

SunoikisisDC Digital Approaches to Cultural Heritage
2022 session 4

Digital Heritage Collections

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Digital Heritage Collections

Stella Wisdom, Digital Curator

 @miss_wisdom

<https://www.bl.uk/people/experts/stella-wisdom>

Digital collections are collections of materials that are available digitally. They include analogue materials that have been digitised, e.g.

- Manuscripts
- Printed books
- Newspapers
- Maps
- Sounds

Also born digital collections, which comprise of material that has been natively created in a digital format, rather than digitised from an analogue item.

Examples of born-digital collections:

- Personal digital archives, including emails, text-based documents, spreadsheets, digital images taken with a digital camera etc.
- Data sets and data bases
- Web archives



The British Library is the national library of the UK
We receive a copy of every publication produced in the
UK and Ireland

In our collections you can find:

- 13.5 million printed books and e-books
- 310,000 manuscript volumes: from Jane Austen to James Joyce; Handel to the Beatles
- 60 million patents
- 60 million newspapers
- Over 4 million maps
- Over 260,000 journal titles, many of them digital
- 7 million sound recordings from 19th-century wax cylinders to CDs and radio broadcasts
- 8 million stamps
- over 500 terabytes of preserved data in our UK Web Archive which, since 2013, has aimed to collect every UK website.

<http://www.bl.uk/aboutus/quickinfo/facts/>

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The International Dunhuang Project: The Silk Road Online

IDP is a ground-breaking international collaboration to make information and images of all manuscripts, paintings, textiles and artefacts from Dunhuang and archaeological sites of the Eastern Silk Road freely available on the Internet and to encourage their use through educational and research programmes.



SHARE

IDP partner institutions which both provide data for and act as hosts to the multilingual website and database are:

[The British Library, London IDP Directorate \(English Version\)](#)

[The National Library of China, Beijing \(Chinese version\)](#)

[The Institute for Oriental Manuscripts, St Petersburg \(Russian version\)](#)

[Ryukoku University, Kyoto \(Japanese version\)](#)

[The Berlin-Brandenburg Academy of Science and Humanities \(German version\)](#)

[The Dunhuang Academy, Dunhuang \(Chinese version\)](#)

[Bibliothèque nationale de France, Paris \(French version\)](#)

[Research Institute of Korean Studies, Seoul \(Korean version\)](#)

Major IDP partners providing data include:

[The Library of the Hungarian Academy of Sciences, Budapest](#)

[The British Museum, London](#)

[The Victoria & Albert Museum, London](#)

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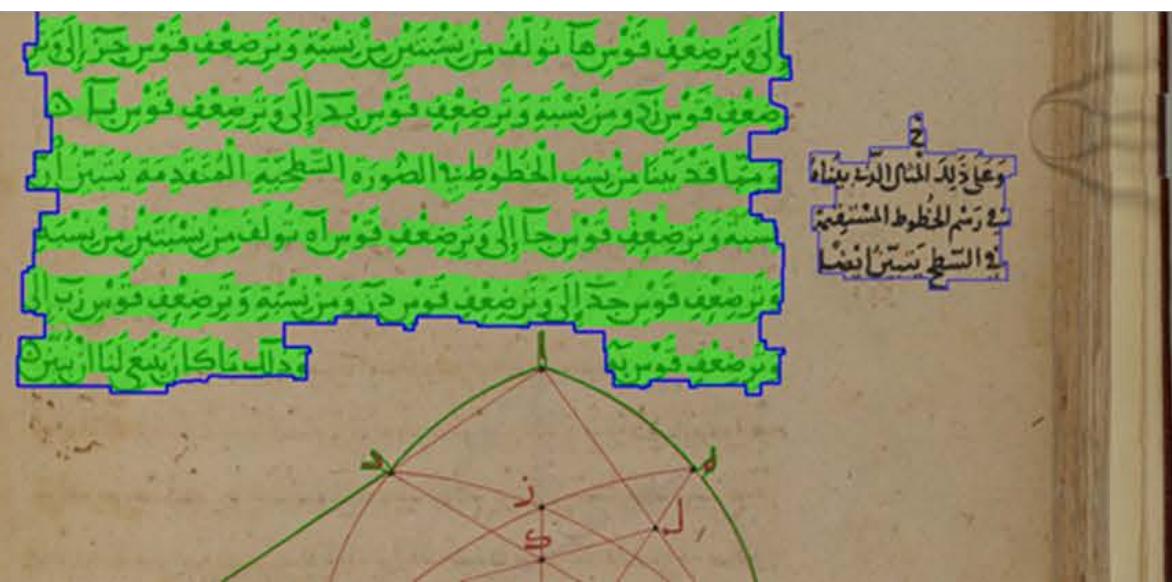
The International Dunhuang Project: The Silk Road Online, started digitising manuscripts in 1997 with the aim of bringing together collections in virtual space. Its web site went online in October 1998 allowing free access to the IDP DATABASE with images of the manuscripts and contextual information.

<http://idp.bl.uk/>

HTR (Handwritten Text Recognition)

- Arabic scientific manuscripts digitised as part of the BL Qatar Foundation partnership
- Other Arabic-script manuscripts (e.g., Persian, Malay, Indonesian)
- Chinese manuscripts digitised as part of IDP – the International Dunhuang Project

<https://www.bl.uk/projects/arabic-htr>



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Automating the recognition of historical Chinese handwritten texts

Hosted by the British Library



উইকিসংকলন

প্রধান পাতা
সম্প্রদায়ের প্রবেশদ্বার
কেন্দ্রীয় আলোচনা
সাম্প্রতিক পরিবর্তন
লেখক

অজানা যেকোনো লেখক
অজানা যেকোনো লেখক
অজানা যেকোনো নির্ধার্ত
সাহ্য্য

দান করুন

প্রদর্শন পছন্দ

বিন্যাস ২

সরঞ্জাম

সংযোগকারী পাতাসমূহ
সম্পর্কিত পরিবর্তন
বিশেষ পাতাসমূহ
স্থায়ী সংযোগ

পাতার তথ্য

এই পাতাটি উন্মুক্ত করুন
সঠিক্কণ্ঠ ইউআরএল

Visualizzatore

মুদ্রণ/রক্ষণি

< > পাতা আলোচনা চিত্র ^

পড়ুন সম্পাদনা ইতিহাস দেখুন আরও ▾ উইকিসংকলন অনুসন্ধান



১লা নভেম্বর থেকে ১৫ই নভেম্বর পর্যন্ত
মুদ্রণ সংশোধন প্রতিযোগিতা চলবে। আপনিও অংশ নিন!

[বক্তব্য করুন]

পাতা:কথামালা - সৈশ্বরচন্দ্র বিদ্যাসাগর (১৮৭৭).pdf/১০<

এই পাতাটির মুদ্রণ সংশোধন করা হয়েছে, কিন্তু বৈধকরণ করা হয়নি।

কথামালা।

১০

ময়ূরগণ, দেখিবা মাত্র, তাহাকে দাঁড়কাক বলিয়া চিনিতে পারিল, সকলে মিলিয়া, তাহার পাখা হইতে, এক একটি করিয়া, ময়ূরপুচ্ছগুলি তুলিয়া লইল, এবং তাহাকে নিতান্ত অপদার্থ জান করিয়া, এত ঠোকরাইতে আরম্ভ করিল যে, দাঁড়কাক, জ্বালায় অঙ্গীর হইয়া, পলায়ন করিল। অনন্তর, সে পুনরায় আপন দলে মিলিতে গেল। তখন, দাঁড়কাকেরা উপহাস করিয়া কহিল, অরে নির্বোধ! তুই ময়ূরপুচ্ছ পাইয়া, অহকারে মত হইয়া, আমাদিগকে ঘৃণা করিয়া ও গালাগালি দিয়া, ময়ূরের দলে মিলিতে গিয়াছিলি; সেখানে অপদার্থ হইয়া, আবার আমাদের দলে মিলিতে আসিয়াছিস। তুই অতি নির্লজ্জ। এই ক্লেপে যথোচিত তিরক্ষার করিয়া, তাহারা সেই নির্বোধ দাঁড়কাককে তাড়াইয়া দিল।

যাহার যে অবস্থা, সে যদি তাহাতেই সন্তুষ্ট থাকে, তাহা হইলে, তাহাকে কাহারও নিকট অপদার্থ ও অবমানিত হইতে হয় না।

কথামালা। ১৩
ময়ূরগণ, দেখিবা মাত্র, তাহাকে দাঁড়কাক বলিয়া চিনিতে পারিল, সকলে মিলিয়া, তাহার পাখা হইতে, এক একটি করিয়া, ময়ূরপুচ্ছগুলি তুলিয়া লইল, এবং তাহাকে নিতান্ত অপদার্থ জান করিয়া, এত ঠোকরাইতে আরম্ভ করিল যে, দাঁড়কাক, জ্বালায় অঙ্গীর হইয়া, পলায়ন করিল। অনন্তর, সে পুনরায় আপন দলে মিলিতে গেল। তখন, দাঁড়কাকেরা উপহাস করিয়া কহিল, অরে

Competition to proofread historical Bengali books digitised through the Two Centuries of Indian Print project, using Wikisource in partnership with the West Bengal Wikimedians User Group and the Bengali Wikisource community, to create perfect transcriptions of the books.

<https://blogs.bl.uk/digital-scholarship/2021/03/wikisource-competition-to-proofread-indian-books.html>



The British Newspaper Archive is a partnership between the British Library and Findmypast to digitise and provide access to the British Library's vast collection of British newspapers containing most of the runs of newspapers published in the UK since 1800.

<https://www.britishnewspaperarchive.co.uk/>
<https://blog.britishnewspaperarchive.co.uk/>

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Collection guides

Digitised printed books (18th-19th century)



Concise Guide to London, with map, etc. 1885

PRICE SIXPENCE
CONCISE GUIDE
TO LONDON AND ENVIRONS

Printed books digitised in partnership with Microsoft from the 18th & 19th century

About the collection

In partnership with Microsoft, the British Library has digitised, and made freely available under [Public Domain](#)

Related guides

- The King's Library**
The collection of George III includes thousands of books and pamphlets
- Datasets for content mining**
Content suitable for use in text and data mining research
- Datasets for image analysis**
Image collections suitable for large-scale image-analysis-based research
- Italian printed collections**
Our Italian collections cover all periods and a wide variety of subjects
- Portuguese printed collections**
Contemporary and antiquarian material, including 225 books published in Portugal before 1601
- German printed collections**
Early and modern material printed in the German-speaking countries

<https://www.bl.uk/collection-guides/digitised-printed-books>

Digitised printed books

In partnership with Microsoft, the British Library digitised, and made freely available under Public Domain Mark, over 60,000 volumes (around 25 million pages) of out of copyright 18th & 19th century texts.

Items within this collection cover a wide range of subject areas including geography, philosophy, history, poetry and literature and are published in a variety of languages.

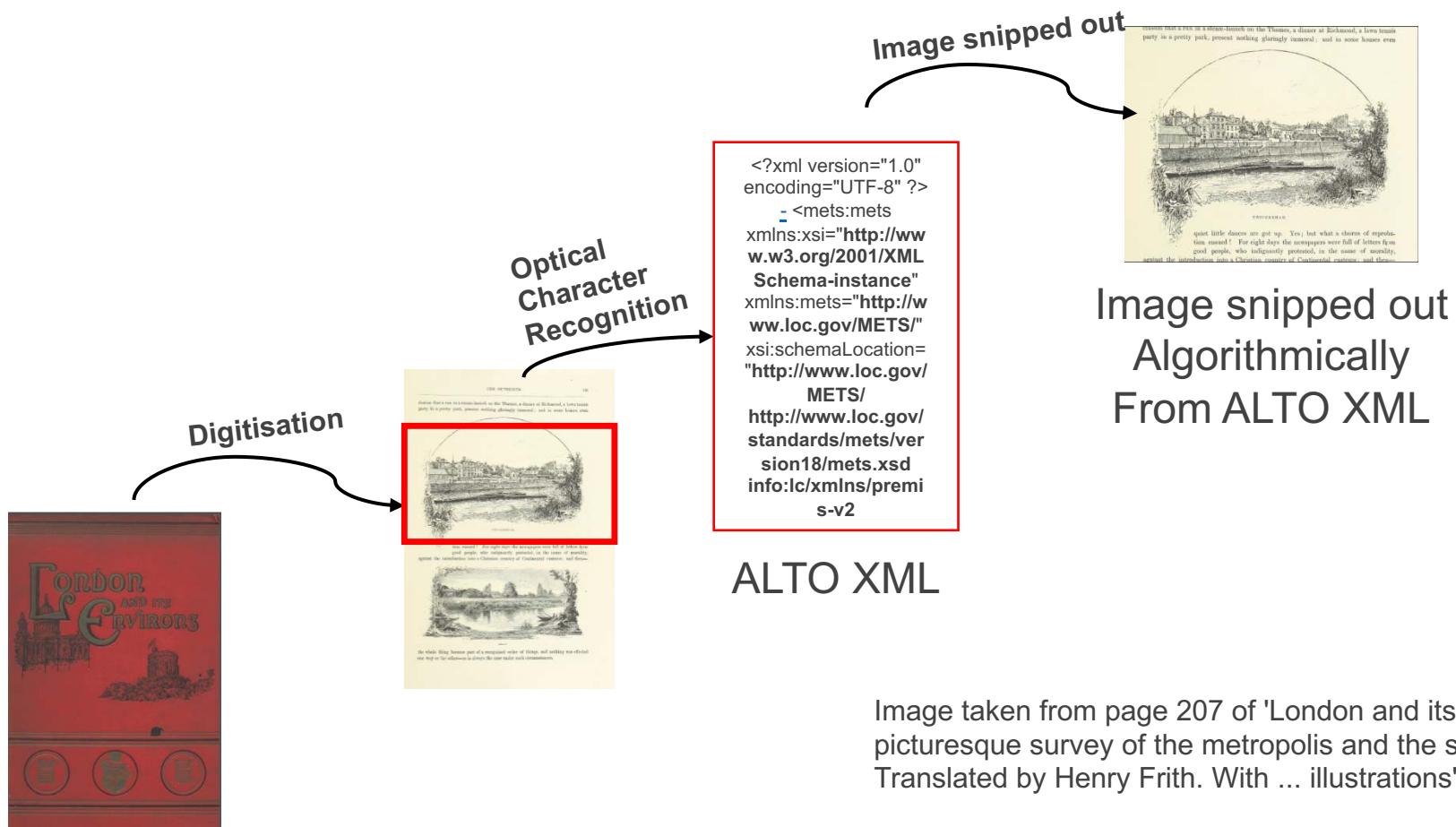
All volumes are available for view, download and full-text search from the British Library Catalogue via the Library's IIIF standard enabled Universal Viewer.

