A community presentation from Susanne Blumesberger, University of Vienna Library & Lisa Hönegger, AUSSDA Libraries as intermediaries – Sara Garavelli

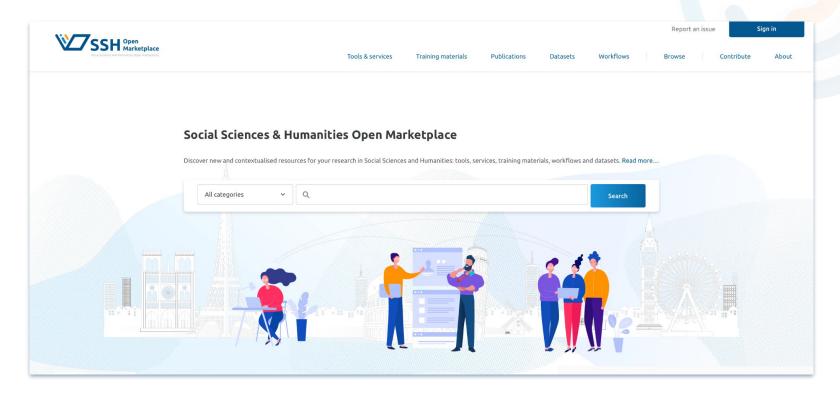
<u>Presentation</u> – <u>recording</u>

Presentation:

https://eoscfuture.eu/wp-content/uploads/2022/04/ProviderDays_Libraries_Presentation2Inge_clean.pdf

Recording: https://www.youtube.com/watch?v="vxHJNU78Pw

Social Sciences and Humanities Open Marketplace



https://marketplace.sshopencloud.eu





SSHOC Open Marketplace: from tools to workflows

Home / Workflows / Create a dictionary in TEI



Create a dictionary in TEI

This scenario sets out the best practices for creating a born-digital dictionary, especially with the TEI (Text Encoding Initiative). However, building a standardized lexicographical dataset is not only a data format problem, it is also an intellectual and technical process where one has to choose how to model their data, and with which tools operate in order to create an easy-to-use and sustainable resource.

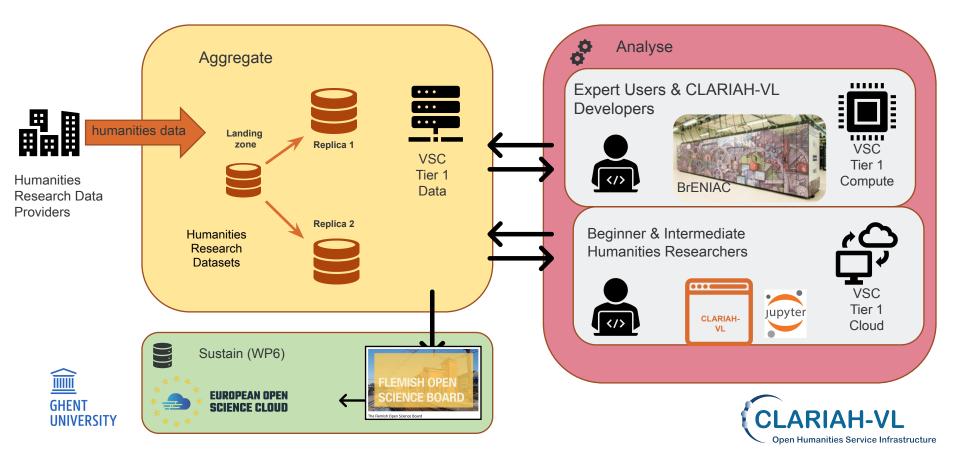


Workflow steps (5) 1 Build the model of the dictionary Expand 2 Create a corpus of useful resources for the dictionary. Expand 3 Setting up the editing environment Expand 4 Setting up the publishing environment Expand 5 Provide for long-term availability Expand

https://marketplace.sshopencloud.eu/workflow/4qFarh



Data-driven research in the arts and humanities



CLARIN and Libraries

9 May 2022 - 10 May 2022



Thanks for listening!

Sally Chambers

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KBR, Royal Library of Belgium and

Ghent Centre for Digital Humanities, Belgium







