

# Geisteswissenschaftliche Daten im Digitalen Zeitalter

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Harvard Library



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# Mission Statement

Harvard Library Preservation Services enables the University to fulfill its responsibility to ensure the longevity and usability of Harvard's renowned collections.

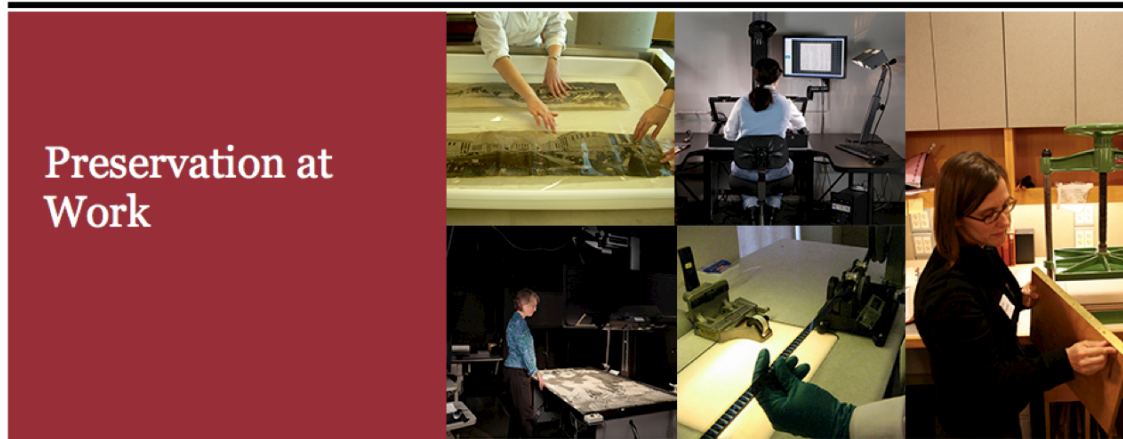
Home > About Us > Service Directory >

## Preservation Services

The Harvard Library holds the largest academic library collection in the world, and the age and vulnerability of its vast holdings vary widely. The Harvard Library Preservation Program comprises state-of-the-art facilities and expert staff committed to ensuring that library materials remain secure and usable for contemporary and future scholars, by employing a variety of strategies for conserving materials, digitizing collections, preserving library content in digital formats, and providing robust education and outreach programs.

**See Also:**

- [Find a Library](#)
- [Archives & Special Collections](#)



## Preservation at Work

- [Emergencies](#)
- [Collections Care](#)
- [Imaging Services](#)
- [Media Preservation](#)
- [Weissman Preservation Center](#)
- [Educational Programs](#)
- [Guidelines](#)
- [Preservation Departmental Library](#)

### NEWS AND INFORMATION

**News**

[Harvard Gazette: Harvard's Best Listeners](#)

[Harvard Gazette: Sensibly Saving Jane Austen](#)

[Harvard Gazette: Old Japan, Online](#)

[Harvard Gazette: Treasures Hiding in Plain Sight](#)

**Information**

[Video: To Preserve and Protect—Innovation at Harvard](#)

# Conservation Treatment & Preservation Advice

See Also:

- Preservation Liaisons



## CONSERVATION SERVICES AND RESOURCES

- + Conservation Treatment
- + Binding
- + Enclosures
- + Preservation Advice
- + Resources

- Harvard Library Preservation
- Emergencies
- Conservation Treatment & Preservation Advice
- Digital Preservation Services
- Imaging Services
- Media Preservation Services
- Staff Section (access restricted)

## OVERVIEW OF SERVICES

There are three units within Preservation that perform conservation services, including treatment (repair), enclosures, binding, consultation, preservation review, assessments, and surveys.

The units below provide these services for the following types of materials:

- [Weissman Preservation Center](#): Special collections
- [Collections Care](#): General and circulating collections
- [Media Preservation](#): Audiovisual collections

For advice on preservation issues, expand the "Preservation Advice" section of the navigation menu on the left.



## Harvard Library Preservation, Imaging Services

**See Also:**[Library staff directory](#)

### Imaging Services

*Imaging Services offers a broad range of collections reformatting services designed to protect endangered materials and to extend scholarly access to Harvard's collections beyond the University.*



#### SERVICES

- + [Reproduction Services For Library Patrons](#)
- + [Collections Reformatting Services For Harvard Libraries](#)

- [Harvard Library Preservation](#)
- [Emergencies](#)
- [Conservation Treatment & Preservation Advice](#)
- [Digital Preservation Services](#)
- [Imaging Services](#)
- [Media Preservation Services](#)
- [Staff Section \(access restricted\)](#)

#### CREATING COPIES OF LIBRARY MATERIALS AS A PRESERVATION STRATEGY

Library materials are reproduced for several reasons: to provide back-up copies of items showing obvious signs of deterioration, to replace those that have become too fragile to use, to reduce wear and tear on items that are rare or unique, and to extend access to Harvard's collections beyond the University. Since the beginning of recorded history, copying has been vital to the survival of information.