Use the search term "blmsd" to limit results to this specific collection.

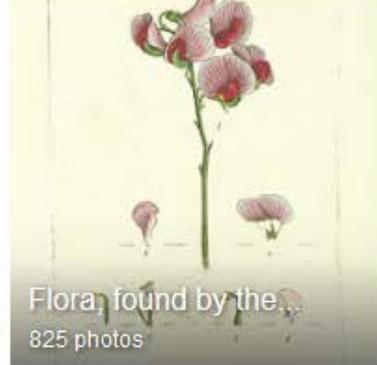
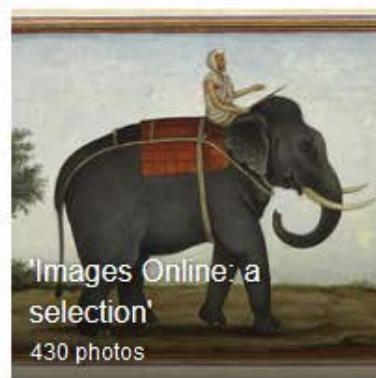
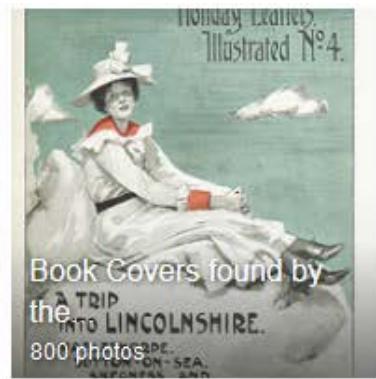
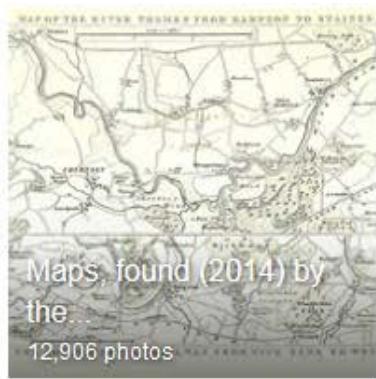
Over 1 million images extracted from the book pages can be found on British Library's Flickr channel.

<https://www.bl.uk/collection-guides/digitised-printed-books>

Book illustrations were extracted algorithmically from the digitised books
<https://blogs.bl.uk/digital-scholarship/2013/12/a-million-first-steps.html>



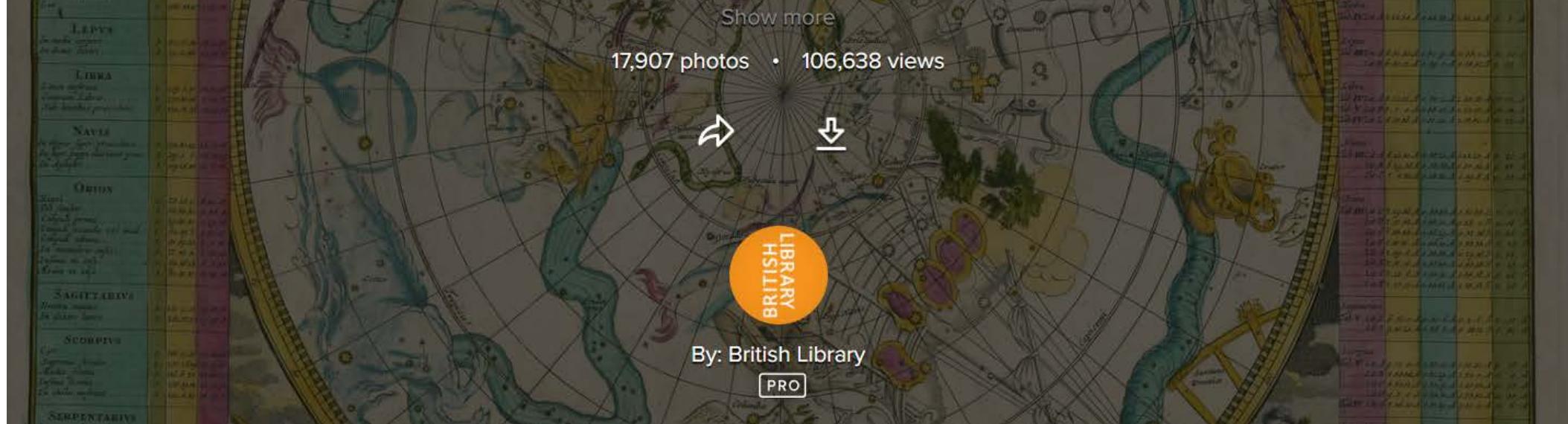
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Book illustrations were uploaded to Flickr and albums were created through crowd-sourced tagging
<https://www.flickr.com/photos/britishlibrary/albums>

King's Topographical Collection

The Topographical Collection of George III contains drawn and printed maps, views and atlases produced between 1500 and 1824. The entire collection can be accessed



<https://www.bl.uk/collection-guides/king-george-iii>

King's Topographical Collection Album with 18,000 images on the British Library's Flickr Commons space:

<https://www.flickr.com/photos/britishlibrary/albums/72157716220271206>



British Library

PREMIUM

London, United Kingdom

The British Library is the national library of the United Kingdom and the largest library in the world by number of items catalogued.

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Willem Janszoon Blaeu Celestial Globe 1602

10k 5 28



Willem Janszoon Blaeu, Terrestrial Globe, 16...

1.2k 0 6



Thomas Tuttell Celestial Globe C1700

2.5k 0 6

<https://sketchfab.com/britishlibrary/collections/bl-globes><https://www.bl.uk/maps/articles/european-globes-of-the-17th-and-18th-centuries><https://www.bl.uk/press-releases/2020/march/digital-globes>LIBRARY
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EThOS

Free access to UK
doctoral theses

e-theses online service

<http://ethos.bl.uk>

Rob Sherman: multimedia PhD research



Rob is a PhD candidate with both Bath Spa University's department for digital writing and the University of Bath Human-Computer Interaction department. He is investigating the application of technical, psychological and artistic techniques to the creation of interactive characters.

Published date: 22 September 2016

Rob is using a practice based approach to his PhD research to look at how we generate characters for storytelling, particularly in digital or computational technologies - and how that differs from traditional techniques.

As his PhD is practice based he will produce a small written thesis alongside a main body of practice work. The practice will involve creating a digital simulation of a character and a textual version of that character alongside it. The two versions will interact: reading the textual version to the simulated version will cause the latter change in different ways. Rob plans pull in online data, including geolocation and time data in the character development.

Rob has given careful consideration to the legacy of his PhD multimedia work. An earlier published work, the *Black Crown project*, was removed suddenly by its publisher and archived – Rob does not know whether the work would still be playable or is now simply a collection of files. And as a writer in residence for the British Library, he has explored the legacy of archives and how information can be warped, tainted or decayed. Although just beginning his PhD, he is already planning the preservation and future access of his multimedia research and practice. At present Rob does not feel his university library has a plan for storing and making accessible his multimedia research. He feels this is mainly due to the demands of rapidly evolving hardware and software options, and the fact that multimedia research outputs are a relatively new issue in the assembly of the PhD thesis.

"I'm not relying on the university to archive it. I think I'm probably better placed to understand what my work needs. It's not just one entry in an online repository, it's part of my life which I need to keep going, I feel."

<https://www.bl.uk/case-studies/rob-sherman>

EThOS & Multimedia PhD Theses

Coral Manton's research placement investigated multimedia and non-text PhD research outputs and how EThOS might develop to meet the challenge of evolving digital theses. She interviewed doctoral students from various disciplines as case studies
<http://blogs.bl.uk/digital-scholarship/2016/09/multimedia-phd-research-and-non-text-theses.html>

Sam Martin: multimedia PhD research



Sam is a PhD candidate at the University of Warwick Centre for Interdisciplinary Methodologies. Her PhD explores how people with coeliac disease and other illnesses use social media to share and visualise their experience of self-care. Her thesis will include two smartphone apps which help younger patients learn about self-care through games-based learning, and older patients visualise chronic symptoms via a photo editing tool.

Published date: 19 September 2016

I wanted my thesis to explore how research could make an impact in the world of chronic illness via technology, combining e-learning, web and application development

Key points

- Doctoral theses today are unlikely to consist solely of a written text-based thesis. Many also include multimedia items such as websites, creative outputs, sound files or computer games
- Rob's "thesis" will largely take the form of interactive story characters, supported by a smaller critical analysis in written form
- Doctoral students and libraries need to think about how non-text outputs will continue to be made accessible for future researchers.

In her PhD Sam is exploring how people with coeliac disease share their symptoms and self-management of the disease on social media. She is doing a comparison between the US and the UK, and also looking at how people visualise the complications around self-care. Sam's research does more than contribute new knowledge to her academic discipline; through the apps she's developed she is helping people within the coeliac community talk about and manage their symptoms.

She is achieving this through analysing the most used hashtags on Twitter and Instagram, and uses co-occurrence hashtag analysis to understand the bigger conversations around symptoms, diagnosis and co-morbid illnesses. She has taken the data and interpreted it into interactive social networks. And she has used some of the results to create two apps as a service for the coeliac and wider chronic illness community.

One of these is the *Spoonie Living App*. This studies how people can visualise the symptoms of often invisible chronic illnesses like coeliac disease and IBS in a more focused way. Users can add illness-specific stickers to images of themselves or their environment, and then share it across different social networks.

The app has already been used quite widely by people suffering from two or more illnesses including coeliac disease - and has so far had over 1,000 images shared across Instagram,

<https://www.bl.uk/case-studies/sam-martin>

Key points

- The nature of PhD theses is changing - Sam is producing phone apps and social media files as well as a traditional written thesis in the course of her PhD
- But the presentation of her multimedia work, and long-term access to it, may be limited to screenshots and links to the apps in app-stores.
- The British Library needs to think about multimedia PhDs as we index all UK theses in EThOS, the national thesis service.



Alfred Cort Haddon 1898 Expedition (Torres Strait and New ...



Phonograph, Hula. A group of children from Hula,...



RAI Bougainville Cylinder Collection [C83]



Wax cylinder from the Alfred Cort Haddon 1898 E...



Wax cylinder inside its box. Pa...



Daniels Ethnographical Expedition to New Guinea...



An Edison Home phonogra...

True Echoes is a British Library Sound Archive research project that aims to reconnect an archive of digitised wax cylinder recordings of Oceanic cultures with the communities from which they originate.

These recordings were created using phonographs in Papua New Guinea, Solomon Islands, Vanuatu, New Caledonia and Australia between 1898 and 1918, they represent some of the earliest uses of sound in anthropological research.

