



# OXLOD Open Workshop

12 June 2018 - OeRC

Linked Open Data primer: Kevin Page

Mapping Manuscript Migrations: Toby Burrows

Bodleian MSs catalogs: Andrew Morrison

Mapping MMM data: Athanasios Velios





# Mapping Manuscript Migrations: Digging Into Data For The History And Provenance Of Pre-Modern European Manuscripts

## Abstract

Hundreds of thousands of pre-modern European manuscripts have survived until the present day. As the result of changes in their ownership over the centuries, they are now spread all over the world. Collectively they constitute a great cultural and scholarly treasure. There are many sources of data relating to them, and new sources continue to proliferate in the digital environment. This project will link disparate datasets from Europe and North America to provide an international view of the history and provenance of these manuscripts. The aggregated data will enable researchers to analyse and visualize these topics at scales ranging from individual manuscripts to thousands of manuscripts. Our research will address their origins and movements, and the collectors and owners involved in their history. We will be able to show how these manuscripts have traveled across time and space to their current locations, where they continue to find new audiences.

## Principal Investigators

Toby Burrows, University of Oxford, United Kingdom, AHRC/ESRC

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Lynn Ransom, University of Pennsylvania, United States, IMLS

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# Project Objectives

- Collect and transform heterogeneous data to a unified Data Model
- Expose the combined data in a Linked Data environment
- Implement a software interface for browsing and searching the combined data
- Explore research questions relating to the history and provenance of manuscripts on a large scale
- Visualize the data
  - geographical relationships
  - network relationships

**LOGIN**

Login

Password

Remember me

The Schoenberg Database of Manuscripts aggregates observations of pre-modern manuscripts drawn from over 12,000 auction and sales catalogues, inventories, catalogues from institutional and private collections, and other sources that document sales and locations of these books from around the world.

### Search the Database

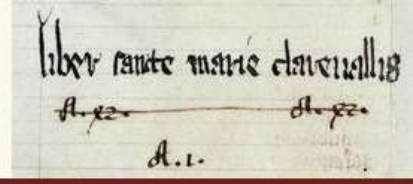
Everyone is invited to search the database. Use the search bar below, or click the facets to the right.




| Author   |       |
|--|-------|
| Saint Augustine (S. Augustinus), Bishop of Hippo (354-430) | 5,142 |
| Jerome, Saint (S. Hieronymus) (347-419/420)                | 3,723 |
| Cicero, Marcus Tullius (106-43 BC)                         | 3,310 |

# Bibale

Historic Collections, Provenance, and Medieval Text Transmission



## Medium

- édition avancée  
Répertoire des manuscrits reproduits et recensés

# IRHT

Recherche

Accueil
Manuscrits
Etablissements
Panier (0)

## MEDIEVAL MANUSCRIPTS IN OXFORD LIBRARIES

A catalogue of Western manuscripts at the Bodleian Libraries and selected Oxford colleges

ADVANCED SEARCH

OR BROWSE BY

MANUSCRIPTS

WORKS

PEOPLE

PLACES



# Data Sources

|  |                                |  |
|--|--------------------------------|--|
| Medieval Manuscripts in Oxford Libraries   | Text Encoding Initiative (TEI) | 9,500 catalogue records;<br>about 1,000 with detailed provenance information   |
| Schoenberg Database of Manuscripts (UPenn) | Own data model                 | 225,000 records containing provenance-related observations of manuscript histories   |
| Bibale (IRHT)<br>Medium (IRHT)             | Own data model                 | <i>Bibale</i> : more than 5,000 manuscripts with provenance information<br><br><i>Medium</i> : brief records for more than 109,000 manuscripts, with links to other sources of information |

A catalogue of Western manuscripts at the Bodleian Libraries and selected Oxford colleges