#### CONTACT INFORMATION

Imaging Services  
Widener Library  
Ground Floor, Room G-81  
Harvard Yard  
Cambridge, MA 02138  
USA

Tel: 617-495-3995  
Fax: 617-495-0403  
Email: [imaging@fas.harvard.edu](mailto:imaging@fas.harvard.edu)  
Hours (business office): 10 am–2 pm, M–F

#### THE SHELF



## Media Preservation

**See Also:**[Library staff directory](#)

# Media Preservation

*Providing a range of preservation services designed to care for, provide access to and digitize Harvard Library's audio and motion picture collections*



### MEDIA PRESERVATION SERVICES

[+ Services And Resources](#)

- [Harvard Library Preservation](#)
- [Emergencies](#)
- [Conservation Treatment & Preservation Advice](#)
- [Digital Preservation Services](#)
- [Imaging Services](#)
- [Media Preservation Services](#)
- [Staff Section \(access restricted\)](#)

### MEDIA PRESERVATION OVERVIEW

Media Preservation provides reformatting services for library audio-visual resources. Media collections are machine-readable by nature and as such require special care and handling during the preservation process. Obsolescence and deterioration of the carrier formats contribute to a much shorter lifespan for these materials than paper-based collections. Media Preservation maintains the professional playback equipment as well as the expertise necessary to safely handle and transfer a wide range of media formats with optimal results.

### PROJECT INQUIRIES

[Project inquiry form](#)

### CONTACT

**Audio Preservation Services**  
Tel: 617-495-1240

**Film Conservation Services**  
Tel: 617-496-8647



## Harvard Library Preservation, Digital Preservation Services

**See Also:**

- [Library staff directory](#)
- [DRS & delivery systems](#)

# Digital Preservation

*Keeping Harvard's digital collections viable and accessible into the indefinite future despite a constantly changing technological environment. The image on the right was adapted from the first file deposited for preservation to the DRS.*



### SERVICES & RESOURCES

- + [Preservation Services & Guidelines](#)
- + [Projects & Initiatives](#)
- + [What Are Your Preservation Needs?](#)
- + [Documentation & Contacts](#)

- [Harvard Library Preservation](#)
- [Emergencies](#)
- [Conservation Treatment & Preservation Advice](#)
- [Digital Preservation Services](#)
- [Imaging Services](#)
- [Media Preservation Services](#)
- [Staff Section \(access restricted\)](#)

### OVERVIEW: DIGITAL PRESERVATION PROGRAM

The core teaching and research missions of the University are increasingly dependent upon digital content. Digital materials are inherently fragile and dependent for their long-range viability on technologies that change continuously. One of the key challenges of the twenty-first century is how to preserve the usefulness of this digital content for future generations of scholars.

In response to these challenges, Harvard Library established the Digital Preservation Program in June 2008. The program builds on years of digital preservation projects and initiatives conducted at Harvard University.

The centerpiece of the preservation program is Harvard Library's digital preservation repository, the Digital Repository Service (DRS).

To learn how to use the DRS, the deposit process, or the services available to deliver DRS content, see [DRS & Delivery Services](#).

For more in-depth information about the DRS data model, content models and preservation practices, see [Preservation Repository \(DRS\)](#).

### CONTACT INFORMATION

Digital Preservation Services  
 90 Mt. Auburn St.  
 Tel: 617-495-3724  
 Email: [Andrea.Goethals](mailto:Andrea.Goethals@harvard.edu)



# Library Assets

Original, digitized, and born digital

- Primary data
- Secondary data

Wide variety of materials and lots of them



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Drina  
Country born, daughter  
of Jack, Guinea  
~~of the~~  
Plantation of  
B. F. Taylor Esq