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View and listen to television and radio news programmes broadcast in the UK since May 2010

Available from twenty-two UK and international news channels, with more programmes added daily

The channels from which we currently select are:

Television: Al Jazeera English, BBC One, BBC News, BBC Parliament, BBC Two, BBC Four, Bloomberg, Channel 4, CNN, CCTV News, France 24, ITV1, NHK World, Russia Today, Sky News

Radio: BBC London, BBC Radio 1, BBC Radio 4, BBC 5 Live, BBC World Service, LBC, talkSport

Advanced word searching by subtitles available for some television channels

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Subtitles

0:00:12	AHOW
0:00:13	Angry mobs strike shops and
0:00:15	businesses. Cars set on fire while
0:00:17	armoured vehicles are deployed to
0:00:20	tackle the disorder, with police
0:00:23	and

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Programme title:
Sky News : UK Riots . Part 11

Start date:
09/08/2011 00:00:00

Channel:
Sky News

End Date:
09/08/2011 11:00:00

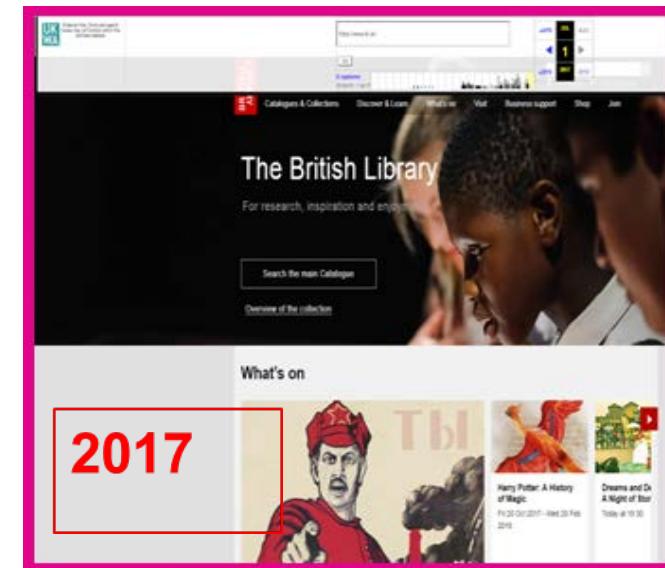
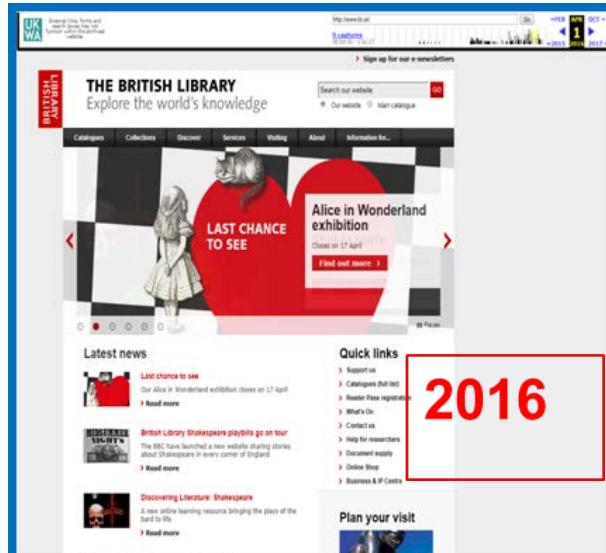
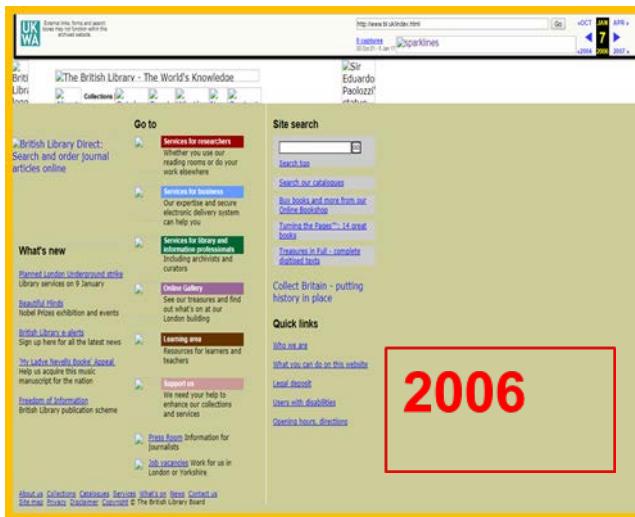
The Broadcast News service records and delivers access to television and radio news programmes from 31 channels receivable free-to-air in the UK.

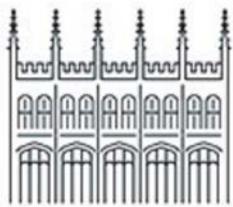
Recording began officially on 6 May 2010 and there are over 175,000 programmes available, with around 60 hours added each day, available immediately after broadcast.

<https://www.bl.uk/collection-guides/television-and-radio-news>

LIBRARY BRITISH

Web archives

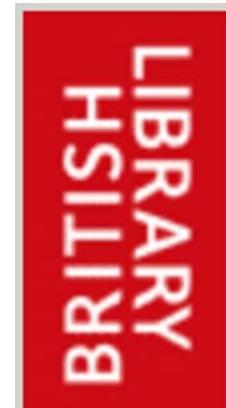




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Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



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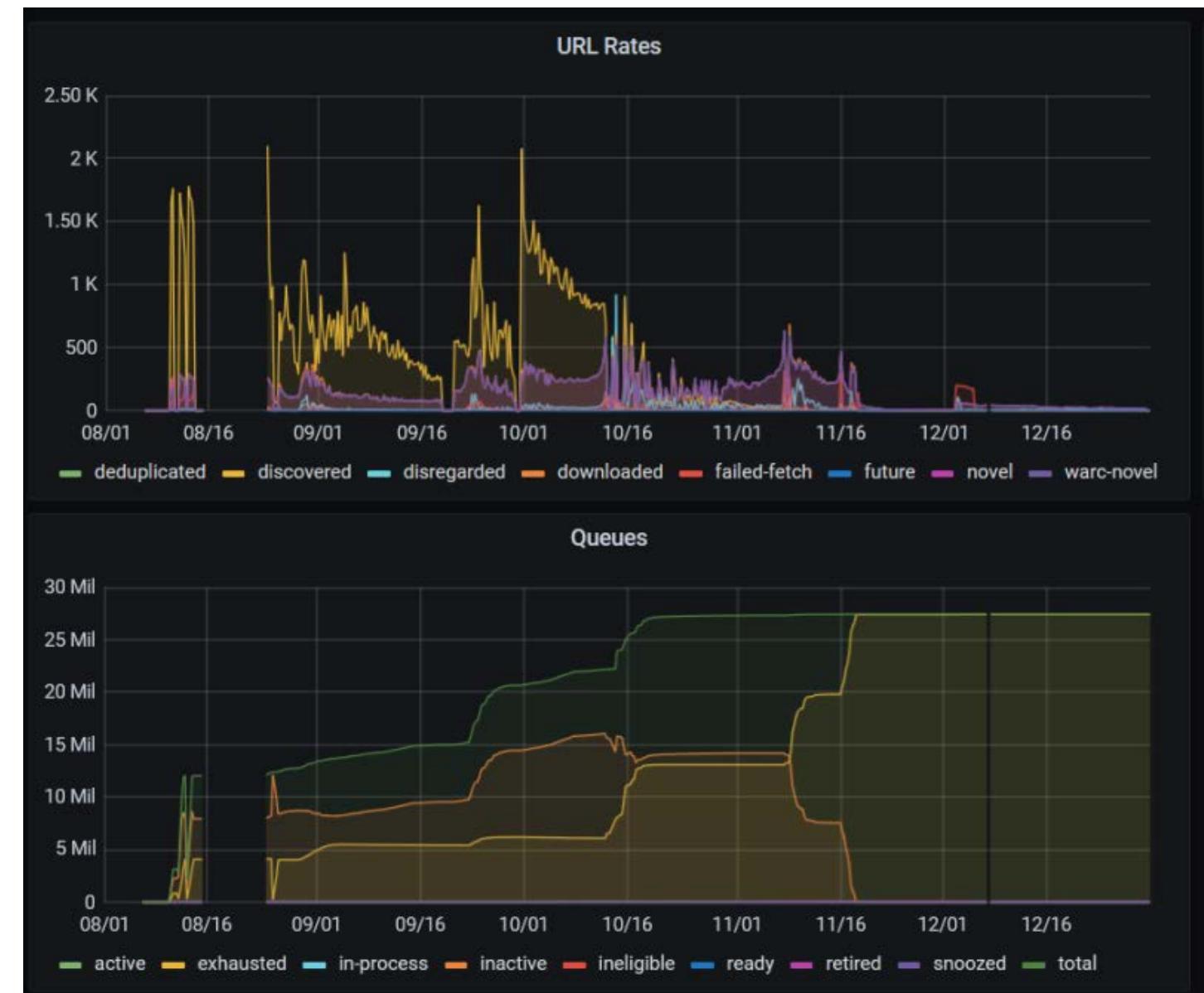
The British Library has been collecting websites since 2005, initially on a selective basis and since 2013 at a ‘whole domain’ level. Vast majority is acquired under the Non-Print Legal Deposit Regulations 2013.

The UK Web Archive uses two different methods: automated ‘Annual Domain Crawls’ and ‘Frequent Crawls’. Once per year since 2013 UKWA have attempted to collect as much of the UK based web space as possible, ingesting millions of websites. ‘Frequent crawls’ represent target websites that have been selected by a person, usually a curator.

<https://www.bl.uk/collection-guides/uk-web-archive>

<https://www.webarchive.org.uk/>

UK Web Archive Annual Report
April 2020 - March 2021
<https://doi.org/10.23636/m93k-xj25>



<https://blogs.bl.uk/webarchive/2022/01/ukwa-2021-technical-update.html>

Other web archiving organisations:

UK Government Web Archive is maintained by the National Archives

<https://www.nationalarchives.gov.uk/webarchive/>

UK Parliament Web Archive provides access to previous versions of the parliamentary website and related external and legacy websites

<http://webarchive.parliament.uk/>

Internet Archive is the largest and longest-running open-access archive of web content and its collections span web publishing across the world

<https://archive.org/>

International Internet Preservation Consortium (IIPC) provides a list of organisations and national libraries around the world that maintain web archives.

<https://netpreserve.org/>

British Library Born Digital Archives Collections



- The Library's Contemporary Archives and Manuscripts Department currently holds 40 individual born digital archives, taking up around 4TB of storage space.
- We mostly collect the personal and professional archives of prominent individuals whose work has made a significant impact on social, cultural, artistic or intellectual life in the United Kingdom. (Novelists, poets, dramatists, scientists, politicians, and activists)
- The vast majority of these form part of larger hybrid archives, containing paper material too.
- These collections arrived at the Library on a wide-variety of carriers charting the history of personal computing, from early magnetic media to SSDs.

<https://blogs.bl.uk/english-and-drama/2020/04/born-digital-literary-archives-how-were-archiving-the-future.html>

British Library Born Digital Archives Collections

- Carmen Callil Publisher, Writer and Critic, Founder of Virago Press (1938-)
- Wendy Cope, Poet (1945-)
- Hanif Kureishi, Novelist, Screenwriter (1954-)
- Andrea Levy, Novelist (1956-2019)
- John Maynard Smith, Evolutionary Biologist (1920-2004)
- Donald Michie, Artificial Intelligence Researcher (1923-2007)
- Anne McLaren, Developmental Biologist (1927-2007)
- Will Self, Novelist (1961-)

British Library Born Digital Archives Workflow

- We use a SPEKTOR Ultra Digital Forensics machine to appraise archival material held on hard-drives and computers off-site. SPEKTOR automatically flags some sensitive content such as passwords and financial information and gives us a quick sense of the collection.
- We assess other carriers (CDs, Floppy Disks, other magnetic media) visually and – where material is deemed to be ‘non-archival’, for instance system disks or commercial software – we return this to the donor.
- Upon acquisition, flash storage and computers are forensically captured using SPEKTOR Ultra on-site at the Library.
- Optical carriers (such as CDs and DVDs) are captured in .iso format.
- Magnetic carriers (such as Floppy Disks) are captured by BL Digital Preservation at bit-level using Kryoflux.
- All Captures are ingested into our Minimum Preservation Tool for backup and regular fixity checking.
- Carriers are labelled and moved to long-term storage.

Enhanced Curation: Hanif Kureishi's writing study

<https://www.bl.uk/collection-items/hanif-kureishis-writing-study>

Panoramic view of writer Hanif Kureishi's study created by taking a series of photographs of the room and digitally stitching them together to make one image.



Thank
you

stella.wisdom@bl.uk





Digital Collections and EMKP

Dr Paula Granados, EMKP Digital Curator

pgranadosgarcia@britishmuseum.org

@Paula_LGG

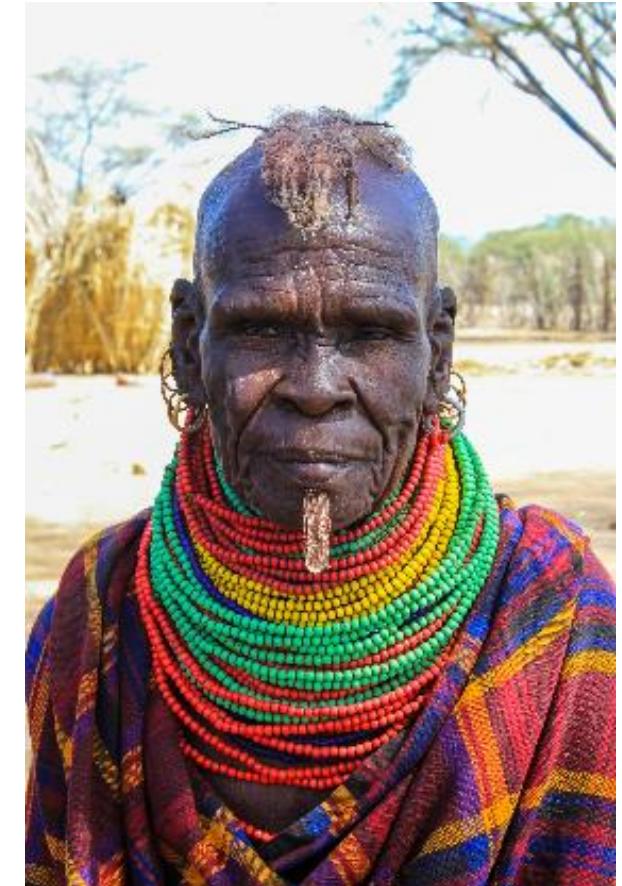


Urhobo women making rope and broom by Akpobome Diffre-Odiete, EMKP Grantee 2019



Contents:

1. Digital curation and challenges
2. EMKP background and intro to the Programme.
3. EMKP digital strategy (metadata, digital repository, preservation)
4. Challenges and concerns (open access, ethical considerations, digitally born cultural heritage, data accessibility).
5. Technical responses to the challenges.



Apprehending *asapan*: documenting the Turkana initiation ceremony by Sam Derbyshire

Digital Curation



Digital Curation: “the management and preservation of digital objects/data/information over the long-term. Digital curation involves maintaining, preserving and adding value to digital research data throughout its lifecycle.”





