

Connected heritage: How should Cultural Institutions Open and Connect Data?

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Taichung, Taiwan, August 2017

Thank you for the invitation to speak.

I will approach the question by describing the mechanisms organisations have used to open and connect data, then I will look at some of the positive outcomes that resulted from their actions. This is not a technical talk about different acronyms, it's about connecting people to our shared heritage.

Overview

- Definitions
- How - examples of linked data
- How - examples of open data
- Why - what happens when you connect and open data?

Definitions

PRICE ONE SHILLING.

<p>E. M'INTYRE & CO., Tailors, Hosiets, and Outfitters.</p> <p>A splendid assortment of Gseloag and West of England Tweed, also Black Doeakin Woollen Cloths always on hand. Suit made to order in six hoars' notice, on most reasonable terms. No. 27 Collins, Cutter.</p>	<p>THE HEAD CENTRE OF MELBOURNE IS THE "OLABET JUG" WINE DEPOT OPPOSITE TRIMBLE'S ROYAL. By WILLIAM BARTON, J. & Co. See Direct. Best Chass.</p>	<p>C. WAKLEY, <i>The Largest</i> <i>and</i> TAILOR and OUTFITTER, & SHIRTMAKER, <i>Cheapest</i> <i>Stock of Tweed</i> 23 BOURKE STREET EAST. St. Thomas Dunn is Cutter and Manager of the Tailoring Department. Customers' convenience made at the shortest notice, and on the most reasonable terms.</p>
<p>NOTICE OF REMOVAL. W. XL. ANDERSON Having removed from his late residence to the premises situated at No. 27 Collins Street East, Melbourne, he begs to inform his friends and the public that he has removed to the above address, and every description of the work, on hand.</p>	<p>Mr. JOHN ILIFFE, DENTIST, 92 COLLINS STREET EAST.</p>	<p>JOHN BULL TAVERN, RESERVE, BREWERY, AND TEA ROOM, 15 LITTLE COLLINS STREET WEST, MELBOURNE.</p>
<p>5% MYSTERIES of MELBOURNE LIFE. BY THE AUTHOR OF "SCRIPOPOLIS."</p> <p><i>"There's a power whose rusty Angel souls adore, And the lost obey, Weeping evermore."</i></p> <p>Melbourne: MASON, FIRTH, & MOUTCHEON, 1873.</p>		
<p>C. A. BERRY, ASSAYER, MELTER, AND REFINER, 176 SWANSTON STREET, MELBOURNE.</p>		
<p>NORRIS'S SPICE surpasses everything ever yet introduced for FATTENING FOWLS & EFFECTUALLY PREVENTING DISEASES IN THE FOWL-YARD. Sold in Tins, 1s, 2s, and 4s, each, by all druggists, stockkeepers, and seedsmen throughout the colonies; wholesale by all wholesale druggists.</p>		
<p>WILLIAM RADFORD, WHOLESALE AND RETAIL TINSMITH, 19 Pine Green Place, has MILLS, BRASS-CASTING, MACHINERY, Bells, Taps, Brass, Brass, Brass, and every description of the work, on hand.</p>	<p>JOHN KING, Importer & Dealer in China, Glass, & Earthenware, 22 COLLINS STREET EAST, Between Hous of Victoria and Zimmerli-street. Sole Agent in Victoria for the Improved Carbon Filter Company, Dahlke's Patent.</p>	
<p>G. F. WICKENS, PHARMACEUTICAL CHEMIST, 17 ELIZABETH STREET, Two doors south of Collins-street, Melbourne. Dr. Bright's Phosphorus, Sir A. Cooper's Vital Barkers- Wey, Clark's Blood Purifier, Mearns' Fish-bone- Prescriptions accurately prepared.</p>		

A splendid assortment of Gceloag and West of England. Tweed ; also Black Doeakin Woollen Cloths always on hand. Snit made to order in six hoars' notice, on most reainable terms. Mr. M'Mohon, Cutter.

Mysteries of Melbourne life by Cameron, Donald, 1848?-1888.

Published 1873
Usage Public Domain Mark 1.0
Topics Australia -- Fiction

What kinds of data are we talking about? It might just be metadata - the title, author, dates, places... Or 'data' might include digital images of pages or objects. Or it might include full text transcriptions, with or without the optical character recognition errors shown here. Any of these can be offered as collections of metadata, of text, of images, for reading individually or mining as a dataset.

Image, data. <https://archive.org/details/MysteriesOfMelbourneLife>

Open and connected data

Open data: machine-readable data made available under an open licence. Ideally published in a non-proprietary format (CSV, XML, JSON, RDF, SPARQL). Enables commercial and creative re-uses.

Connected data: uses links (URLs) to describe concepts. Ideally published at a stable address so others can use it as a reference. Enables interoperability and collaboration.

I could go into more technical detail, but this is a high-level overview. Not about acronyms. Aim to add enough structure to let people know what your collections are about.

Siri, who is Ang Lee?

Ang Lee might be a common name, but you probably know who I mean. But would a computer?

Siri, who is Ang Lee?



Image: [nicolas genin](#)

This guy!

