Workshop Programme

Publishing from Collections

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Publishing from Collections: Introducing Computational Publishing for Culture

Hands-on Workshop with Simon Worthington (NFDI4Culture @Open Science Lab, TIB Hannover)

Monday, 20 February 2023

Workshop URL: https://experimentalbooks.pubpub.org/programme-overview

Open Notes: https://demo.HedgeDoc.org/s/4gr9JvUS7

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Computational publishing was developed in the life sciences and STEM subjects to allow publishers and authors to embed executable code, visualisations and advanced media objects alongside conventional text in a document. This hands-on workshop demonstrates one way how humanities scholars might use computational publishing.

During the workshop, we will auto-compile catalogue publications for exhibitions or publication listings from multiple open data sources; and show how such compilations can be published multi-format: web, PDF,

ebook, etc. A series of exercises, using Jupyter Notebooks for code and the Quarto platform to wrap up the notebooks for multi-format outputting, will give participants a practical introduction to some of the tools, possibilities and concepts of computational publishing.

Learning points

In the workshop two demonstration catalogue publications will be shown *<toc>Baroque</toc>* and *Publication Catalogue*. A bundle of short exercises and demonstrations have been put together to cover:

1. Rendering a multi-format publication,
2. Asycrononous collective working and making a publication from multiple remote LOD sources,
3. Creating a Wikidata query,
4. Displaying a painting catalogue sample collection from Wikidata Linked Open Data query for a multi-format publication,
5. Editing a Jupyter Notebook in MyBinder,
6. Editing an API query,
7. Embedding media obects: Video - TIB AV Media portal), 3D – Kompakkt, Bibliographic information – ORCID, and
8. Realtime collaborative editing with Hedge Doc and Fidus Writer.

Sample publications

Prototype exhibition catalogue: *<toc>Baroque</toc>*

Image: Baroque pearl with enamelled gold mounts set with rubies.

A prototype framework publication for an exhibition catalogue.

The catalogue uses a Wikidata based collection of Bavarian collections of Baroque paintings. See: 17C Bavarian painting

Publication URL: https://simonxix.github.io/Experimental_Books_workshop/

Prototype publication catalogue: *ScholarlyLed Catalogue*

Sample output of publishers titles from the Thoth single source book metadata service API.

Publication URL: https://simonxix.github.io/scholarled_catalogue/

Preparation needed by participants

No account logins are needed.

The workshop will involve carrying out three activities aimed at giving some familiarity with using computational publishing to retrieve and assemble linked open data and its associated media into a publication.

The activities are organised into short fifteen minute time blocks, with a ten minute review and/or publication render.

· Activity A. Wikidata query

· Activity B. Painting catalogue

· Activity C. Editing a Jupyter Notebooks and accessing video and 3D models (Kompakkt)

· Optional Activity D. Collaborative editing of Colophon with HedgeDoc

You might want to familiarize yourself with some of the platforms being used in the workshop, but this is not necessary to carry out the activities.

· Wikidata query – https://query.wikidata.org/

· Painting collection on Wikidata and the specific collection we'll be using – Sum of all paintings | All painting collections | 17C Bavarian painting.

· Jupyter Notebooks – https://jupyter.org/

· Quarto – https://quarto.org/

· Semantic Kompakkt – https://semantic-kompakkt.de/

· TIB AV Portal – https://av.tib.eu/

· ADA Semantic Publishing Pipeline - https://github.com/NFDI4Culture/ada

· HedgeDoc – https://HedgeDoc.org/

· Thoth - https://thoth.pub/

Schedule

15:00-17:00, Monday, 20 February 2023.

Two hours, 120 minutes.

1) Introduction by all workshop members: **10 minutes**

2) Overview and orientation: **5 minutes**

3) Activity A: Wikidata query building

a) Task: **15 minutes**

b) Whole group review: **10 minutes**

4) Activity B. Painting catalogue

a) Task: **15 minutes**

b) Render and whole group review: **10 minutes**

5) Bio-break (stretch and refresh time): **10 minutes**

6) Activity C. Editing a Jupyter Notebooks and accessing video and 3D models (Semantic Kompakkt)

a) Task: **15 minutes**

b) Render and whole group review: **10 minutes**

7) Conclusion and demos – **20 minutes**

Optional Activity D. Collaborative editing of Colophon with HedgeDoc

a) Task

b) Render and whole group review

Infomation & activities

About: Example prototype publications

1) Exhibition catalogue: *<toc>Baroque</toc>*, and

2) Publication catalogue: *ScholarlyLed Catalogue*.

Prototype exhibition catalogue: <toc>Baroque</toc>

A prototype framework publication for an exhibition catalogue.

The catalogue uses a Wikidata based collection of Bavarian collections of Baroque paintings. See: 17C Bavarian painting

Publication URL: https://simonxix.github.io/Experimental_Books_workshop/

Prototype publication catalogue: ScholarlyLed Catalogue

Sample output of publishers titles from the Thoth single source book metadata service API.

The publication uses data from https://thoth.pub/

Publication URL: https://simonxix.github.io/scholarled_catalogue/

Research

NFDI4Culture and COPIM have collaborated and shared across their research programmes.

NFDI

NFDI4Culture information can be found here: Computational Publishing for Collections - https://github.com/NFDI4Culture/cp4c

The NFDI4Culture project is in the area of Data Publications (Task Area 4) and Publishing in Culture.