Preservation

- Data ingestion/digitization
- Data management plans (DMP).
- Data selection and collection.
- Ethics and Licensing (Open access research and open data (FAIR principles)).

Curation

- Digital repository management.
- Data accessibility
- Facilitating the appropriate degree of access to users.
- Data preservation and maintenance.
- Mitigate digital obsolescence.

Dissemination

- Accessibility and sharing
- Editorial Work
- Digital exhibitions
- Promotion/ valorisation of both the digital asset and the collection.
- Non-specialist engagement.

THE CHALLENGES OF DIGITAL COLLECTIONS



- No shared workflows for the curation of digital objects.
- More urgent issue after Covid 19 – digital collections have emerged without a clear action and preservation plan.
- Little previous experience in the musealisation of digital objects.
- Specific ephemeral and socially constructed nature that make it extremely difficult to capture in a memory institution.
- Some of them lose or not even have a material dimension.
- Tension between managing control and providing access.

Endangered Material Knowledge Programme



Community members stand outside Oga Pysy in preparation for Jerosy Puku ritual (Photo: Fabiana Fernandes)

- Launched in 2018 with funds from Arcadia (a charitable fund of Lisbet Rausing and Peter Baldwin) and based at the British Museum.
- Provides grants for projects documenting material knowledge systems under threat or in danger of disappearing.
- Projects required to produce detailed documentation of the processes and practices involved.



What is material knowledge?



CHI Monivong's tools for making Angkuoch Russey (bamboo Jew's harp). (Photo: Catherine Grant, 6 January 2020)



Unfinished Angkuoch Russey instruments (bamboo Jew's harps), put out to dry in the sun by CHI Monivong. (Photo: Catherine Grant, 6 January 2020)



Chi Monivong makes bamboo angkuoch, January 2020



What is material knowledge?



KRAK Chi playing Angkuoch Russey (bamboo Jew's harp).
(Photo: Catherine Grant, 5 January 2020)



KRAK Chi making Angkuoch Russey (bamboo Jew's harp).
Photo: Catherine Grant, 5 January 2020.

EMKP GRANTS

50 grants awarded in 35 countries



Digital Outcomes



Documenting Knowledge holders, Rowa Island, Vanuatu (Photo: S. Doyle)

- All records from grantees must be digital (audio-visual, audio, photographs, 3D, geospatial, written etc)
- Hosted in Open Access repository by the British Museum
- Preserved for future generations to remember and learn

Challenges of EMKP digital collection



Faith Nguzo, Research assistant recording audio in Kenya, by Patrick Maundu.

1. Born digital content & large quantities of data

- Large grants – up to 1TB data; 22 large grants currently running and due to deliver in next 2 years
- Significantly large collection of digital assets to store and preserve
Repository developed in response to EMKP



First menarche ceremony, Namibia, by Velina Ninkova.

2. Ethical considerations

- Standard considerations as relating to individuals and protecting their rights to intellectual property and GDPR
- Essential to recognise specific and compelling needs of communities around data control and access – e.g. secret knowledge or restricted access knowledge (based on e.g. gender, age, status, profession, season), and need to be reflexive – rights can change according to circumstance (e.g following death of an individual)

Challenges of EMKP digital collection



Team members collecting data in Mouhoun region of Western Burkina Faso by Laurence Douny and Salif Sawadogo

3. Appropriate data collection and management

- Balancing need for rigorous and robust data management system that ensures viable long-term preservation and usability/inter-operability with need to reflect indigenous or community generated knowledge systems
- Naming conventions for example need to be closely considered

Challenges of EMKP digital collection



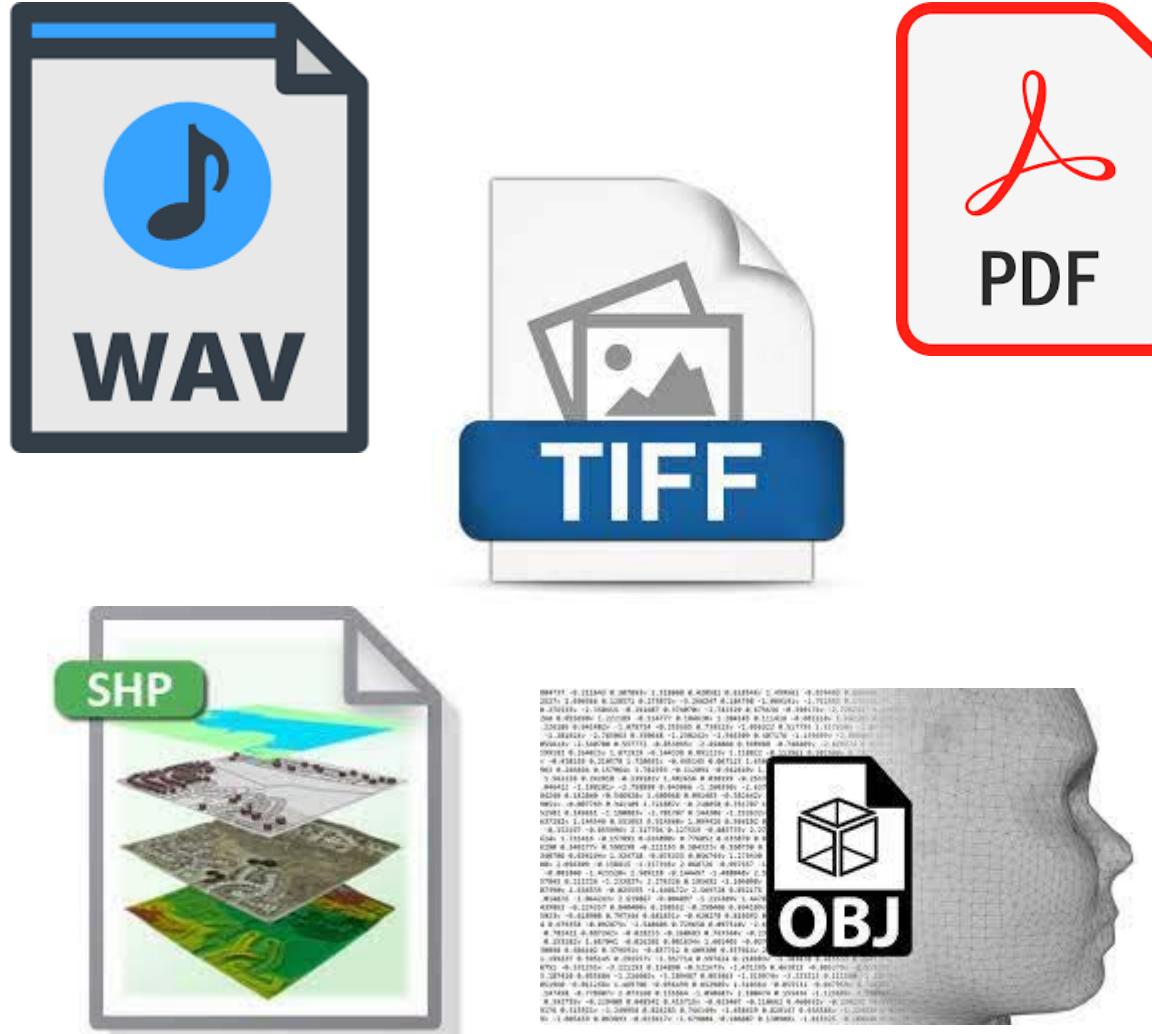
Discussing Angkuoch (mouth harp) in Cambodia by Catherine Grant.

4. Looking to the future

Projects are starting to deliver results for publishing on Figshare repository

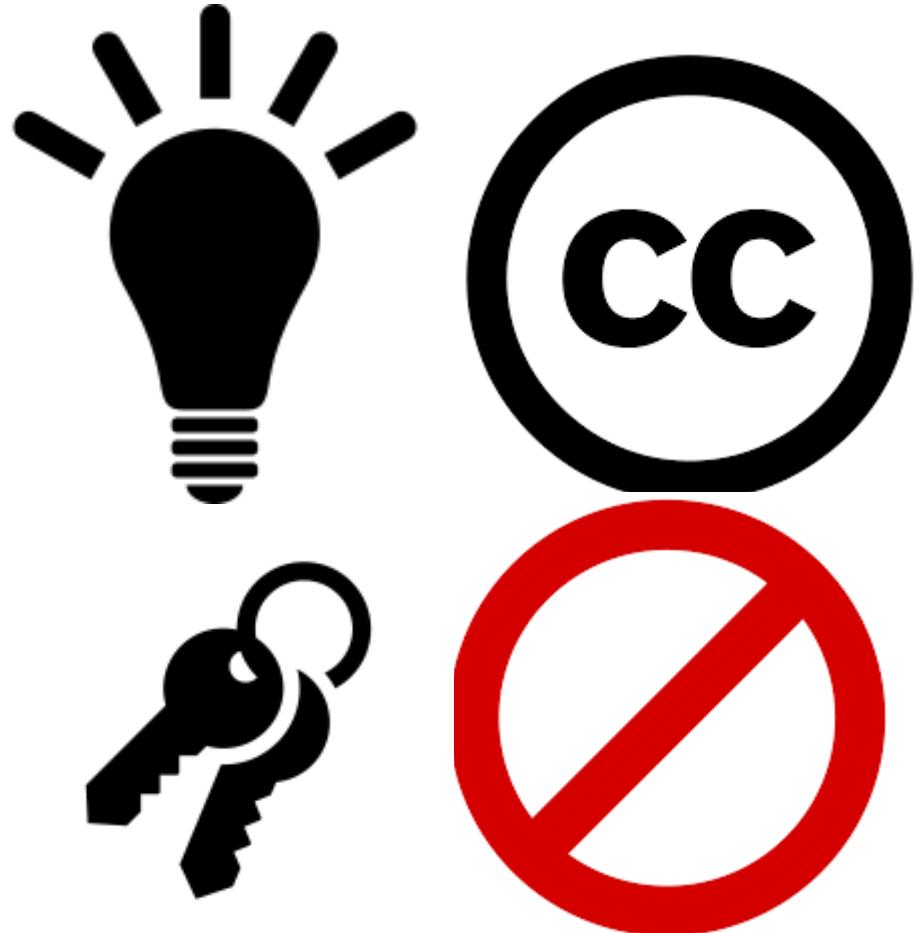
- Responsibility to ensure that assets are available to normal academic audiences, BUT ALSO to non-traditional audiences, including communities and knowledge holders themselves who may not be familiar with grammar or procedure of academic searches.

Technical responses to the challenges



1. Born digital content & large quantities of data

- Support of varied range of media in non proprietary formats (video, audio, GIS, photo, text, 3D modelling)
Possibility to visualise/render maps and 3D?
- Large storage capacity to preserve and provide accessibility to the data.
- Bulk upload of the project data using a GUI interface “Figshare Uploader” developed by Exeter University.



2. Ethical considerations

- Robust workflow to manage data and assess by team prior to ingest and publication.
- Access restriction. Open access is a western conception. Different levels of knowledge can be accessed by different groups by gender, age, community idiosyncrasies.
- FAIR and CARE principles (Collective benefit, Authority to control, Responsibility, Ethics).
- GDPR and compliance with personal information regulations.

Technical responses to the challenges



EMKP METADATA SCHEMA_Spreadsheet.xlsx												
Identification		Scope and content					Geography					
1	Unique ID dc:identifier	Format Type dc:format	Title dc:title	Title alt dc:title	Description dc:description	Description alt dc:description	Session dcisPartOf	Keywords	Country dc:spatial	Region dc:spatial	Place name dc:spatial	
2	Enter file name	File format of asset	In English	In local language	In English	In local language	Alphanumeric identifier of group of recordings and documents the asset belongs to	Up to five keywords	Where was the asset recorded/created			
3	Mandatory	Mandatory	Mandatory	Optional	Mandatory	Optional	Optional	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
4												
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34												

3. Appropriate data collection and management

- New ad hoc metadata schema tailored for projects needs.
- Provides information beyond what is visible in (audio-)visual datasets.
- Multilingual
- Preserves community understandings of place, space, time, and social structure.

THANK YOU

Dr Paula Granados Garcia
Digital Curator EMKP, the British Museum
pgranadosgarcia@britishmuseum.org



The British
Museum

Digital Heritage Collections

Collecting emerging formats, including
web-based interactive narratives and
mobile apps

Stella Wisdom, Digital Curator



@miss_wisdom

Blog: <http://britishlibrary.typepad.co.uk/digital-scholarship/>



What are
Emerging
Formats?

- Born-digital with no print counterpart
- Often consist of more than one media type
- Comprised of non-standard format and metadata types
- Not typically part of existing collections
- At risk of rapid obsolescence

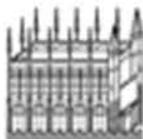
Source: Caylin Smith and Ian Cooke (2018) “Emerging Formats: Complex digital media and its impact on the UK Legal Deposit Libraries.” Alexandria: The Journal of National and International Library and Information Issues. <https://doi.org/10.1177/0955749018775878>

UK Non-Print Legal Deposit

- Print legal deposit has existed since 1662
- Digital legal deposit came into effect in 2013
- Allowed the libraries to collect publications in digital formats
- Publishers must provide a digital file that is suitable for long-term preservation
- Onsite access within reading rooms

“The term 'emerging formats' refers to types of publication that are in scope to collect under the UK's Non-Print Legal Deposit Regulations, but whose content and structure are more challenging compared to those currently collected.”