Siri, who is Ang Lee?



Image: [nicolas genin](#)

<https://www.wikidata.org/wiki/Q160726>

occupation	film director
	→ 0 references
	screenwriter
	→ 0 references
	writer
	→ 0 references

Getty ULAN (Union List of Artist Names)
ID: 500334116
Identifying URL:
<http://vocab.getty.edu/ulan/500334116>

But while people think in 'things', computers can't find meaning in strings of text unless we give them more useful information. So when we identify Ang Lee with a link, the computer can 'understand' that the string of letters is describing a person

Siri, who is Ang Lee?



Image: [nicolas.genin](#)

Titles:

- All the better for her (1 min 17 s)
- All the delights of the season (1 min 14 s)
- Banquete de boda, El
- Brokeback mountain
- Burza lodowa
- Cabalga con el diablo
- Chevauchée avec le diable
- Combe magna (2 min 59 s)
- Comer beber amar
- Crouching tiger, hidden dragon
- Devonshire (1 min 04 s)
- dream (2 min 30 s)
- Eat, drink, man, woman
- En terreno vedado
- Excellent notion (1 min 39 s)
- Felicity (1 min 22 s)
- Fornuft og følelse
- Garçon d'honneur
- Grant me an interview (1 min 05 s)
- Hôtel Woodstock
- Hsi yen, 1993:
- Hsi Yen (Pel·lícula cinematogràfica).
- Hulk
- Ice storm., The
- Lust, caution
- Misc. Gray (2 min 21 s)

<http://www.isni.org/isni/0000000110693224>

Once you have one identifier, you can confidently map to others, and take in their data... This ISNI record includes a comprehensive list of Lee's films because the site understands the link between a creator and their works.

...yet more Ang Lee

• VIAF: 69129224 • ISNI: 0000 0001 1069 3224 • ULAN: 500334116 • LCCN: no94038345 • NLA: 36677240 • GND: 119317079 • SELIBR: 275994 • SUDOC: 060150610 • BNF: 14029737k • NDL: 00514529 • NKC: pna2005262030 • BNE: XX1363585 • WorldCat

following subcategory.

5 F)

"Ang Lee"

In this category, out of 20 total.

					
Ang Lee - 66eme Festival de Venise (Mostra) 2.jpg 801 × 1,011; 120 KB	Ang Lee - 66ème Festival de Venise (Mostra).jpg 999 × 1,500; 1.14 MB	Ang Lee 66ème Festival de Venise (Mostra).jpg 1,000 × 1,500; 1.06 MB	Ang Lee at the end of the game.jpg 3,008 × 2,000; 2.91 MB	Ang Lee Cannes 2013.jpg 669 × 755; 100 KB	Ang Lee Emile Hirsch Cannes 2009.jpg 670 × 496; 107 KB

Wikimedia Commons includes lots of common identifiers, so you can find more material about Lee.

From 'strings' to 'things'

So now we can say:

Ang Lee

(<https://www.wikidata.org/wiki/Q160726>) is a
film director

(<https://www.wikidata.org/wiki/Q2526255>)

...and it'll mean something to humans and to
computers

How - examples of linked data

SPARQL Service Description

This page contains a description of a SPARQL endpoint in accordance with the W3C working draft [SPARQL 1.1 Service Descriptions](#). The format of this page is [XHTML+RDFa](#). T