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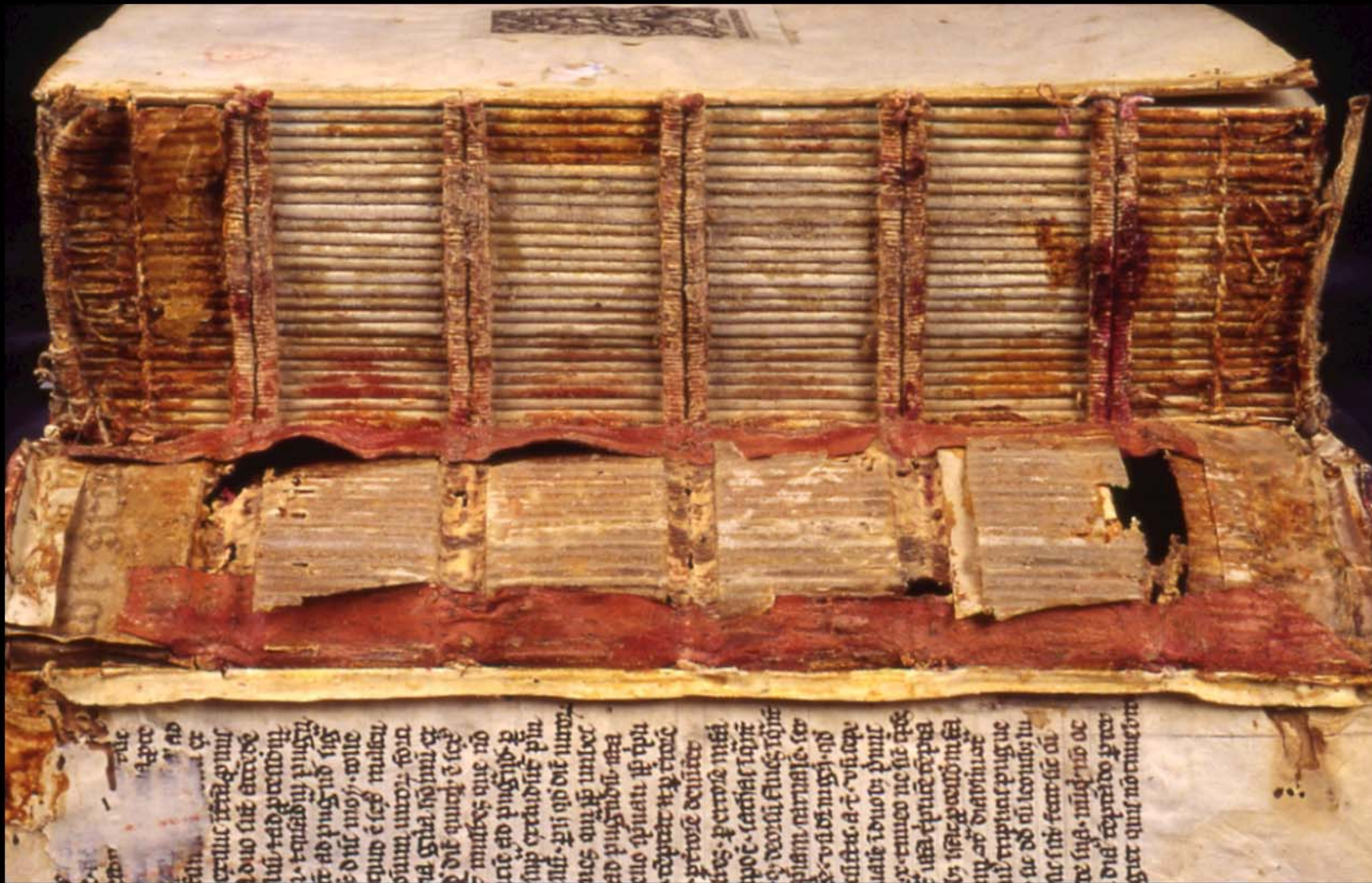












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# Digital Repository Service (DRS)

Long-term preservation repository

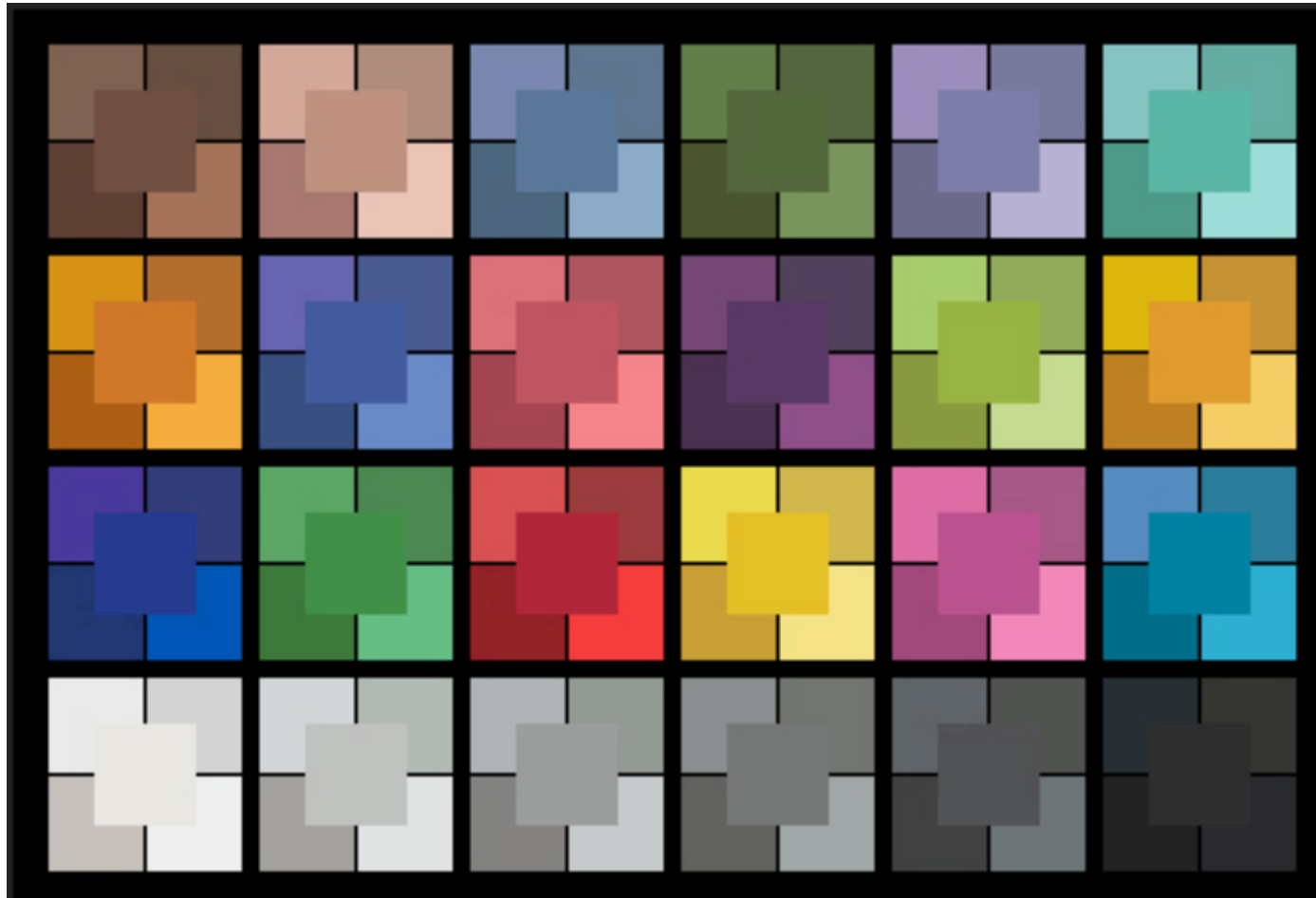
- Professionally managed bundle of services
- Hardware + Software + People + Policies & Procedures
- Preserves content for Harvard's libraries, archives & museums
- Provides content now and in the future to researchers at Harvard and worldwide