Search Medieval Manuscripts



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### Collections

|                              |                              |                              |   |                              |
|------------------------------|------------------------------|------------------------------|---|------------------------------|
| Christ Church MSS.           | Dep. (Deposited manuscripts) | Fragments in printed books   | MSS. Add. (Additional) A                  | MSS. Add. (Additional) B     |
| MSS. Add. (Additional) C     | MSS. Add. (Additional) D     | MSS. Add. (Additional) E     | MSS. Arch. Selden. (Archivum Seldenianum) | MSS. Ash. (Ashmole) Rolls    |
| MSS. Ashmole                 | MSS. Aubrey                  | MSS. Auct. B. (Auctarium B.) | MSS. Auct. D. (Auctarium D.)              | MSS. Auct. E. (Auctarium E.) |
| MSS. Auct. F. (Auctarium F.) | MSS. Auct. T. (Auctarium T.) | MSS. Auct. V. (Auctarium V.) | MSS. Barlow                               | MSS. Barocci                 |

## Physical Description

**Form:** codex

**Support:** parchment

**Extent:** i (modern parchment) + iv (paper) + 15 + iv (paper) + i (modern parchment)

**Dimensions (leaf):** 355×230mm.

**Dimensions (written):** 280-90×190-5mm.

**Foliation:** modern pencil: i-v, 1-20; the text leaves foliated in pencil in the lower margin, probably by Phillipps

### Collation

1(16)

### Layout

72-81 lines; in 3 columns; ruled in pencil

### Decoration

Red and blue initials with penwork.

### Binding

Bound c.1800 in figured red velvet, with blue silk linings decorated in gold, edges gilt and gauffered. Paper flyleaves have watermarks 'J. Whatman' and '1794 J. Whatman', cf. Heawood, nos. 3459–60.

## History

**Origin:** 13th century, late ; **French** (Italian-looking hand) (?)

### Provenance and Acquisition

Probably from same MS. as MS. Lat. class. c. 12.

**Theodore Poelman** (or Pulman), 16th century: annotated by him, and inscribed 'Sum Theodori Pulmanni' (fol. 1r). Cited as MS.P in his edition of Claudian, first published by Plantin, 1571; but M.A. Del Rio, in his *Notae in Claudianum* (Antwerp, 1572, but found accompanying Poelman's 1571 edition) refers to the MS. as 'm.s. liber quam mihi utentum **Victor Giselinus** [i.e. Ghyselinc] singulari vir doctrina concessit' (cit. Hall, ed. cit., p.17). At least one other MS. from Poelman's collection now in the Plantin Moretus Museum, MS.Lat.120, was given to him by Giselinus.

**John Broadley**, his sale, 12 July 1832, lot 182 (this no. in pencil on fol. i verso).

Thomas Thorpe, *Catalogue of upwards of 1400 MSS ...*, 1836, no. 282

**Sir Thomas Phillipps** (1792-1872), MS. 8775

Sotheby's 28 Nov. 1967, lot 100. Bought.

Toby Burrows  
User Level: super\_editor

- Notifications
- Dashboard
- Bookmarks
- Exports
- Groups
- Watched Records
- Projects

TOOLS  
Add New Entry



### SDBM\_31241

This entry has been identified as belonging to manuscript record SDBM\_MS\_9367, which has 2 entries in the SDBM.

|                  |   |
|------------------|---|
| Source           | 1833-03-16 - London - D'athanasi (Auction/Dealer Catalog)   |
| Cat./Lot #       | 201   |
| Selling Agent(s) | London  |
| Titles           | Bible   |
| Dates            | C 1250 (1240 to 1261)   |
| Places           | Italy, Europe<br>France, Europe   |
| Folios           | 43  |
| Provenance Info  | This entry has 5 provenance records involving:<br>Maciejowski, Bernard, Cardinal<br>'Abbās I, Shah of Iran, 1571-1629<br>D'Athanasi, Giovanni<br>Phillipps, Thomas, Sir, 1792-1872<br>Pierpont Morgan Library |

[View complete record...](#)

[Download results as CSV](#)

|  |   |
|--|---|
| Source   |   |
| 1833-03-16 - London - D'athanasi   | 1 |
| Bibliothèque nationale de France - Bibliotheque nationale de France, Archives et Manuscrits Online Catalogue | 1 |
| Source Type  |   |
| Auction/Dealer Catalog   | 1 |
| Collection Catalog   | 1 |
| Provenance   |   |
| Manuscript Date  |   |
| Manuscript   |   |
| Place  |   |
| Language   |   |
| Material   |   |
| Folios   |   |





Toby Burrows [User Level: super\\_editor](#)

[5 Notifications](#)

[Dashboard](#)

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[Watched Records](#)

[Projects](#)

## TOOLS

[+ Add New Entry](#)

**DIGGING INTO DATA  
CHALLENGE**

NATIONAL ENDOWMENT FOR THE  
**Humanities**

**Trans-Atlantic Platform**  
Social Sciences and Humanities

INSTITUTE of  
**Museum and Library  
SERVICES**

Search database...