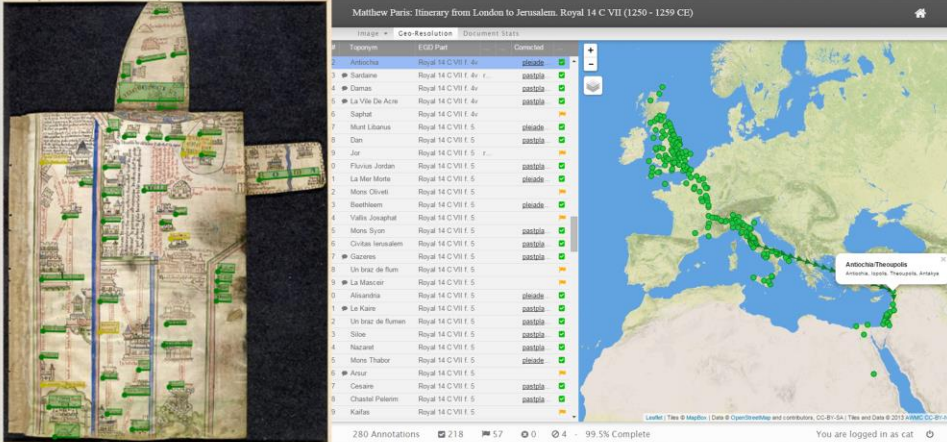
Subject	Predicate	Object
http://www.loc.gov/mads/rdf/v1#	http://www.w3.org/2000/01/rdf-schema#label	Metadata Authority Description Schema in RDF (MADS/RDF)
Metadata Authority Description Schema in RDF (MADS/RDF)		
http://xmlns.com/foaf/0.1/	http://www.w3.org/2000/01/rdf-schema#label	FOAF Vocabulary
FOAF Vocabulary		
http://www.w3.org/2003/01/geo/wgs84_pos#	http://www.w3.org/2000/01/rdf-schema#label	WGS84 Geo Positioning: an RDF vocabulary
WGS84 Geo Positioning: an RDF vocabulary		
http://bnb.data.bl.uk/id/data/BNBCIP	http://rdfs.org/ns/void#triples	25131434 (datatype http://www.w3.org/2001/XMLSchema#integer)
http://bnb.data.bl.uk/id/data/BNBCIP	http://purl.org/dc/terms/modified	2017-07-26 (datatype http://www.w3.org/2001/XMLSchema#date)
http://purl.org/dc/terms/	http://www.w3.org/2000/01/rdf-schema#label	Dublin core terms
Dublin core terms		
http://creativecommons.org/publicdomain/zero/1.0	http://www.w3.org/2000/01/rdf-schema#label	CC0 1.0 Universal
CC0 1.0 Universal		
http://bnb.data.bl.uk/id/data/BNB	http://purl.org/dc/terms/modified	2017-07-26 (datatype http://www.w3.org/2001/XMLSchema#date)
http://bnb.data.bl.uk/id/data/BNB	http://purl.org/dc/terms/alternative	BNB @ en
http://bnb.data.bl.uk/id/data/BNB		This dataset is a release of the BNB as linked open data. The current offering includes descriptions of
http://bnb.data.bl.uk/id/data/BNB		BNBCIP, Furt
http://bnb.data.bl.uk/id/data/BNB		criptions o
http://bnb.data.bl.uk/id/data/BNB		is @ en
http://bnb.data.bl.uk/id/data/BNB	http://rdfs.org/ns/void#triples	147263582 (datatype http://www.w3.org/2001/XMLSchema#integer)
http://www.w3.org/2004/02/skos/core#	http://www.w3.org/2000/01/rdf-schema#label	SKOS core
SKOS core		
http://bnb.data.bl.uk/id/data/BNB	http://purl.org/dc/terms/created	2011-07-26 (datatype http://www.w3.org/2001/XMLSchema#date)
http://bnb.data.bl.uk/id/data/BNB	http://rdfs.org/ns/void#exampleResource	http://bnb.data.bl.uk/resource/005571580
http://bnb.data.bl.uk/id/data/BNB		English explained / Winifred Barnes

British National Bibliography

<http://bnb.bl.uk>

Books and journal titles published in the UK since the 1950s. Used by libraries to get new records. Available in a range of linked data formats including this query service which describes material in 'triples'. Triples are a format for making statements like 'This book's title is 'Welcome to Taiwan' with semantic information included. Triples allow more complex queries without complicated relational database structures.

'linked data without the pointy brackets'



Matthew Paris: Itinerary from London to Jerusalem, Royal 14 C VII (1250 - 1259 CE)

Toponym	EDS Path	Connected
1 Antiochia	Royal 14 C VII f. 4r	placode
2 Santane	Royal 14 C VII f. 4r	placode
3 Damas	Royal 14 C VII f. 4r	placode
4 La Ville De Acre	Royal 14 C VII f. 4r	placode
5 Saphat	Royal 14 C VII f. 4r	placode
6 Munt Libanus	Royal 14 C VII f. 5	placode
7 Dan	Royal 14 C VII f. 5	placode
8 Jar	Royal 14 C VII f. 5	placode
9 Flouier Jordan	Royal 14 C VII f. 5	placode
1 La Mer Morte	Royal 14 C VII f. 5	placode
2 More Chouet	Royal 14 C VII f. 5	placode
3 Beethem	Royal 14 C VII f. 5	placode
4 Valle Joseph	Royal 14 C VII f. 5	placode
5 More Syon	Royal 14 C VII f. 5	placode
6 Chouet Jerusalem	Royal 14 C VII f. 5	placode
7 Gazores	Royal 14 C VII f. 5	placode
8 Un bras de fum	Royal 14 C VII f. 5	placode
9 La Maccor	Royal 14 C VII f. 5	placode
0 Alexandrie	Royal 14 C VII f. 5	placode
1 La Kale	Royal 14 C VII f. 5	placode
2 Un bras de Rumon	Royal 14 C VII f. 5	placode
3 Siloe	Royal 14 C VII f. 5	placode
4 Nazaret	Royal 14 C VII f. 5	placode
5 More Thabor	Royal 14 C VII f. 5	placode
6 Acor	Royal 14 C VII f. 5	placode
7 Cesaire	Royal 14 C VII f. 5	placode
8 Chouet Palem	Royal 14 C VII f. 5	placode
9 Kafas	Royal 14 C VII f. 5	placode

280 Annotations 218 57 0 4 - 99.5% Complete You are logged in as cat

Antiochia Therapsite
Antiochia, Syria, Roman Empire, Antiochia

280 Annotations 218 57 0 4 - 99.5% Complete You are logged in as cat

Pelagios: Enabling Linked Ancient Geodata <http://www.pelagios.org>

Lots of people find linked open data technologies intimidating. Projects like Pelagios allow placenames in documents and maps to be annotated with linked open data identifiers - you just draw around the word and match it to a list of potential placenames. These identifiers mean the items are more easily linked to other collection items that mention the same places.