## DIRECT DIGITAL IMAGE CAPTURE OF CULTURAL HERITAGE: BENCHMARKING AMERICAN MUSEUM PRACTICES AND DEFINING FUTURE NEEDS



[Art-si.org](http://Art-si.org)



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# Key Areas of Interest

bridge



photo

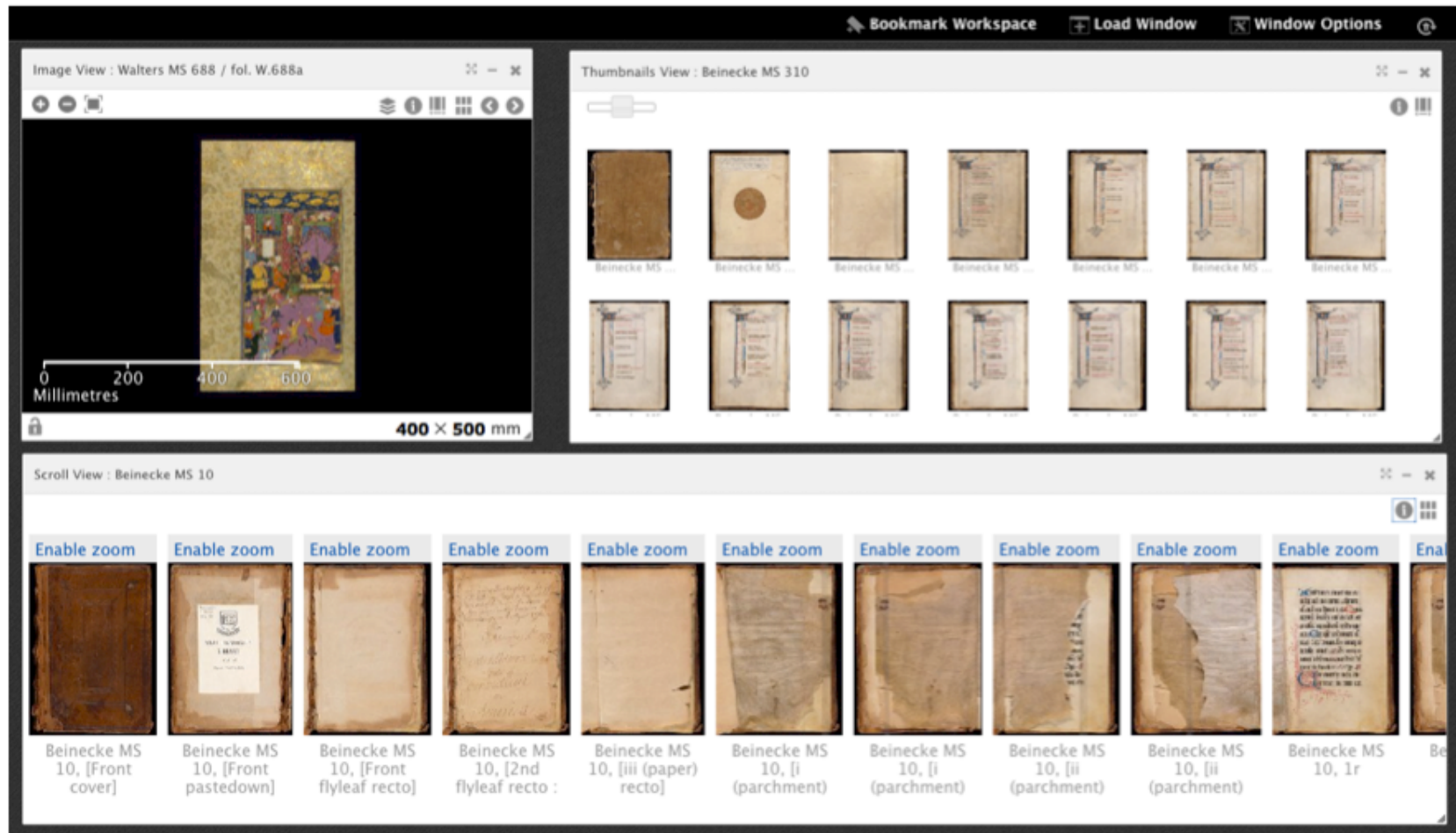


firelight



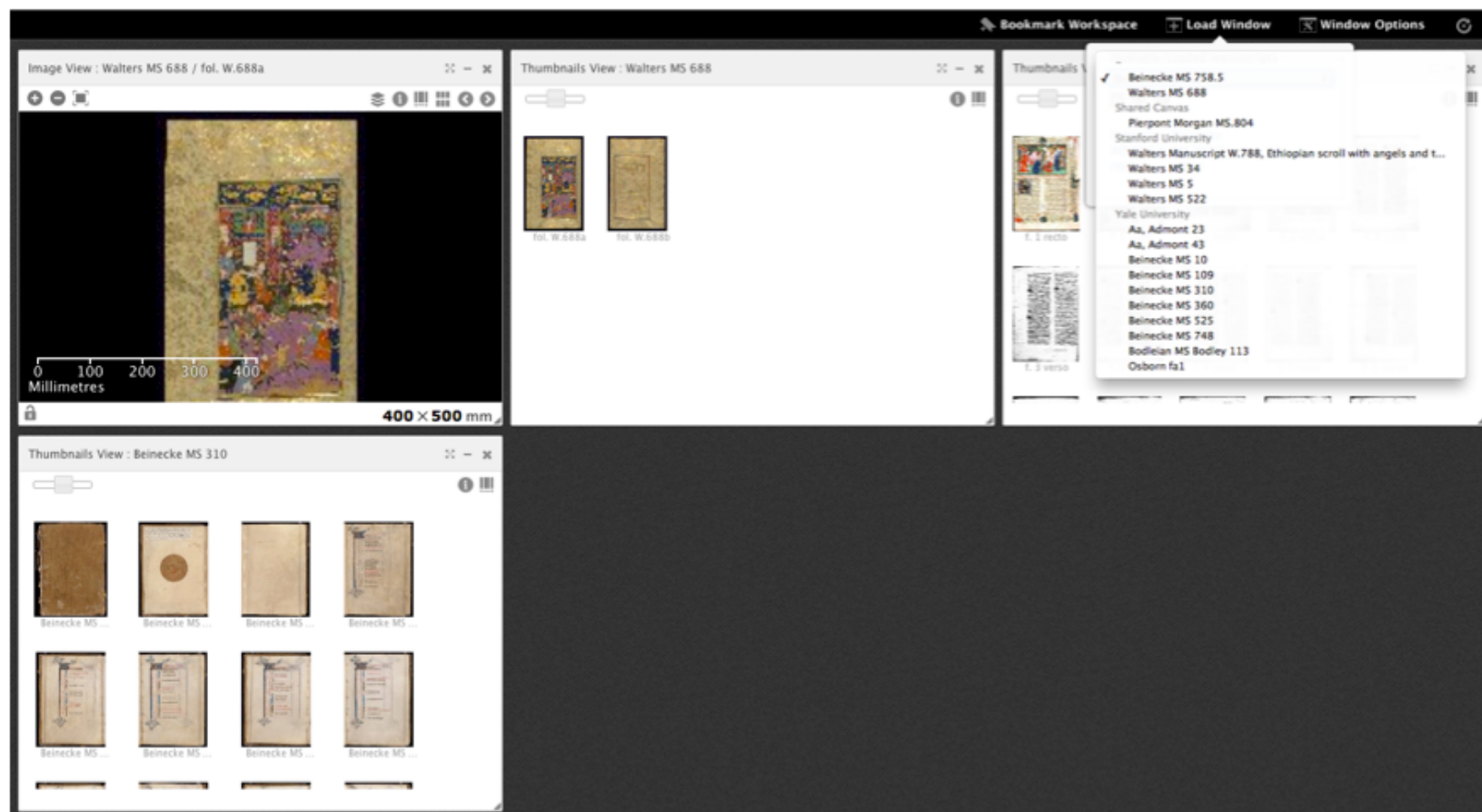


# Imagine an image viewer...





# With content from any repository...