<https://www.bl.uk/projects/emerging-formats>



Bodleian Libraries
UNIVERSITY OF OXFORD

UNIVERSITY OF
CAMBRIDGE

National Library
of Scotland
Leabharlann Nàiseanta
na h-Alba

LLYFRGELL GENEDLAETHOL CYMRU
THE NATIONAL LIBRARY OF WALES



Coláiste na Trionóide, Baile Átha Cliath
Trinity College Dublin
Ollscoil Átha Cliath | The University of Dublin

What we focused on:

1. Book as mobile apps
2. Web-based interactive narratives



Collecting methods

File transfer: with publisher agreement, useful for large and complex publications,
requires engagement and effort from publisher

Download via access code: with publisher agreement, can introduce DRM,
requires a method to transfer to network storage

Web Harvesting: does not require publisher engagement, capability exists in Library, access method is understood, publication must be accessible via web browser, may not be a complete capture

80 Days

- PC Version & Android app
- Source code
- Contextual information



A screenshot of the game's interface showing a menu. It features a map of the world with a focus on Europe and the Middle East. Below the map, there is a list of journeys: 'acapulco_to_neworleans.ink'. The menu includes options like 'Source', 'master', '833266', and 'Full commit'.

```
inke / Untitled project / 80Days
acapulco_to_neworleans.ink

80 Days repo

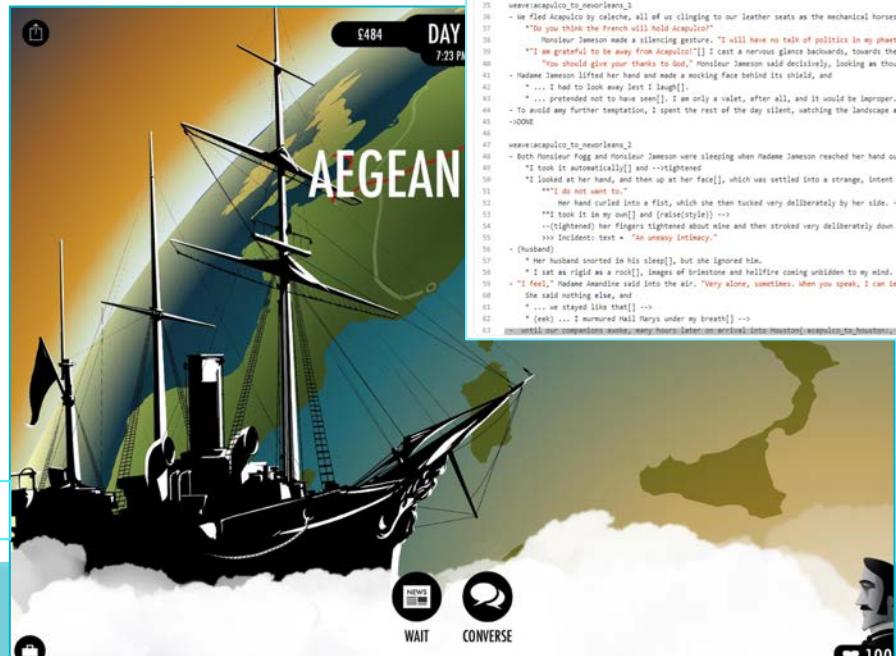
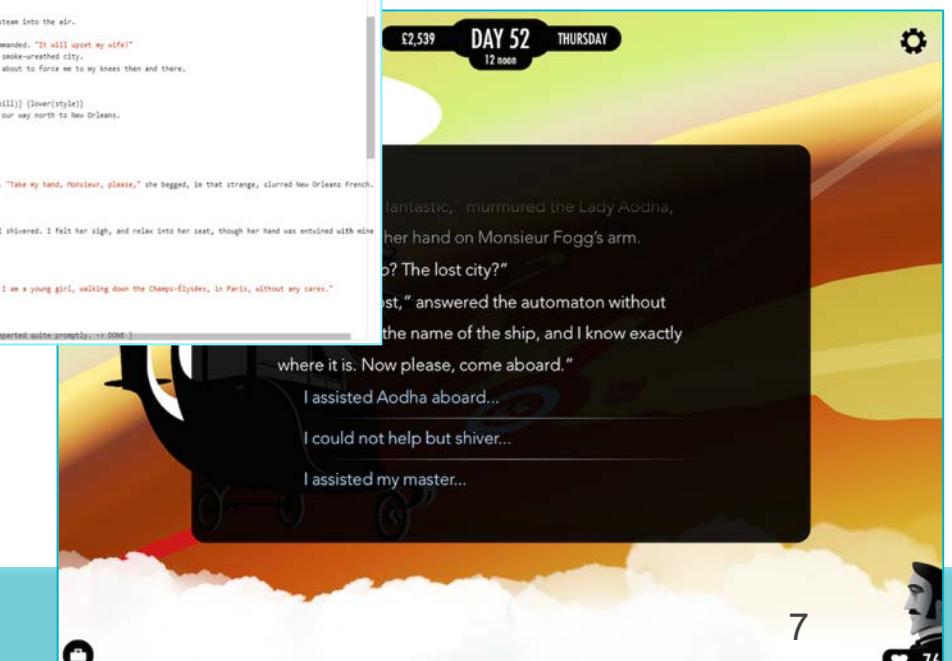
Source master 833266 Full commit

80days / mk / 80days / journeys / acapulco_to_neworleans.ink

Edit ... Pull requests Check out ...

7:23 PM DAY 13 £484 3973/79d Updated a few seconds ago 68

1 user: acapulco_to_neworleans_depart
2 - The calèche we found was not automatic, but occupied by one Monsieur Jasson - American missionary - and Madame Andine Jasson - his white French Creole wife.
3 "I don't know who you fellows are!" Jasson cried, as he clambered aboard amidst the sound of gunfire. "Get yourselves aboard, won't you?"
4 * we did not need to be asked twice[] {lower(style)}
5 * we paused not only to make the necessary introductions[], then jumped into the cab! {raise(style)}
6 --> DONE
7
8 user: acapulco_to_neworleans_1
9 - we fled Acapulco by calèche, all of us clinging to our leather seats as the mechanical horses breathed steam into the air.
10 * "What do you think the French will hold Acapulco?"
11 * "We'll hold it," Monsieur Jasson said. "I will have no lack of soldiers in my phalanx." he commanded. "It will upset my wife!"
12 * "I am grateful to be away from Acapulco." I had a nervous glance back over the bridge, smoke-wreathed city.
13 * "You should give your thanks to God," Monsieur Jasson said decisively, looking as though he were about to force me to my knees then and there.
14 - Madame Jasson lifted her hand and made a mocking face behind his shield, and
15 * ... I had to look away lest I laugh[].
16 * ... pretended not to have seen[], I am only a valet, after all, and it would be improper. {raise(skill1)} {lower(style)}
17 * To avoid any further temptation, I spent the rest of the day silent, watching the landscape as we wound our way north to New Orleans.
18 --> DONE
19
20 user: acapulco_to_neworleans_2
21 - Both Monsieur Fogg and Monsieur Jasson were sleeping when Madame Jasson reached her hand out to me.
22 * I took it automatically[] and --tightened
23 * I looked at her hand, and then up at her face[], which was settled into a strange, intent expression. "Take my hand, Monsieur, please," she begged, in that strange, slurred New Orleans French.
24 * "I do not want to."
25 * Her hand curled into a fist, which she then tucked very deliberately by her side. --ribbed
26 * "I took it in my [ ] and {raise(style)} -->
27 * ... (tightened) her fingers tightened above mine and then stroked very deliberately down my wrist. I shivered. I felt her sigh, and relax into her seat, though her hand was entwined with mine.
28 * Incident text: "An uneasy intimacy."
29
30 user: acapulco_to_neworleans_3
31 - Chuckles filled the cabin.
32 * Her husband snorted in his sleep[], but she ignored him.
33 * I sat as rigid as a rock[], images of briestone and hellfire coming suddenly to my mind.
34 * "I feel," Madame Andine said into the air. "Very alone, sometimes. When you speak, I can imagine that I am a young girl, walking down the Champs-Élysées, in Paris, without any cares."
35 * She said nothing else.
36 * "I feel like that[] --"
37 * "(feel) ... I murmured half-hysterically under my breath[] --> DONE
```



<https://www.inklestudios.com/press/80days>

Lynda Clark



Lynda Clark is a postdoctoral researcher from Nottingham Trent University working with the Digital Scholarship, Contemporary British and Web Archiving teams at the British Library. Her project has been supported through an Innovation Placement funded by the Arts and Humanities Research Council and Midlands 3 Cities Doctoral Training Partnership.

Published date: 29 March 2019

AHRC Innovation Placements allow researchers who have recently completed their PhDs to work with a host organisation outside the Higher Education sector. Placement holders offer their specialist skills to the organisation in exchange for experience of collaborative research in a professional environment. Having recently submitted my PhD thesis on interactive narrative, I was keen to join the Library's pioneering Emerging Formats project to help shape collections policy surrounding interactive web-based works.

My PhD investigated which works might be considered interactive narrative, and the methods creators of interactive fiction (IF) employ in order to build a relationship with their audiences. My thesis included a critical analysis which traced aspects of interactivity from Victorian serials through to modern videogames, plus the creation of an interactive novella with a reader-guided story.

My knowledge of IF creators, works and platforms provided me with a good starting point for collecting works to add to the Library's UK Web Archive. As well as ongoing work on developing an overview of interactive fiction in the UK (which I blogged about for Digital Scholarship), I've also been exploring

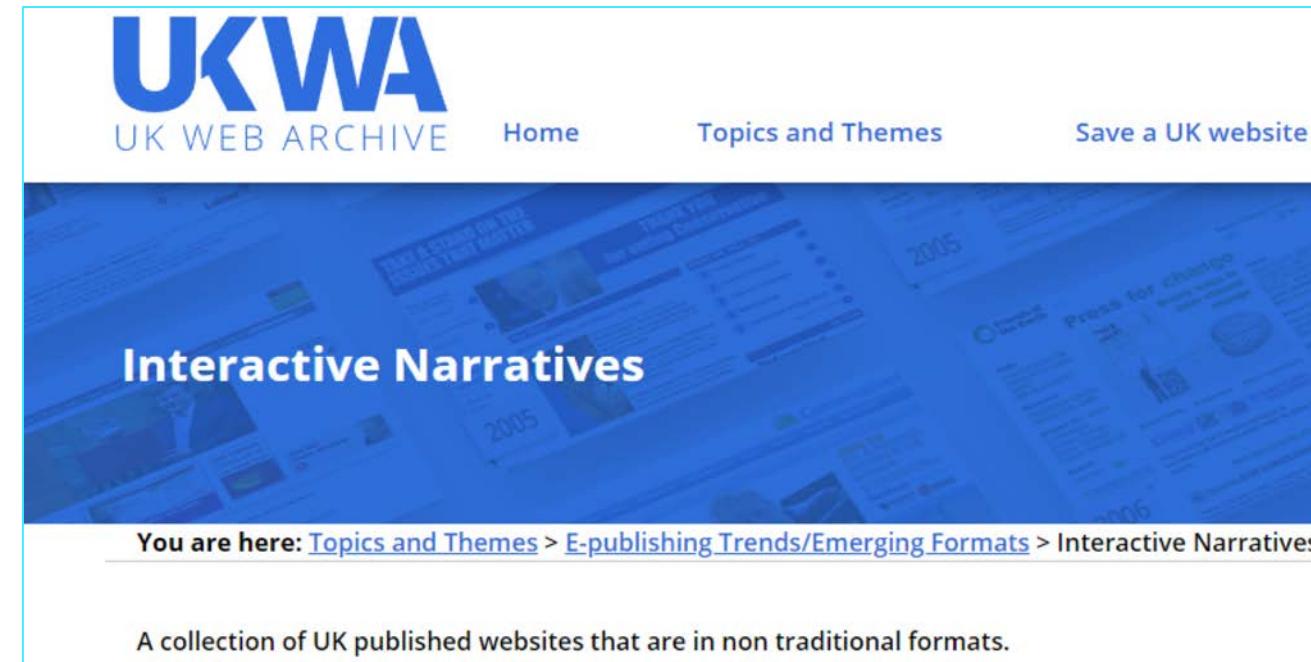
I have particularly enjoyed developing new knowledge of the Library's web archiving work.

Key points

- Lynda's research has explored interactivity in contemporary and historical fiction
- Her fellowship is supporting work to enhance the British Library's collecting of UK digital publications and other emerging formats
- The project includes training in web archiving and behind-the-scenes insight into the curatorial challenges of collecting

Interactive Narratives Collection

- Part of E-publishing Trends/Emerging Formats
- Mix of text, sound and video elements
- Different types of interactions
 - hypertext
 - parser-based
 - choice-based
- Captured with Heritrix + Webrecorder



<https://www.webarchive.org.uk/en/ukwa/collection/1836>

Web archiving tools



HERITRIX

Webrecorder

Collect & Revisit the Web

<https://webrecorder.net/>

LIBRARY
HISTORY
BRITISH

Identifying works

User expectation:

Low awareness among creators, publishers, researchers

Challenges:

No comprehensive directory

Rapid technological change

Our approach:

- Build network of contacts with publishers and content creators
- Engage with researchers and other professionals to share knowledge
- Participate in the interactive narrative and digital media community

Gothic Novel Jam 2018

We received 46 entries submitted by people from all around the world including UK, Australia, America and France.