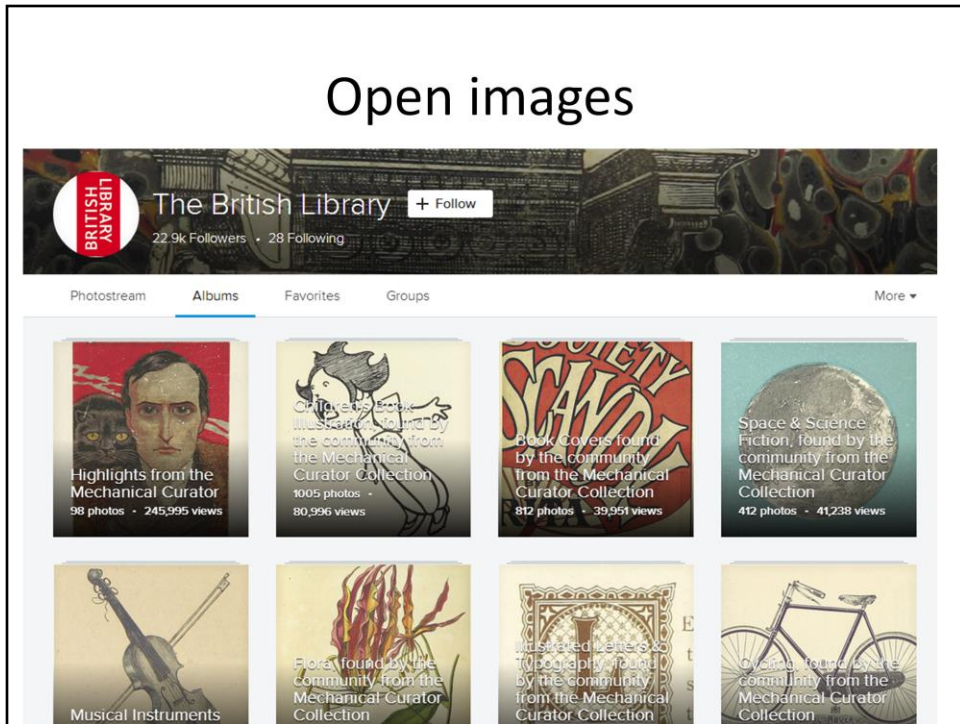
The logos are institutions that have shared images freely on Flickr Commons

CSV

- Plain-text, comma-separated format files
- Spreadsheet-style format is familiar to many
- Low barrier to entry - easy to play with

- Can't be updated once downloaded
- Hard to accept changes e.g. if people clean data or add links to connect with other datasets

Open images



Since 2008, it's been possible to share freely licenced images on Flickr Commons. The BL put one million images extracted from 19th C books on Flickr Commons. This story is periodically picked up by the media...

Downloadable datasets

Digitised Books - Images identified as Embellishments. c. 1510 - c. 1900. JPG.



Image, pg 145. Ballads and Songs of Lancashire chiefly older than the 19th Century. Collected, compiled, and edited, with notes, by J. H., etc. L.P. by John Antiquary Harland, 1865

The dataset comprises c. 41,6951 images identified as 'Embellishments' from the British Library's Flickr Commons collections, dating between c. 1510 - c. 1900. The images were algorithmically gathered from 49,455 digitised books, equating to 65,227 volumes (25+ million pages), published between c. 1510 - c. 1900. The books cover a wide range of subject areas including philosophy, history, poetry and literature. The images are in .JPEG format.

Content Notes:

Full title: Digitised Books - Images identified as Embellishments. c. 1510 - c. 1900. JPG.
Dataset creator: British Library
Dataset publisher(s): British Library
Dataset date: 2014
Range of years covered: c. 1510 - c. 1900
DOI:
<https://doi.org/10.21250/db17>

Download:

[dig19cbooks-embellishments.zip](#) (zip)
provided by dataset creator)
43.40GB .ZIP file, comprising of 416,951 .jpg images in 316 folders
CC0 1.0 Public Domain

If you have any queries about this dataset or about this website, please email digitalresearch@bl.uk.

Collecting together datasets under data.bl.uk.

APIs

The screenshot shows the Brooklyn Museum website's 'Collections: Index' page. At the top, there is a navigation menu with links for 'Visit', 'Exhibitions', 'Calendar', 'Collections', 'Education', 'About', 'Support', 'Shop', 'Press', and 'Community'. Below this is a secondary navigation bar with icons and links for 'Home', 'FAQ', 'Access', 'Directions', 'Contact', and 'E-News', along with a search bar labeled 'search (alt+s)'. The main heading is 'Brooklyn Museum' followed by 'Collections: Index'. A sub-navigation bar includes 'Collections', 'On View', 'Exhibition Archive', 'Research Resources', 'News', and 'Play'. The main content area explains that the Brooklyn Museum Collection API is a set of services for displaying collection images and data. It is divided into two columns: 'Getting Started' with links for 'Overview', 'Encoding', 'Requests', 'Responses', 'Rights', and 'API'; and 'Methods' with links for 'collection.search', 'collection.getCollections', 'collection.getRightsTypes', 'collection.getItem', 'collection.getImages', and 'collection.getFacetations'. On the right side, there is a sidebar with links for 'Terms of Use', 'Contact', 'News', and 'Application Gallery', and a prominent blue button that says 'Apply For Your Key' with a key icon.