# That lets scholars compare...

Bookmark Workspace Load Window Window O

View : University of Pennsylvania: Ms. Codex 902 - [Chansonnier] / 1r

Image View : Bibliothèque nationale de France, NAF 6221 / 1r

50 100 150  
etres

400 X 500 mm

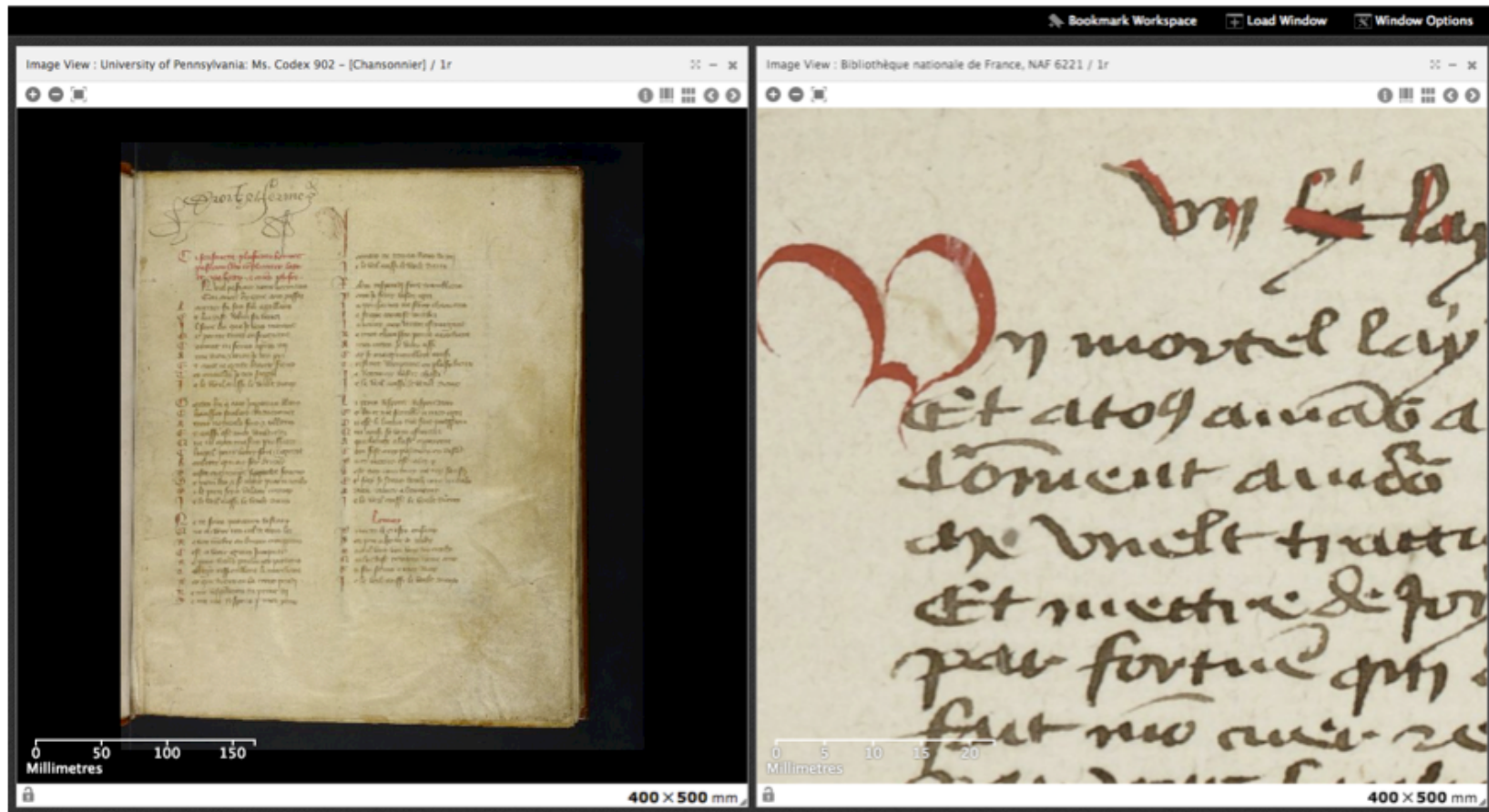
0 50 100 150  
Millimetres

400 X 50





# And investigate in detail...







Notebook (seq. 1-148)

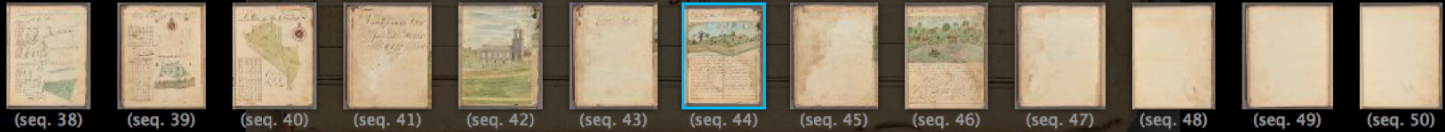
- (seq. 1)
- (seq. 2)
- (seq. 3)
- (seq. 4)
- (seq. 5)
- (seq. 6)
- (seq. 7)
- (seq. 8)
- (seq. 9)
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- (seq. 12)
- (seq. 13)
- (seq. 14)
- (seq. 15)
- (seq. 16)
- (seq. 17)
- (seq. 18)
- (seq. 19)
- (seq. 20)
- (seq. 21)

To find the breadth of a river by measuring along one side at certain stations, taking the bearing of some remarkable thing on the other side.