<https://itch.io/jam/gothic-novel-jam/entries>

itch.io Browse games Game jams Upload game Devlogs Community Search for games or creators Log in Register

Gothic Novel Jam
Hosted by AshG · #GothNovJam

46 Entries

Overview Entries Community 14 Screenshots Submission feed

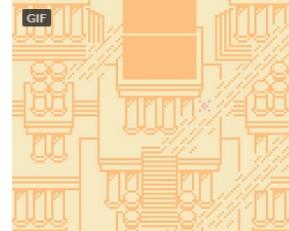
FILTER All submissions Browser playable (26) Windows (11) macOS (4) Linux (5)



The Night is Darkening
A ship crashes on a peculiar isle. 3D Adventure.
LovelyHellplace
Adventure
 



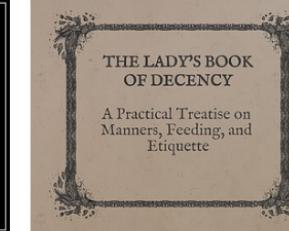
The House of the Living
A Gothic Bitsy Adventure
VonBednar
Adventure
 



a vision of the sublime
in deepest dreams
mark wonnacott




The Tower
a woman lives and gnaws
communistsister
Interactive Fiction

THE LADY'S BOOK OF DECENCY
A Practical Treatise on Manners, Feeding, and Etiquette



The House on the Hill
A Comedihorror for #GothNovJam
Emma Dee
Puzzle




ENDLESS WANDERING
endless wandering?
onion



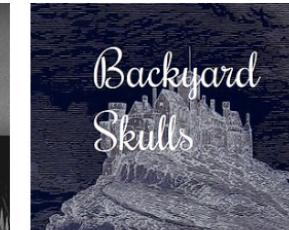
The Unseen Light
A game for Gothic Novel Jam 2018 and #bits...
ducklingsmith




Zugzwang
Explore an old manor where rooms change ar...
Ludipe



The Child of Hagar
It is your child. It lives in the barn. It is hungry. ghoulishkid



Backyard Skulls



Redacted
■ days and ■ hours have passed since yo...
rumpel



Twine is an open-source tool for telling interactive, nonlinear stories.

You don't need to write any code to create a simple story with Twine, but you can extend your stories with variables, conditional logic, images, CSS, and JavaScript when you're ready.

Twine publishes directly to HTML, so you can post your work nearly anywhere. Anything you create with it is completely free to use any way you like, including for commercial purposes.

Twine was originally created by [Chris Klimas](#) in 2009 and is now maintained by a whole bunch of people at [several different repositories](#).



Download 2.3.14
For [Windows](#), [macOS](#), and [Linux](#)
(32-bit)

[Use it online](#)

Version 1.4.2 for [Windows](#) and
[OS X](#) is also available.



Do you love Twine?

[Help support its development!](#)



Cookbook

Reference documentation and examples of common authoring tasks



Discuss

on the Interactive Fiction Community Forum



Discord

live chat with other people using Twine

Twine is an open-source tool for telling interactive, nonlinear stories: <https://twinery.org/>

Collecting works:

User expectation:

Collect complete copies that can stand the passing of time, and can be accessed in a meaningful way (retain the authentic experience and its original context).

Challenges:

- Different versions of the same publication
- Hardware and software dependencies
- Digital Rights Management (DRM)

Our approach:

- Mixed approach to collecting
- Collecting contextual information around a publication
- Recording what we can't collect

Description as a collection method

- Collecting descriptive material to support access, interpretation and preservation
- Especially useful when complete collection wasn't possible or some functionality had been lost
- Descriptive material can include:
 - Press kits
 - Web pages
 - Interview with the author
 - Trailers, videos, screenshots
 - Video capture

inkle about store blog join us press

Press Kit - 80 Days

Press contact: Emily Morganti - pr@inklestudios.com

[Press pages](#) [Overview](#)

inkle
Heaven's Vault
80 Days
Sorcery!



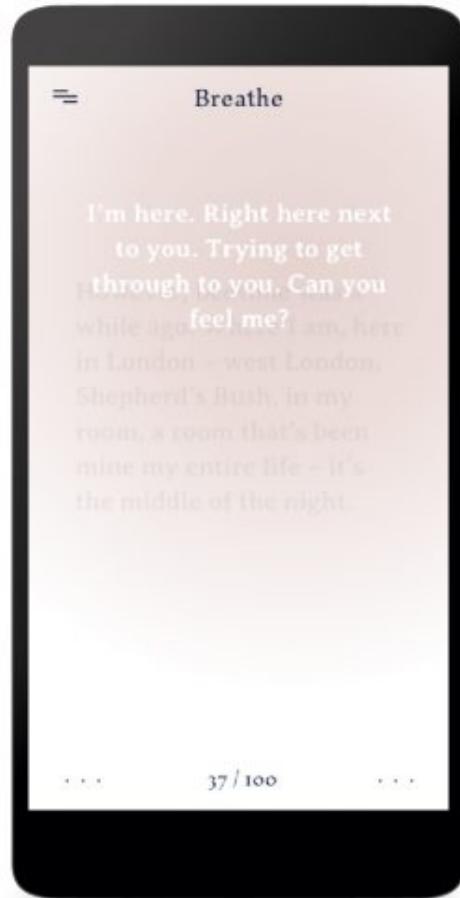
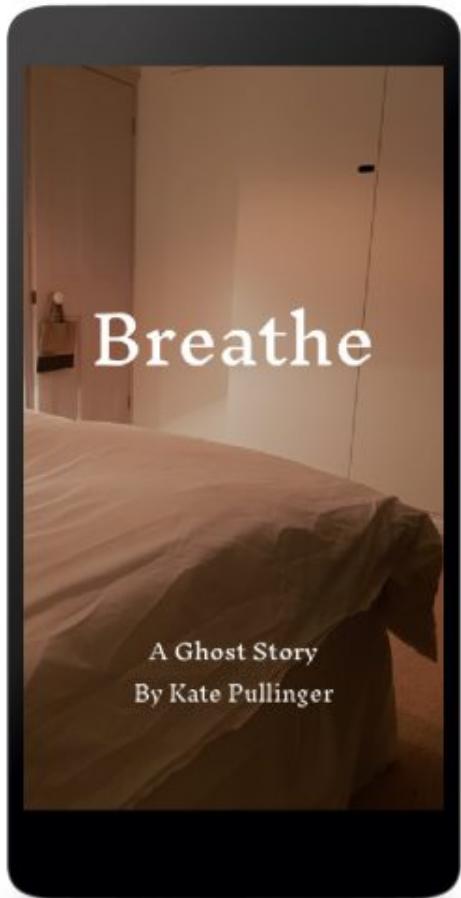
[Download image](#)

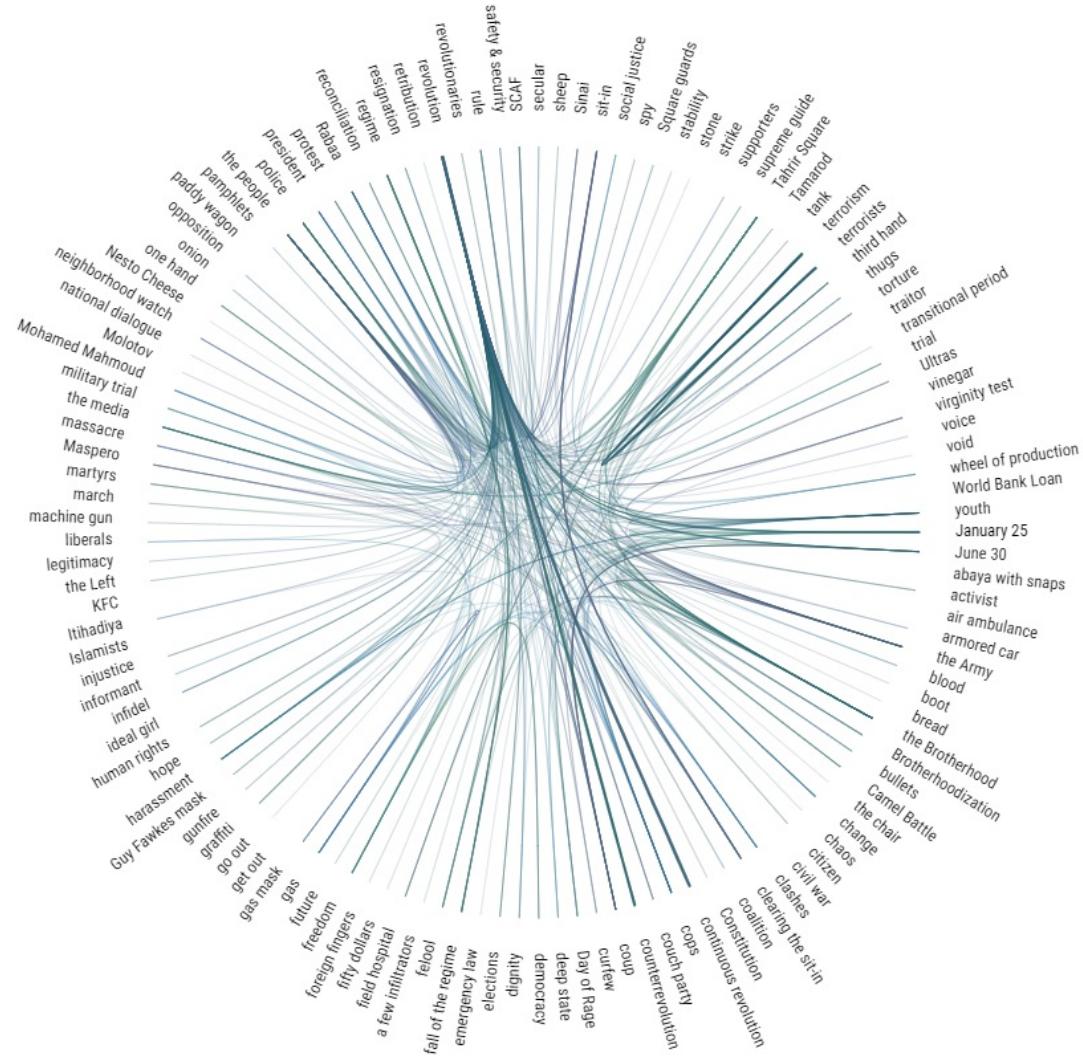
official site: inklestudios.com/80days
platforms: iOS, Android, Nintendo Switch, Steam, GoG, Humble Store.
released: July 31st, 2014 (iOS), December 16th.

<https://www.inklestudios.com/press/80days>

Breathe by Kate Pullinger

<https://ambientlit.com/breathe>





A Dictionary of the Revolution by Amira Hanafi: <http://www.qamosalthawra.com/en>



winter skies

DECEMBER

the rain by day

rarely clear

JANUARY

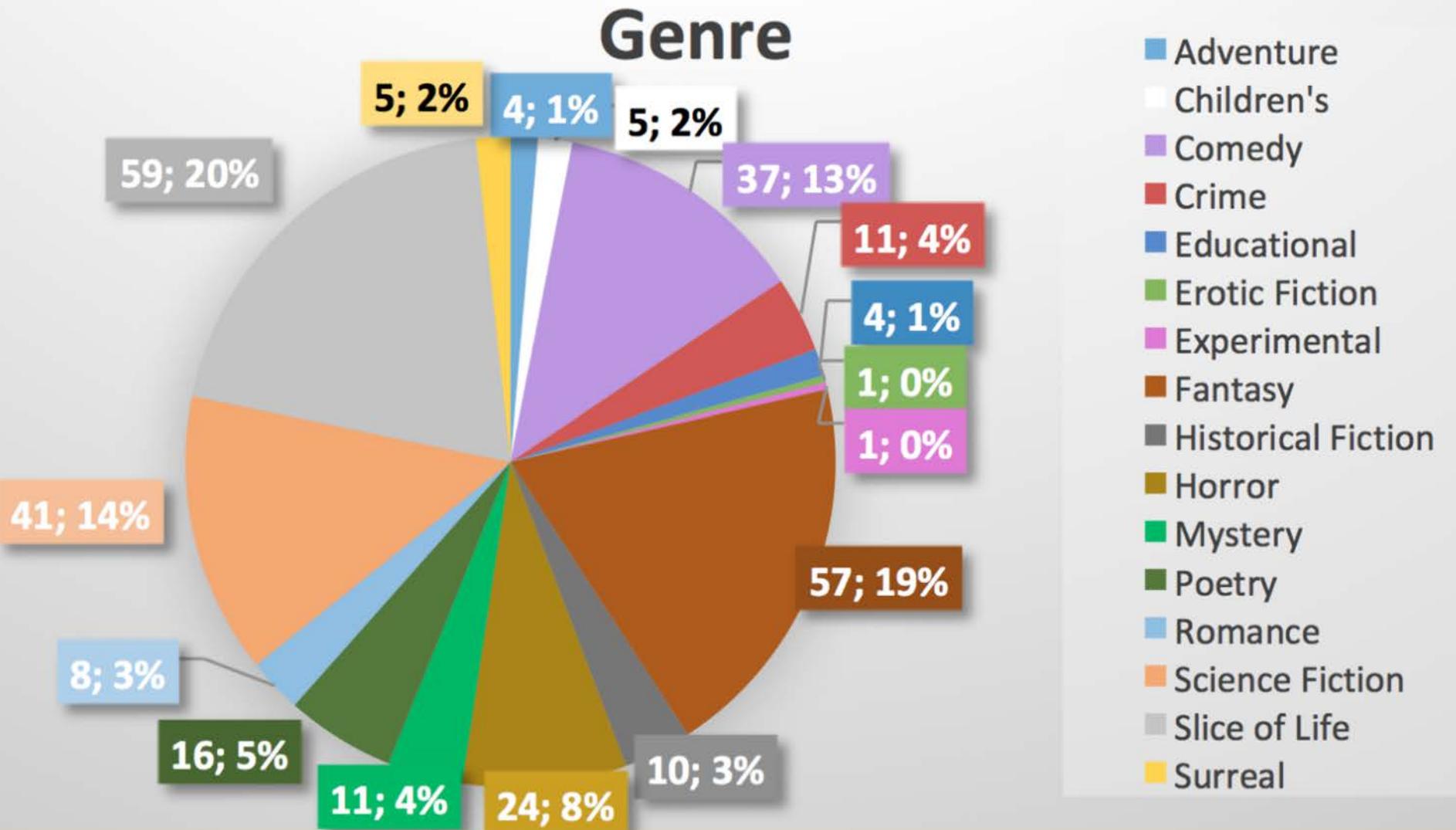
Mists make dangerous travel. The air loaded with freezing particles. Attached to fixed objects. A blade of grass. Some garden shrubs. Spreading tufts of crystals. Gigantic specimens of snow-white coral. An elegant fringe. The rime falls. Transparent. In heaps beneath the trees.