The first museum API was released by the Brooklyn Museum of art in 2009. APIs provide a way to request specific information from a dataset and use the results in another programme. This means other people can make programmes based on your data.

How to open your data?

The basics: find digital or digitisable data that can be openly licenced and doesn't include personal data. Choose the simplest, most sustainable and most usable format.

Build for success: choose data people want to use. Document it well. Test its usability. Publicise it and respond to feedback. Celebrate and share interesting uses.

To help you think about which method is right for you... Not a technical bit.

Narrow down from all the information you have to what's shareable. E.g. copyright and data protection ok, digital or able to be digitised.

Work out what data you have in a shareable state – is it metadata, digitised images, full text? Work out who might be interested in using it – visual designers, historians, computational linguists, literature scholars? What formats are in the sweet spot of being easy to support (for you) and easy to use (for them)? Think about whether you'll want to update it often or only once. Can you publish directly from systems in daily use to ensure that the data is maintained?

Making sure your data is used

Competitions and events

BL Labs Awards rewards Research, Commercial, Artistic, Teaching/Learning work with digital collections

Off the Map encourages game design students with exhibition themes

Hackathons: great for feedback

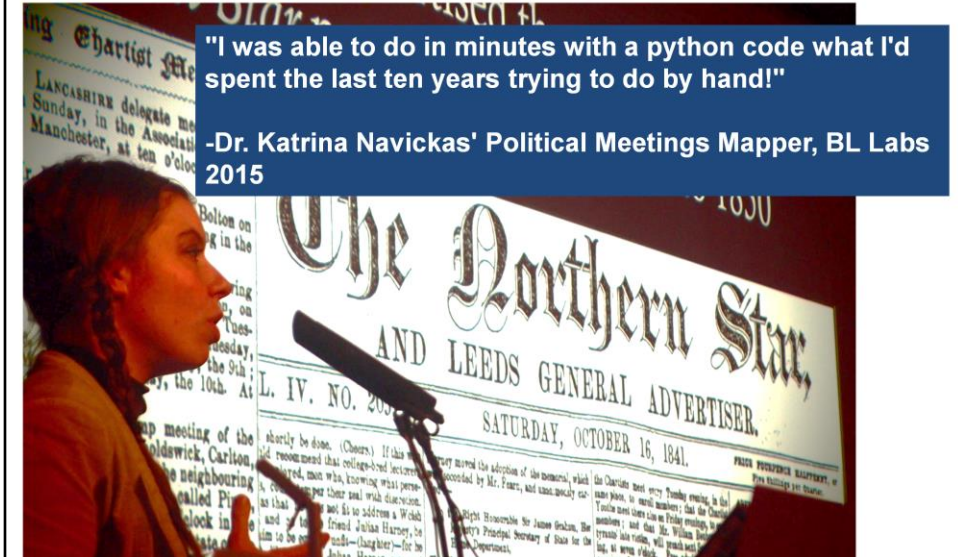


<http://gamecity.org/alices-adventures-off-the-map-winners-announced/>

Competitions seem effective way to motivate participation - time-limited, clear expectations re what to submit, clear rewards and recognition. Off the Map, run by colleague Stella Wisdom, explores how British Library digital collections can be used in creative ways. Opportunity for game, design students in the UK to showcase their talents to industry; hopefully lead to engagement with new audiences.

BL Labs Awards recognise work done with digital collections (in research, commercial, artistic, teaching/learning categories); Competition winners got to work closely with Labs team for several months to make their DS project idea a reality.

Create and share case studies



Great thing about competitions is they help create case studies. Dr Katrina Navickas was a Labs Competition winner whose story particularly resonates with 'traditional' historians and academics.

Katrina used text mining techniques to map weekly political meetings as advertised in the Northern Star newspaper between 1841 and 1845. Previously she manually created a dataset by taking notes in archives.

<http://politicalmeetingsmapper.co.uk/maps/methods>

Get out there: BL Labs Roadshows



Labs team, usually with a digital curator, run workshops and activities at universities around the country, to encourage re-use of digital collections. Find a format suitable for your organisation - the point is to actively promote the data to people

BUY

Unavoidable tensions...