Field Book

1 <sup>st</sup> N. W. 6 <sup>in</sup> 18 Chains 20 Links	03 <sup>d</sup> N. W. 15. 20 Ch. 14 <sup>in</sup> Lin.
A tree on the bank of the river bearing N. W. 17 <sup>d</sup>	The church bears N. W. 88 <sup>d</sup>
A wind mill on the land N. W. 20 <sup>d</sup>	The end of a little village N. W. 32 <sup>d</sup>
A house upon the river bank N. W. 52 <sup>d</sup>	The end of the little village bearing S. W. 32 <sup>d</sup>
2 <sup>d</sup> N. 8 14 <sup>in</sup> 18 Chains 10 Links	The house respecting 02 <sup>d</sup>
The tree N. W. 77 <sup>d</sup> .. 00	The land S. W. 24 <sup>d</sup> 00
The house S. W. 20 <sup>d</sup> .. 00	
The wind mill S. W. 20 <sup>d</sup> .. 00	
Forward observations	
A noted house far in the land N. W. 28 <sup>d</sup>	







File Edit View History Bookmarks Tools Help




Library Leader... Harvard Mirador ... Web Timeshe... Mirador Viewer x Search DRS Object: 400750691 Sequence 515... Sequence 1 : ... Downloads | F... Settings Clock Refresh Print +

oculus-dev.harvard.harvard.edu/demo/#62492395-a057-4e5d-868c-a07393136563 Search

Most Visited Google News Google Shared Shelf join.me - Free Screen ... THE SHELF Harvard Mirador Viewer Mirador Viewer

Bookmark Change Layout

 **MS Typ 41. Houghton Library, Harvard University. Chronique du monde depuis la création, et des roi...**   



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# It Used to Be Easy

## Separated

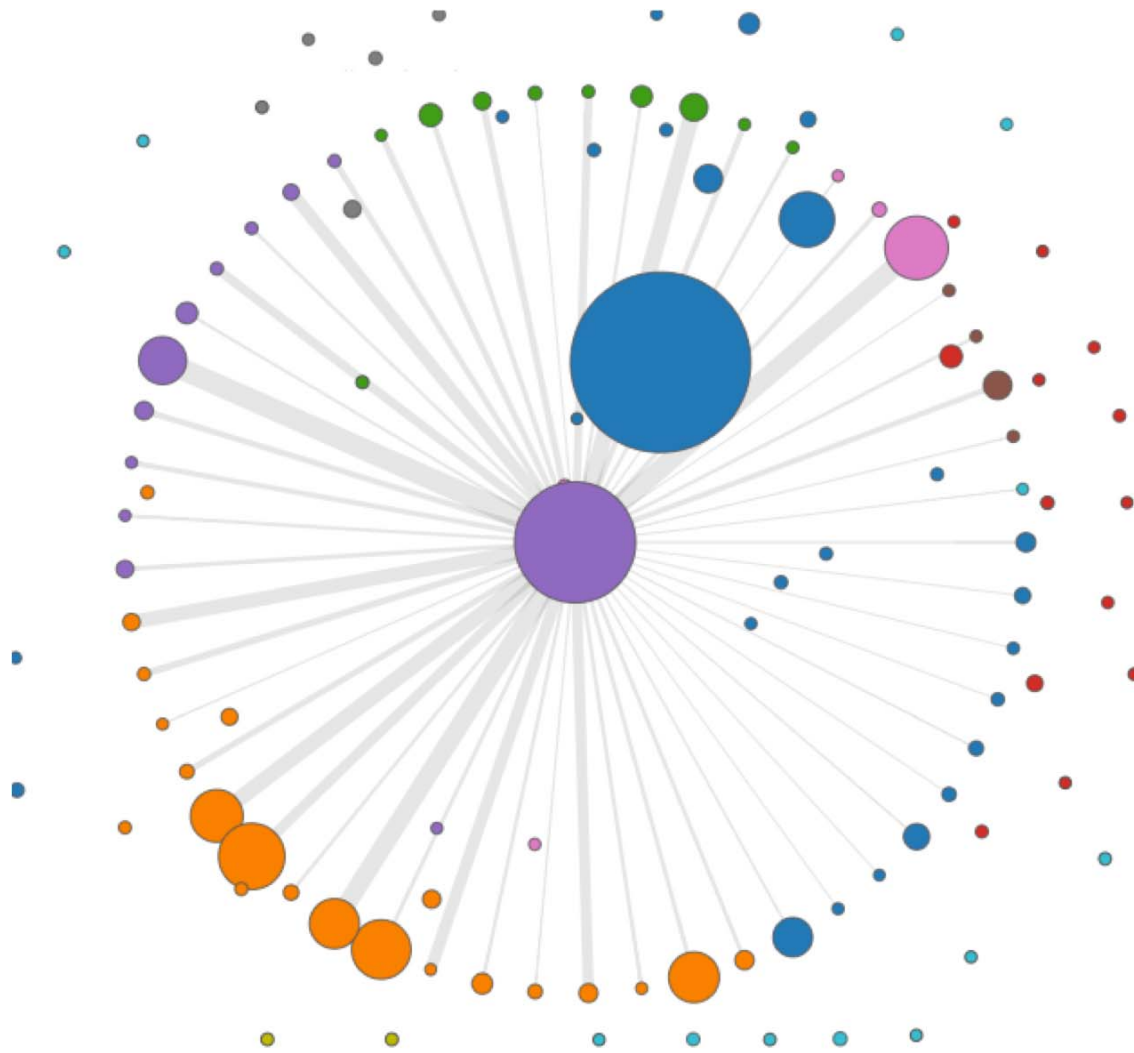
- Primary Data
  - Databases, digital image collections, etc.
- Secondary Data
  - Publications