Task Area 4 of the NFDI4Culture is looking at which initiatives are enhancing their publications for open scholarship. Its aim is to establish a guideline for scholars to create publications and their associated data with a focus on long-term digital preservation.

NFDI4Culture – Consortium for Research Data on Material and Immaterial Cultural Heritage – which is a consortium within the German National Research Data Infrastructure (NFDI).

COPIM

About COPIM research.

Activity A: Create a Wikidata query

Objective: User builds a visual query in Wikidata. See example: paintings, Bavarian Collections, 1590 - 1750 - https://w.wiki/6KRQ

External LOD and media used: Wikidata LOD, and Wiki commons, Web Gallery of Art - https://www.wga.hu/

Notes: Wikidata Visual Query

- Allows for non-expert query building with plain language
- View query as plain language and as code
- Experience of building a query
- Contact with some basic building blocks of Wikidata
- View and export SPARQL
- Introduction to multilingual features of Wikidata

Steps

1) Go to https://query.wikidata.org/

2) Build a query around the 17C Bavarian painting collection to replicate the catalogue selection to be used in Activity B. Example:

i) Code: https://github.com/SimonXIX/Experimental_Books_workshop/blob/main/paintings.ipynb

ii) Rendering: https://simonxix.github.io/Experimental_Books_workshop/paintings.html

b) Example: Paintings; in collection; Bavarian Collections; 1590 - 1750 - https://w.wiki/6KRQ

c) Instructions to be given in the workshop

d) Participants can change the selection criteria around the available criteria: artists, dates, etc.

e) Completion: Paste your query link into the HedgeDoc link provided. https://demo.HedgeDoc.org/s/4gr9JvUS7

Activity B. Painting catalogue

NB: This is a guided demonstration activity due to the large number of steps involved. Participants will be able to make suggestions and requests for edits.

Objective: Make a section of nine paintings for the exhibition catalogue to be selected from Wikidata and rendered multi-format in Quarto.

External LOD and media used: Wikidata LOD, and Wiki commons, Web Gallery of Art - https://www.wga.hu/

Notes: Jupyter Notebooks retrieval of content from Wikidata and rendering in Quarto.

· Review a query being used in Jupyter Notebooks

· Inclusion of media in a publication

· Editing a Jupyter Notebook

· Multi-format outputs

· Basics of Quarto publishing

Links:

1) Code: https://github.com/SimonXIX/Experimental_Books_workshop/blob/main/paintings.ipynb

2) Rendering: https://simonxix.github.io/Experimental_Books_workshop/paintings.html

Steps

1) View code and rendering and explain steps

2) Demonstrate a change in the Notebook code configuration and output, simplest is the increase in the LIMIT of items.

3) Show and talk through full items as they exist on Wikidata.

4) Depending on current Notebook configuration invite suggestions for changes to the configurations of items being retrieved by the Notebook processing. If this is possible – re-render the publication.

5) Show the TOC feature of Quarto

Activity C. Editing a Jupyter Notebooks and accessing video

Objective: Running and editing Juypter Notebooks in MyBinder and retrieving video and 3D models as embeds.

External LOD and media used: TIB AV Portal, Semantic Kompakkt

Notes: Jupyter Notebooks editing in MyBinder

· Allows for non-expert query building with plain language

· View query as plain language and as code

· Experience of building a query

· Contact with some basic building blocks of Wikidata

· View and export SPARQL

· Introduction to multilingual features of Wikidata

Links:

3) Sample Jupyter Notebook: Video and 3D Notebook embeds

4) TIB AV Portal: https://av.tib.eu/

5) Semantic Kompakkt demo site: https://kompakkt.wbworkshop.tibwiki.io/explore

Steps

1) Open Notebook in the browser using MyBinder - Video and 3D Notebook embeds

2) Add new videos and 3D models to the Notebook: See links

3) Render the Notebook

4) Download Notebook

(Optional) Activity D. Collaborative editing of Colophon with HedgeDoc

Objective: Editing 'Colophon' HedgeDoc to be included in publication. Quarto TOC function allows documented to be edited in different remote applications – which is one approach to asynchronous editing.

External editing platform: HedgeDoc

Notes: Remote async editing

· Editing with HedgeDoc

· Multi-user real-time editing

· Editing a Markdown document

· Saving as a Gist Git document (temporary file)

· Saving to Quarto

Links:

6) Colophon HedgeDoc: https://demo.hedgedoc.org/s/Xzv9WrAjg

Steps

1) Colophon HedgeDoc: https://demo.hedgedoc.org/s/Xzv9WrAjgAdd new videos and 3D models to the Notebook: See links

2) Save as Gist

3) Make commit to Git Repo

4) Render Quarto

Software

· Wikidata – https://www.wikidata.org/

· Jupyter Notebooks – https://jupyter.org/

· Jupyter Book – https://jupyterbook.org/

· Quarto – https://quarto.org/

· Semantic Kompakkt – https://semantic-kompakkt.de/

· TIB AV Portal – https://av.tib.eu/

· ADA Semantic Publishing Pipeline – https://github.com/NFDI4Culture/ada

· HedgeDoc – https://HedgeDoc.org/

· Thoth – https://thoth.pub/

· Vivliostyle – https://vivliostyle.org/

· Wikibase – https://wikiba.se/

Glossary

· SPARQL - https://en.wikipedia.org/wiki/SPARQL

To contribute make a pull request or email message: simon.worthington@tib.eu