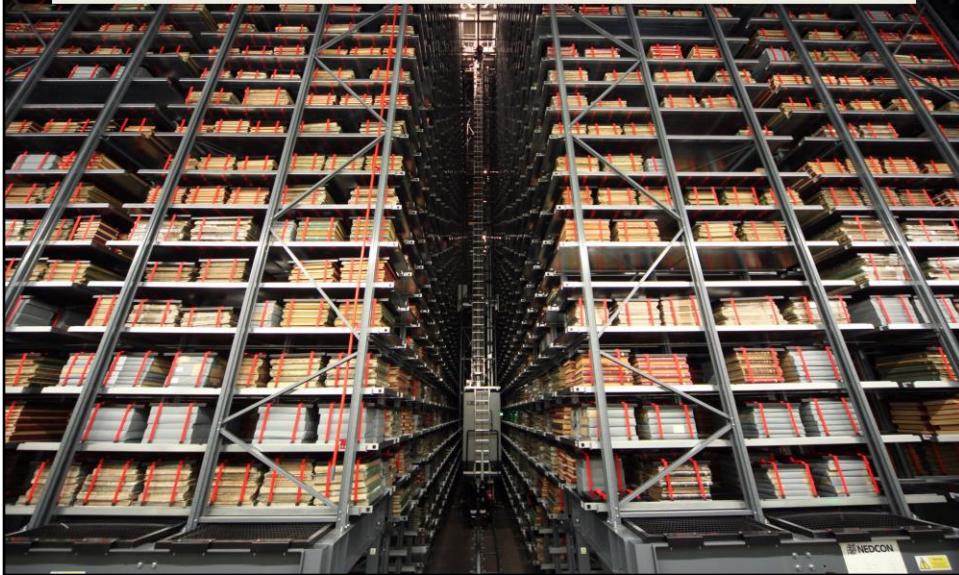
- Give content away for the benefit of all
- Monetise assets; protect against loss of potential income; protect against mis-use of collections; conserve collections in perpetuity; protect the IP of artists; demonstrate ROI on digitisation

It's not all a bed of roses... Here are some contradictory things cultural heritage institutions (in the UK) are told they must do. How do you balance these requirements?

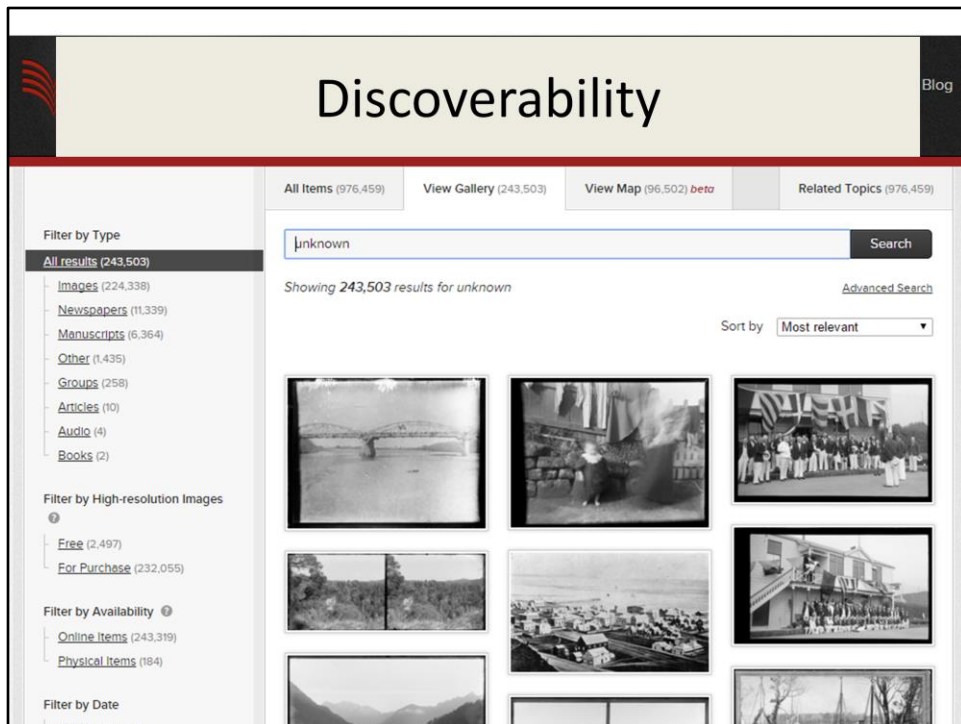
IP - intellectual property; ROI - return on investment

**Why - what happens when you
connect and open data?**

Preservation



Pragmatic - allows lots of people to use items without causing any further damage. The storage void of the new British Library National Newspaper Building at Boston Spa in West Yorkshire. Photo © Kippa Matthews
TimeOut: 'Here, 60 million newspapers, spanning three centuries are kept in really neat low-oxygen storage chambers'



Digitised catalogue data is great but it's like hearing about a party you weren't at. Direct access to catalogue contents is even better. Digitisation is a key part of everyday business of cultural heritage institutions.