# Now

- Fluid boundaries between primary and secondary data
- Data becomes very much part of a publication
  - Desirable to see the heritage of a particular idea
    - Need better tools to cite claims/evidence, not papers
  - Improved data integration necessary
    - Need systems and tools to find and integrate data
    - Need standards
- Data produced during research process also considered publication







**Snapshotting workspaces – object, image, location,  
zoom level – to derive patterns of usage**



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# What is Needed

- More sophisticated tools and services
  - **Collective and open source** tools, e.g., different workspaces to work with data from different repositories, annotate, etc.
  - Most common denominator needs to be worked out
- Variety of standards
  - Standardization increases sustainability over time, e.g., file formats like JPEG or TIFF

**Sustainability of Digital Formats**  
**Planning for Library of Congress Collections**

[Introduction](#) | [Sustainability Factors](#) | [Content Categories](#) | [Format Descriptions](#) | [Contact](#)

The Digital Formats Web site provides information about digital content formats. The analyses and resources presented here will increase and be updated over time. The compilers, Caroline R. Arms, Carl Fleischhauer, and Kate Murray invite [feedback](#) on the content.

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**Introduction**  
Background information and overview: What is a format? How shall we evaluate formats? What projects in other organizations are addressing these questions? >>  
[Overview](#) | [Formats, Evaluation Factors, and Relationships](#) | [Papers and Presentations](#) | [Related Resources](#)

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**Sustainability Factors**  
What affects the ability of the Library to preserve content in a given format? These sustainability factors apply to all formats. >>  
[Disclosure](#) | [Adoption](#) | [Transparency](#) | [Self-documentation](#) | [External Dependencies](#) | [Impact of Patents](#) | [Technical Protection Mechanisms](#)

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**Content Categories**  
The evaluation of formats must take into account quality and functionality. These factors vary according to the type of content under consideration and the categories will be expanded as time passes. >>  
[Still Image](#) | [Sound](#) | [Textual](#) | [Moving Image](#) | [Web Archive](#) | [Datasets](#) | [Geospatial](#) | [Generic](#)

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**Format Descriptions**  
Documents with more information about specific formats. >>  
[Browse categories](#) | [Browse alphabetical list](#) | [Format Descriptions as XML](#)



# What is Needed

- Education for all involved
  - New degree programs
  - New ways of thinking and sharing need to be developed
- Roles and responsibilities need to be defined
  - Researchers and tool developers are not responsible for longevity of tools
- Policy development
  - Annotations: who is responsible for keeping them, who can access them?
  - Policies around data
    - Privacy and long term storage



# Dataverse

- Dataverse is an open source software project for sharing, citing and archiving data
- Gives credit and control to data authors and distributors
- Dataverse development started in 2006 at Harvard IQSS
- Helped instigate and is at the center of a cultural change toward open and reproducible research
- Allows experiments to be repeated, build on data from someone else



Search



## Data Science

*Enhancing Data Sharing and Analysis*



The Institute for Quantitative Social Science

Software ▾ Research ▾ People ▾ Presentations Publications Blog

HOME / SOFTWARE /

## About Dataverse

P.I.: [Gary King](#) -- Project Lead: [Mercè Crosas](#) -- [Team](#)

Dataverse is a software application that enables institutions to host research data repositories. It provides a preservation and archival infrastructure, while researchers can share, keep control of and get recognition for their data through an easy to access web browser interface. Dataverse supports the sharing of research data with a persistent data citation, and data publishing and management workflows with versioning and metadata standards.



### Related Presentations

**Discovering + Publishing Data with Dataverse**, at **AMIGOS Open Source Virtual Conference**, Thursday, September 17, 2015

This presentation will provide some background information on the Dataverse's history, offer examples of how libraries and

**Check out:  
Harvard Purdue Data Management Symposium**



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# Conclusions

- Concepts and methods developed for analog data have been applied to digital data
  - However, there are fundamental differences that we just now begin to exploit
- Technically lots of different data can be easily visualized and connected
  - However, we still have to explore what the scholarly interpretation of this new experience is
  - Currently this is often happening in separate ecosystems creating solutions that are not sustainable
  - We are still in the early stages; while the community as a whole has, e.g., digitized lots of materials we are just now starting to really make use of these digital objects



# Conclusions

- Community building, dialogue and technical standardization efforts are a must
  - Cross domain communities have to be built
  - This is a non-trivial task
- Still quite difficult to find people who understand the humanities, technology and the various methodologies involved – and can comfortably switch between all of the above and see the big picture





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Thank you!