rimo

FEBRUARY

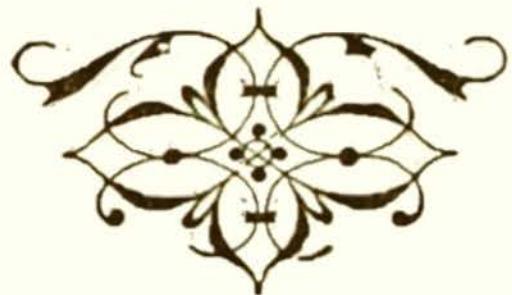
sleet

This is a Picture of Wind by J.R. Carpenter: <http://luckysoap.com/apictureofwind/>



The Memory Archivist

by Lynda Clark



**About
Begin**

Preserve Your Memories

<https://notagoth.itch.io/the-memory-archivist>

LIBRARY
HISTORY
BRITISH



<https://giuliac.itch.io/the-british-library-simulator>



New Media Writing Prize Collection in UKWA

<https://www.webarchive.org.uk/en/ukwa/collection/2912>

<https://blogs.bl.uk/digital-scholarship/2021/01/the-new-media-writing-prize-collection-is-now-available-in-the-uk-web-archive.html>

<https://blogs.bl.uk/digital-scholarship/2021/07/building-the-new-media-writing-prize-special-collection.html>

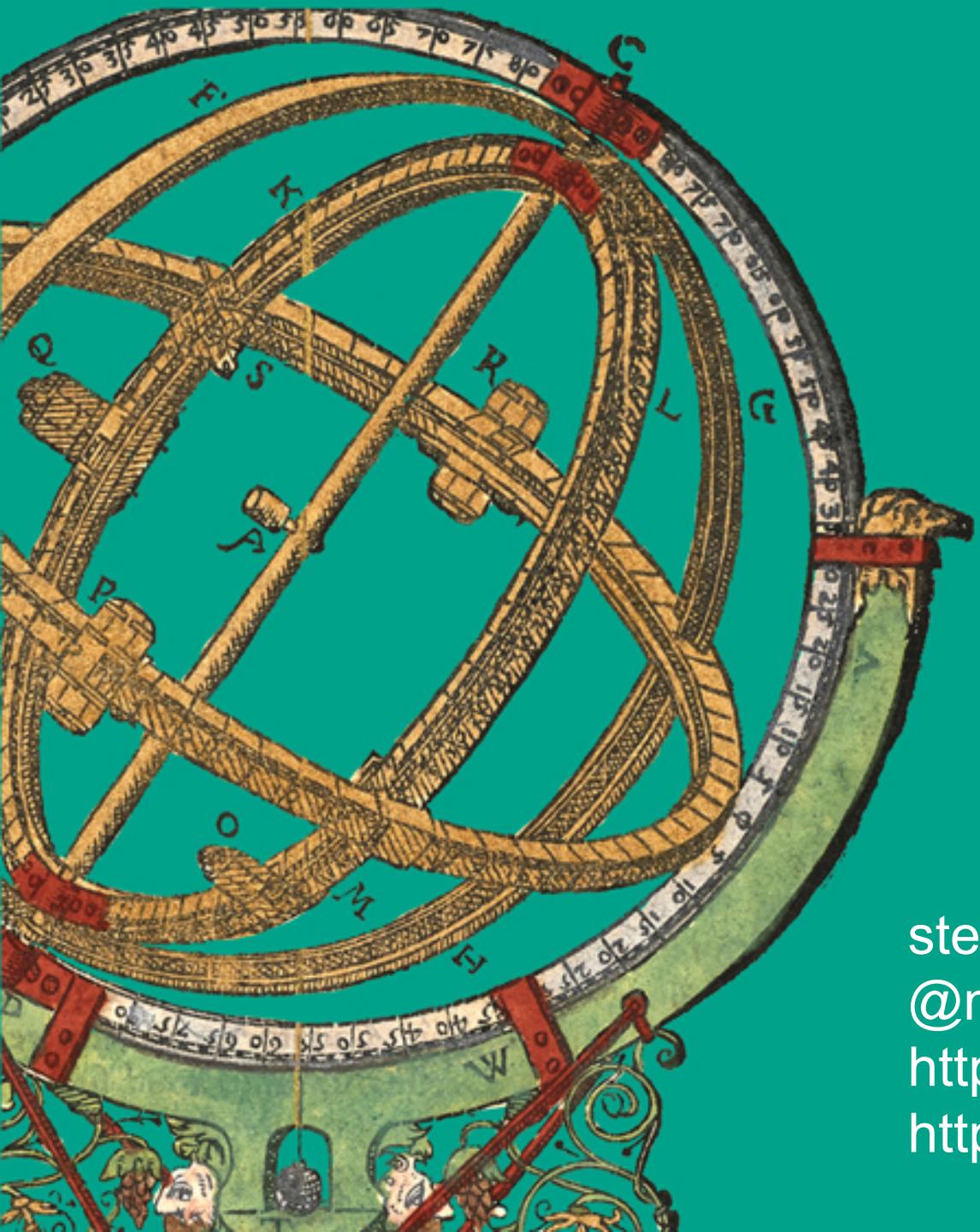
Quality Assurance in the New Media Writing Prize Collection by Tegan Pyke: <https://doi.org/10.23636/1y1j-by18>

Interactive Narratives Reading list

- The Memory Archivist by Lynda Clark: <https://notagoth.itch.io/the-memory-archivist>
- Breathe by Kate Pullinger: <https://breathe-story.com/>
- The Cartographer's Confession by James Attlee (play in armchair mode): <https://research.ambientlit.com/cartographersconfession>
- A Dictionary of the Revolution by Amira Hanafi: <http://www.qamosalthawra.com/en>
- This is a Picture of Wind by J.R. Carpenter: <http://luckysoap.com/apictureofwind/>
- The Garden of Forking Paths by Richard A Carter: <http://richardacarter.com/garden-of-forking-paths/>
- Galatea by Emily Short: <http://iplayif.com/?story=http%3A%2F%2Fwww.ifarchive.org%2Fif-archive%2Fgames%2Fzcode%2FGalatea.zblr>

Thank
you

stella.wisdom@bl.uk
@miss_wisdom
<https://blogs.bl.uk/digital-scholarship/>
<https://www.bl.uk/subjects/digital-scholarship>



Sunoikisis DACH

Spring 2022

Digital heritage collections

Rhiannon Lewis
Digital Humanities PhD candidate

**SCIENCE
MUSEUM
GROUP**



**SCHOOL OF
ADVANCED STUDY**

**UNIVERSITY
OF LONDON**

Digitised collections

Presentation contents:

- What do we mean by **digitised museum collections?**
- **Science Museum Group** [SMG] case study
 - **Digital images** of collection objects
 - Can be hosted on and off museum platforms
 - **Digitised collections** beyond digital images

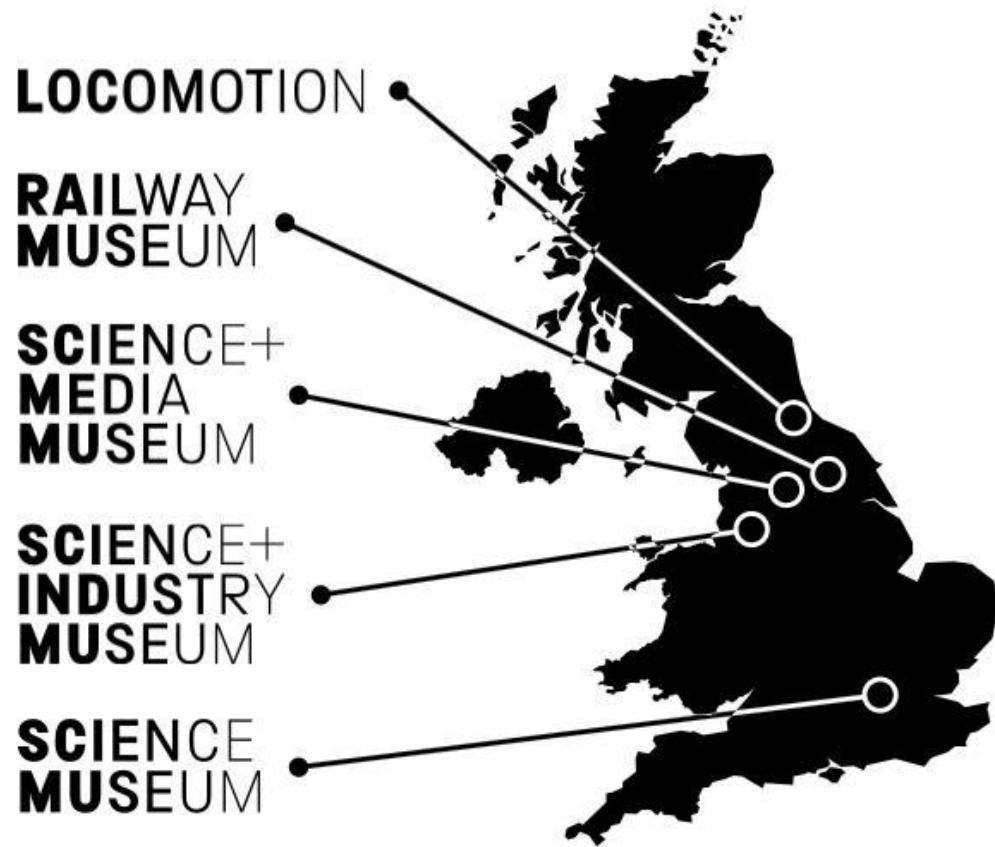
Digitised museum collections

- *Digitising collections* different from *digital collecting*, in that it has a physical referent object or artefact
- National museums have been digitising collections since 1990s
- *Sometimes* these digitised museum objects can be called “digital surrogates”
- Not all digitisation of collection objects is done by museums
- A digitised collection object can take many forms

Bibliography for 'digital surrogate'

- Benjamin, Walter, 'The Work of Art in the Age of Mechanical Reproduction', in Illuminations (New York: Schocken Books, 1969), p. 26 <<https://web.mit.edu/allanmc/www/benjamin.pdf>>
- **Cameron, Fiona, 'Beyond the Cult of the Replicant: Museums and Historical Digital Objects—Traditional Concerns, New Discourses', in Theorizing Digital Cultural Heritage a Critical Discourse (MIT Press, 2007), pp. 64–90**
- Cormier, Brendan, COPY CULTURE: Sharing in the Age of Digital Reproduction (V&A Publishing, 2018)
<<https://vanda-production-assets.s3.amazonaws.com/2018/06/15/11/42/57/e8582248-8878-486e-8a28-ebb8bf74ace8/Copy%20Culture.pdf>> [accessed 3 February 2022]
- Di Giuseppantonio Di Franco, Paola, Fabrizio Galeazzi, and Valentina Vassallo, Authenticity and Cultural Heritage in the Age of 3D Digital Reproductions, ed. by Paola Di Giuseppantonio Di Franco, Fabrizio Galeazzi, and Valentina Vassallo (McDonald Institute, 2018), i
<<https://doi.org/10.17863/CAM.27029>> [accessed 28 January 2020]
- Fyfe, Gordon, 'Reproductions, Cultural Capital and Museums: Aspects of the Culture of Copies', Museum and Society, 2 (2004) <<https://doi.org/10.29311/mas.v2i1.2783>>
- Hindmarch, J., Melissa Terras, and S. Robinson, 'On Virtual Auras: The Cultural Heritage Object in the Age of 3D Digital Reproduction', in The Routledge International Handbook of New Digital Practices in Galleries, Libraries, Archives, Museums and Heritage Sites. (London: Routledge, 2019), pp. 243–56
<<https://melissaterras.org/2019/11/19/new-book-chapter-on-virtual-auras-the-cultural-heritage-object-in-the-age-of-3d-digital-reproduction/>> [accessed 21 January 2020]

Science Museum Group



'SEE WHAT'S ON DISPLAY' partial screenshot,

<https://collection.sciencemuseumgroup.org.uk/> [accessed 1 November 2019]

My PhD

Collections as networked images: the
(re)use of the Science Museum Group
[SMG] collections in the forms of digital
images through social media

Digital images of collection in my PhD are defined as two types:

- ***newly created*** those that are taken by visitors to the museum and then shared through social media;
- And ***existing*** digital images produced by the museum then shared.

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Museums collections photography



LEFT: Photographing an item from the collection, SAY CHEESE!, Science Museum Blog.
<https://blog.sciencemuseum.org.uk/say-cheese/> [accessed 13 October 2019].

RIGHT: Wooden figure of Saint Barbara, Science Museum Group

© The Board of Trustees of the Science Museum

<https://collection.science museum group.org.uk/objects/co85425/wooden-figure-of-saint-barbara-figure-representation>
[accessed 7 August 2020].