Access

Items consulted in Reading Rooms: 1,694,000
BL website items consulted: 3,249,000

Source: Annual Report 2015/16

Print Download Send feedback Share Embed Full Screen

Why should access to our collective cultural and scientific heritage be limited to those who happen to be nearby, or who can afford to travel to see it? And why should it be limited to the opening hours of an organisation? (The BL reading rooms aren't open on a Sunday)

CONT

Access

16 17

18 19

20

If collections are international in scope, they should be internationally accessible

Search within this item:

[Print](#) [Download](#) [Send feedback](#) [Share](#) [Embed](#) [Full Screen](#)

Why should access to our collective cultural and scientific heritage be limited to those who happen to be nearby, or who can afford to travel to see it? And why should it be limited to the opening hours of an organisation? (The BL reading rooms aren't open on a Sunday)

'Traditional' outcomes



https://www.flickr.com/photos/nationalibrarynz_commons/5353172318

Lots of scholarship with digital collections ends up in traditional outputs, like monographs or articles. It can be incredibly difficult to track these uses, particularly if people cite the original and not the digital surrogate they actually used.

Delight



Some images have the ability to reach across centuries and delight us.

If you're a medieval scholar you might know the story that hedgehogs shake grape vines then 'trundle off back to their burrows, carrying the grapes on their spines, as a meal for their young', or the deeper moral about the devil, but you can delight in the image without that knowledge.

Cool things happen



This is a screenshot from a video clip made by a group from Malaysia using images from 19thC books the BL put on Flickr. They didn't need to ask us, but they were kind enough to email us afterwards.

Mario Klingemann
Detail from '556
Minerals'



New ways of processing images as data, texture - the library could never have applied the technologies that code artist Mario Klingemann brought to 19th images. His exploration of the images resulted in new ways of seeing collections at scale.

His web site is: <http://mario-klingemann.tumblr.com/>

And <http://incubator.quasimondo.com/>

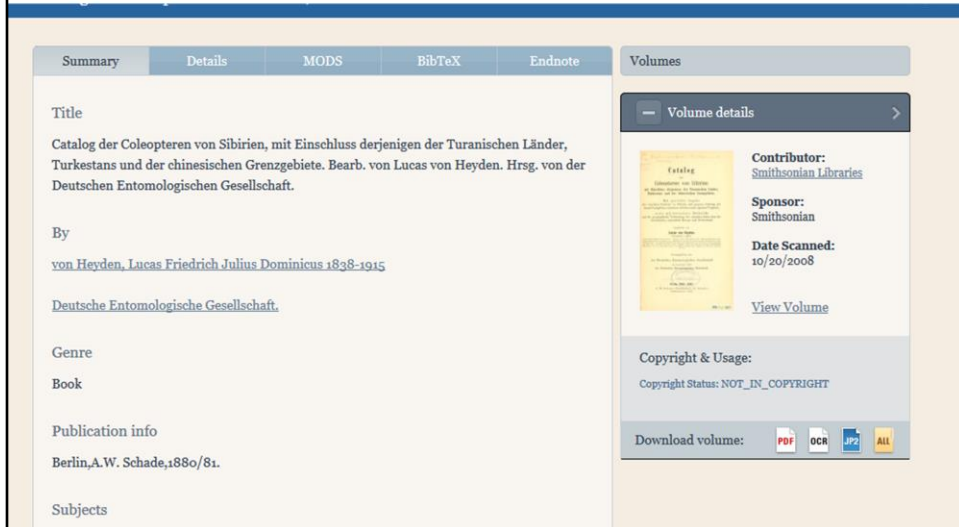
Partnerships without paperwork

The screenshot displays the Wikimedia Commons homepage. At the top, the title "Partnerships without paperwork" is centered. Below it, the Wikimedia Commons logo and a subtitle "a database of 29,231,417 freely usable media files to which anyone can contribute" are visible. The page is divided into several sections:

- Left Sidebar:** Contains navigation links such as "Main page", "Welcome", "Community portal", "Village pump", "Help center", "Language select" (set to English), "Participate" (with sub-links for "Upload file", "Recent changes", "Latest files", "Random file", "Contact us"), "Print/export" (with sub-links for "Create a book", "Download as PDF", "Printable version"), "Tools" (with sub-links for "What links here", "Related changes", "Special pages", "Permanent link", "Page information", "Wikidata item", "Cite this page", "Subpages"), and "In Wikipedia" (with sub-links for "Qafár af", "Anʻyuuwa", "Acóh", "Afríkaans").
- Top Right:** Features links for "Images", "Sounds", "Videos", and a blue "Upload" button.
- Picture of the day:** A central yellow-bordered box containing a high-resolution image of a vibrant red rose. Below the image is the caption: "Kardinal - Hybrid tea rose, Raised by R.Kordes, Germany. 1986(reg.)". At the bottom of this box are links for "Tweet", "RSS feed", "Subscribe", and "Previous Pictures of the day".
- Photo challenge:** A green-bordered box with the text: "Take some photos and upload them to meet our monthly thematic challenge, get inspiration and try new subjects! [Learn more about the challenges!](#)". Below the text is a green button that says "Check out this month's challenges".
- Highlights:** A blue-bordered box with the text: "If you are browsing Commons for the first time, you may want to start with [Featured pictures](#), [Quality images](#) or [Valued images](#). You can also see some work created by our highly skilled contributors in [Meet our photographers](#) and [Meet our illustrators](#). You may also be interested in [Picture of the Year](#)."

When people can access and re-use digitised content, especially when it's identified unambiguously with links, they can do amazing things with it - without having to spend three years and lots of money on lawyers just to get started.

It helps scientists

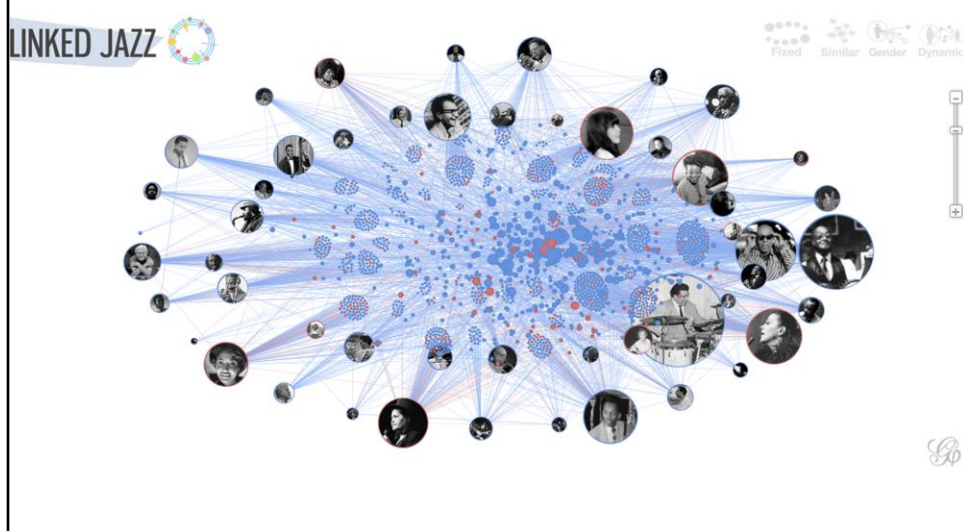


The screenshot displays the BHL interface for a specific book record. The main content area is divided into two columns. The left column contains a 'Summary' tab and fields for Title, By (author and publisher), Genre (Book), Publication info (Berlin, A.W. Schade, 1880/81), and Subjects. The right column features a 'Volumes' tab, a 'Volume details' section with a thumbnail of the book cover, contributor and sponsor information (Smithsonian Libraries), a date scanned (10/20/2008), a 'View Volume' link, a 'Copyright & Usage' section (NOT_IN_COPYRIGHT), and a 'Download volume:' section with icons for PDF, OCR, JP2, and AII.

The Biodiversity Heritage Library improves research methodology by collaboratively making biodiversity literature openly available to the world as part of a global biodiversity community.

'These collections are of exceptional value because the domain of systematic biology depends, more than any other science, upon historic literature. Yet, this wealth of knowledge is available only to those few who can gain direct access to significant library collections. Literature about the biota existing in developing countries is often not available within their own borders.'

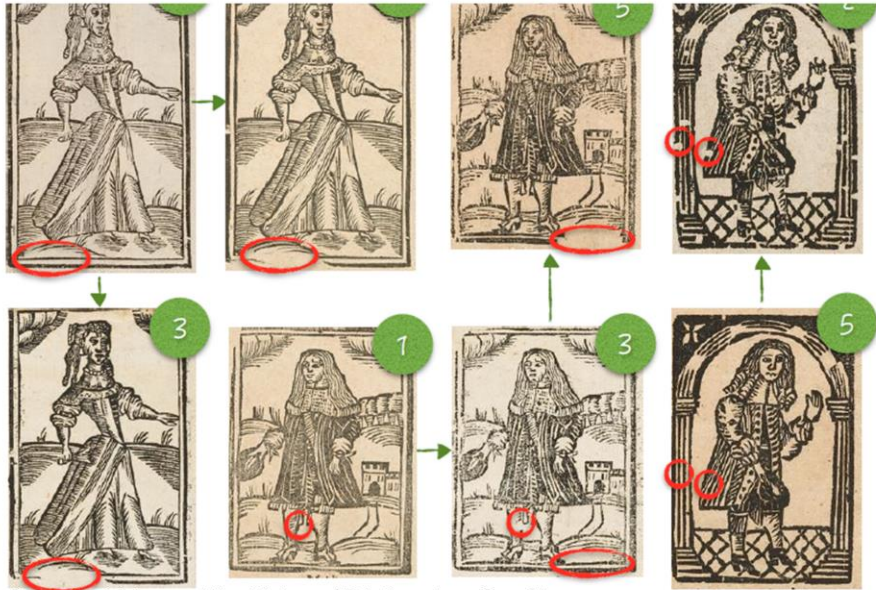
Links support new knowledge



This site is able to pull in information about jazz musicians from a lot of other sites, making it much richer

<https://linkedjazz.org/network/?mode=gender>

We learn more about collections



Computational techniques applied to open data can help us learn more about collections. This project was able to identify woodcuts re-used in different publications and order the publications by finding tiny differences in the condition of the woodcuts.

Computer Vision and the History of Printing, Joon Son Chung

谢谢

Questions?

Open and connected datasets:
<http://bit.ly/euWleR>

Dr Mia Ridge @mia_out
Digital Curator, British Library

International Digital Culture Forum 2017
Taichung, Taiwan, August 2017