SEARCH OUR COLLECTION

Search objects, people, categories, object numbers etc.



All 384,372

People 20,059

Objects 313,944

Documents 50,369

View:



Filter search



Polaroid Land camera Model 95
Photographic Technology
1948-1953



Crick and Watson's DNA
molecular model
Biochemistry
1953



Ped-O-Jet Mass Inoculation
Gun
Public Health & Hygiene
1970-1975



Stephenson's Rocket
Locomotives and Rolling Stock
1829



Packet of 10 'Gold Flake'
Cigarettes
Smoking
1920-1960



Queen Victoria's Saloon
Locomotives and Rolling Stock
1889

Clear all filters

> Image

> Category

> Maker

> On Display

> Object type

> Place

> Material

> Date



Drain with decorated cover, Roman, 100-400 CE, Science Museum Group Collection © The Board of Trustees of the Science Museum. <https://collection.sciencemuseumgroup.org.uk/objects/co84069/drain-with-decorated-cover-roman-100-400-ce-drain> [accessed 3 February 2020]

Platforms of interest...

Pinterest

Twitter

Pinterest

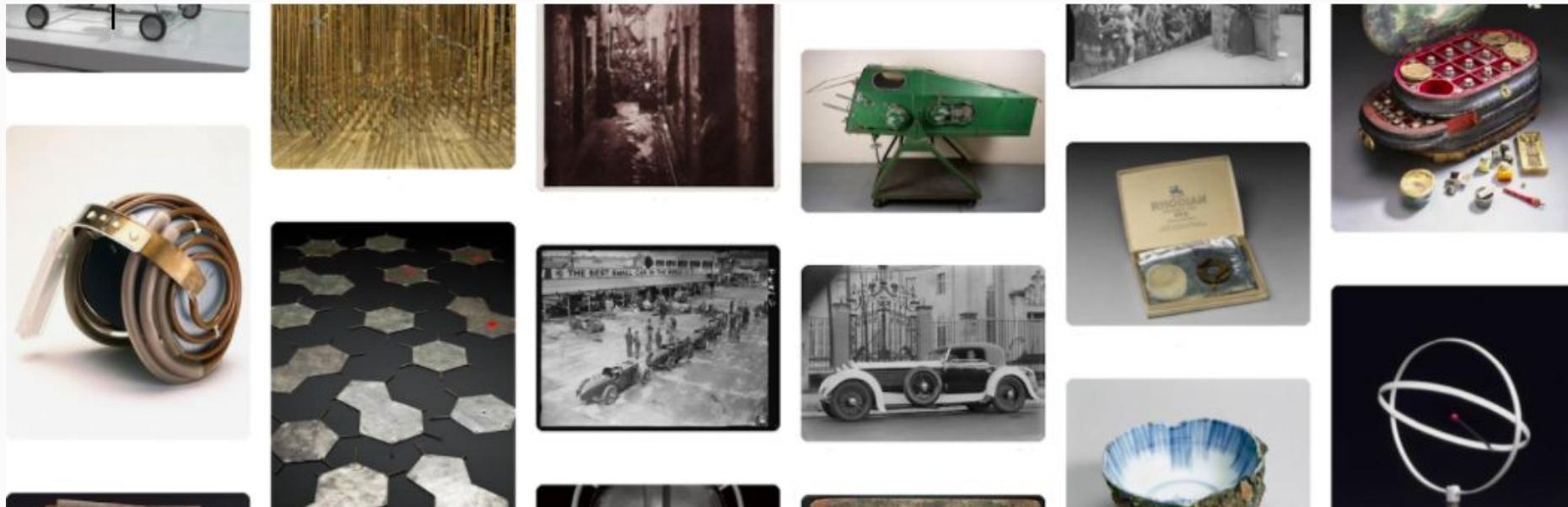
sharing existing digital images

Images on Pinterest exist elsewhere on the internet, but can be collected by users on Pinterest.
'...over 95% are pinned from pre-existing web sources.'

Sudip Mittal and others, 'Pinned It! A Large Scale Study of the Pinterest Network', 2014, pp. 1-10
<<https://doi.org/10.1145/2567688.2567692>>. P 5.

Pinterest

Existing Science Museum Group collection images shared



Activity page on Science Museum Group Pinterest https://www.pinterest.co.uk/sciemuseum/_activities/ with edits. [accessed 07 July 2019].

Digital images of collection in my PhD are defined as two types:

- ***newly created*** those that are taken by visitors to the museum and then shared through social media;
- And ***existing*** digital images produced by the museum then shared.

Twitter

Wikimedia commons

Museum objects as digital images,
represented on wikipedia pages, as
wikimedia images.

James Watson's Wikipedia page Double Helix DNA model

Identifying the double helix [edit]

In mid-March 1953, Watson and Crick deduced the [double helix](#) structure of DNA.^[13] Crucial to their discovery were the experimental data collected at King's College London—mainly by Rosalind Franklin for which they did not provide proper attribution.^{[38][11]} Sir Lawrence Bragg,^[39] the director of the Cavendish Laboratory (where Watson and Crick worked), made the original announcement of the discovery at a Solvay conference on proteins in Belgium on April 8, 1953; it went unreported by the press. Watson and Crick submitted a paper entitled "Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid" to the scientific journal *Nature*, which was published on April 25, 1953.^[40] Bragg gave a talk at the Guy's Hospital Medical School in London on Thursday, May 14, 1953, which resulted in a May 15, 1953, article by Ritchie Calder in the London newspaper *News Chronicle*, entitled "Why You Are You. Nearer Secret of Life."

Sydney Brenner, Jack Dunitz, Dorothy Hodgkin, Leslie Orgel, and Beryl M. Oughton were some of the first people in April 1953 to see the model of the structure of DNA, constructed by Crick and Watson; at the time, they were working at Oxford University's Chemistry Department. All were impressed by the new DNA model, especially Brenner, who subsequently worked with Crick at Cambridge in the Cavendish Laboratory and the new [Laboratory of Molecular Biology](#). According to the late Beryl Oughton, later Rimmer, they all travelled together in two cars once Dorothy Hodgkin announced to them that they were off to Cambridge to see the model of the structure of DNA.^[41]

The Cambridge University student newspaper *Varsity* also ran its own short article on the discovery on Saturday, May 30, 1953. Watson subsequently presented a paper on the double-helical structure of DNA at the 18th Cold Spring Harbor Symposium on Viruses in early June 1953, six weeks after the publication of the Watson and Crick paper in *Nature*. Many at the meeting had not yet heard of the discovery. The 1953 Cold Spring Harbor Symposium was the first opportunity for many to see the model of the DNA double helix.

Watson, Crick, and Wilkins were awarded the Nobel Prize in Physiology or Medicine in 1962 for their research on the structure of nucleic acids.^{[13][42][43]} Rosalind Franklin had died in 1958 and was therefore ineligible for nomination.^[38]

The publication of the double helix structure of DNA has been described as a turning point in science; understanding of life was fundamentally changed and the modern era of biology began.^[44]

Interactions with Rosalind Franklin and Raymond Gosling [edit]

Watson and Crick's use of [DNA X-ray diffraction data](#) collected by Rosalind Franklin and her student [Raymond Gosling](#) was unauthorized. Franklin's high-quality X-ray diffraction patterns of DNA were privileged unpublished information taken without permission from a scientist working on the same subject in another laboratory.^[12] Watson and Crick used some of Franklin's unpublished data—without her consent—in their construction of the double helix model of DNA.^{[38][45]} Franklin's results provided estimates of the water content of DNA crystals and these results were consistent with the two sugar-phosphate backbones being on the outside of the molecule. Franklin told Crick and Watson that the backbones had to be on the outside; before then, Linus Pauling and Watson and Crick had erroneous models with the chains inside and the



DNA model built by Crick and Watson in 1953, on display in the Science Museum, London



Watson's accomplishment is displayed on the monument at the American Museum of Natural History in New York City. Because the monument memorizes only American laureates, Francis Crick and Maurice Wilkins (who shared the 1962 Nobel Prize in Physiology or Medicine) are omitted.



Left: James Watson wikipedia page, partial screenshot, https://en.wikipedia.org/wiki/James_Watson [accessed 2 February 2022]

Right: DNA model built by Crick and Watson in 1953, on display in the Science Museum, London. Uploaded: 24 May 2005 by wikimedia user Alkivar. Image in public domain https://en.wikipedia.org/wiki/James_Watson#/media/File:DNA_Model_Crick-Watson.jpg [accessed 2 February 2022]



Pair of miniature brass 'bugle' ear trumpets invented by ear, nose and throat specialist Jean Pierre Bonnafont (1805–1891) and manufactured by Frederick C. Rein & Son. They are designed to be worn under the hair. On display at the Science Museum London : Medicine : The Wellcome Galleries.

More details

<https://collection.sciencemuseumgroup.org.uk/objects/c08600960> This file comes from I Science Museum Collections, a website operated by Science Museum Group, a non-departmental public body in the UK. This tag does not indicate the copyright status of the attached work. A normal [copyright tag](#) is still required. See [Commons:Licensing](#).

CC BY 4.0

File: F Rein Pair Miniature Ear Trumpets.jpg
 Created: 18 June 2021

Partial Screenshot https://en.wikipedia.org/wiki/Ear_trumpet#/media/File:F_Rein_Pair_Miniature_Ear_Trumpets.jpg
[accessed 2 February 2022]



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Ear trumpet

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Cite this page

Wikidata item

Print/export

Download as PDF

Printable version

In other projects

Wikimedia Commons

Languages

العربية

Deutsch

Français

Bahasa Indonesia

Nederlands

Português

Русский

Edit links

Contents [hide]

- 1 History
- 2 Pinard horn
- 3 See also
- 4 References
- 5 External links



An 18th-century drawing of ear trumpets

History [edit]

The use of ear trumpets for the partially deaf dates back to the 17th century.^[1] The earliest description of an ear trumpet was given by the French Jesuit priest and mathematician Jean Leurechon in his work *Recreations mathématiques* (1634).^[2] Polymath Athanasius Kircher also described a similar device in 1650.

By the late 18th century, their use was becoming increasingly common. Collapsible conical ear trumpets were made by instrument makers on a one-off basis for specific clients. Well-known models of the period included the Townsend Trumpet (made by the deaf educator John Townshend), the Reynolds Trumpet (specially built for painter Joshua Reynolds) and the Daubeny Trumpet.

The first firm to begin commercial production of the ear trumpet was established by Frederick C. Rein in London in 1800. In addition to producing ear trumpets, Rein also sold hearing fans and speaking tubes. These instruments helped concentrate sound energy, while still being portable. However, these devices were generally bulky and had to be physically supported from below. Later, smaller, hand-held ear trumpets and cones were used as hearing aids.^{[3][4]}

Rein was commissioned to design a special acoustic chair for the ailing King of Portugal, John VI of Portugal in 1819. The throne was designed with ornately carved arms that looked like the open mouths of lions. These holes acted as the receiving area for the acoustics, which were transmitted to the back of the throne via a speaking tube, and into the king's ear.^[5] Finally in the late 1800s, the acoustic horn, which was a tube that had two ends, a cone that captured sound, and was eventually made to fit in the ear.^[1]

Johann Nepomuk Mälzel began manufacturing ear trumpets in the 1810s. He notably produced ear trumpets for Ludwig van Beethoven, who was starting to go deaf at the time. These are now kept in the Beethoven Museum in Bonn.

Toward the late 19th century, hidden hearing aids became increasingly popular. Rein pioneered many notable designs, including his 'acoustic headbands', where the hearing aid device was artfully concealed within the hair or headgear. Reins' Aurole Phones were headbands, made in a variety of shapes, that incorporated sound collectors near the ear that would improve the acoustics. Hearing aids were also hidden in couches, clothing, and accessories. This drive toward ever-increasing invisibility was often more about hiding the individual's disability from the public than about helping the individual cope with his problem.^[4]



Pair of miniature brass 'bugle' ear trumpets invented by ear, nose and throat specialist Jean Pierre Bonnafont (1805–1891) and manufactured by Frederick C. Rein & Son. They are designed to be worn under the hair. On display at the Science Museum London : Medicine : The Wellcome Galleries.



Google Arts & Culture

Online Exhibitions...

Nicolas Flamel: alchemy and the
legend of the philosopher's stone

Digital images not the only
way to digitise a collection...

Sketchfab

3D SMG collection objects on SketchFab

Pharmacy Leech Jar animated
3D Model

API

JSON Application programming
interface for science museum
group collection

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            "total": 6  
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        "processed": 1643839646399,  
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        "uid": "co84069",  
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        "version": 19  
      }  
    }  
  }  
}
```

JSON from collections API through browser for 'Drain with decorated cover, Roman, 100-400 CE'
<https://collection.science museum group.org.uk/api/objects/co84069> [accessed 2 February 2022].

Expanded URLs from demos in the presentation:

- Drain with decorated cover, Roman, 100-400 CE, Science Museum Group collection
<https://collection.science museum group.org.uk/objects/co84069/drain-with-decorated-cover-roman-100-400-ce-drain>
- Nicolas Flamel: alchemy and the legend of the philosopher's stone - Google Arts and Culture exhibition
<https://artsandculture.google.com/exhibit/nicolas-flamel-alchemy-and-the-legend-of-the-philosopher%E2%80%99s-stone/hwLiqPSro7CIJQ>
- Science Museum Group on Sketch Fab
<https://sketchfab.com/science museum/models>
- Virtual 3D reconstruction of Leech Jar
<https://learning.science museum group.org.uk/resources/leech-jar/>

[Accessed 3 February 2022]

Thank you

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