Search

[Advanced](#)

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[Recent Additions](#)

[Community Forum](#)

[« Previous](#) [Next »](#)

[A-Z Sort](#)

[Numerical Sort](#)

## Browsing facet: Provenance

|  |        |
|--|--------|
| Bibliothèque nationale de France   | 21,049 |
| Phillipps, Thomas, Sir, 1792-1872  | 19,603 |
| British Library  | 7,525  |
| Bernard Quaritch (Firm)  | 4,765  |
| Thorpe   | 4,312  |
| Colbert, Jean Baptiste   | 4,157  |
| Bibliothèque royale de Belgique  | 3,711  |
| Thorpe, Thomas, 1791-1851  | 2,941  |
| Pierpont Morgan Library  | 2,907  |
| Biblioteca apostolica vaticana   | 2,828  |
| Cotton, Robert, Sir, 1571-1631   | 2,693  |
| Libri, Guillaume, 1803-1869  | 2,593  |
| Rodd   | 2,489  |
| North, Frederick, Earl of Guilford, 1766-1827                              | 2,420  |
| Celotti, Luigi, Abate (1768-1846)  | 2,272  |
| Ashburnham   | 2,081  |
| Venezia, Biblioteca nazionale marciana                                     | 2,016  |
| Portland, Margaret Cavendish Holles Harley Bentinck, Duchess of, 1715-1785 | 1,870  |
| Oxford, Robert Harley, earl of, 1661-1724                                  | 1,854  |
| Harley, Henrietta Cavendish Holles, Countess of Oxford                     | 1,846  |
| Payne & Foss   | 1,798  |
| Puttick and Simpson  | 1,753  |
| Henry E. Huntington Library and Art Gallery.                               | 1,677  |
| Riccardi family  | 1,622  |

## De la bibliothèque médiévale ...

À l'origine, l'objectif de Bibale, créée par la section Codicologie de l'IRHT, était de décrire l'histoire de la transmission des manuscrits et des textes qu'ils contiennent par l'étude des collections anciennes et modernes, et celle de leurs possesseurs.

Les notices décrivent les manuscrits conservés aujourd'hui, pourvus d'ex-libris, d'armoiries ou d'autres marques de provenance, mais aussi les manuscrits attestés par les documents les plus divers : inventaires, catalogues, comptabilités, chroniques, correspondances, etc.

## ... à la bibliothèque idéale

Forte de cette richesse, la nouvelle Bibale élargit le corpus de données à de plus nombreux imprimés, et ambitionne ainsi de fédérer toutes les données de provenance que pourront proposer les bibliothèques françaises participantes\*.

Grâce à un système d'associations entre notices, Bibale permet d'une part de reconstituer la trajectoire de chaque exemplaire jusqu'à la collection où il est conservé aujourd'hui, à travers les bibliothèques médiévales et modernes, les collections publiques et privées, les ventes publiques et les collections de libraires, et d'autre part, de dévoiler les différentes collections qui ont existé à travers les siècles.

Toutes vos questions et remarques sont les bienvenues : [formulaire de contact](#).

## Les données de Bibale

Bibale décrit 5520 personnes morales et physiques, 1237 collections, 7491 sources et marques de provenances, 5684 livres (à l'heure actuelle essentiellement des manuscrits), 248 reliures, et 626 textes, liés à 240 œuvres.

Les notices présentes peuvent encore parfois être relativement sommaires.

Les sujets offrant le plus de données sont pour l'instant :

- L'héraldique : la plupart des données des 5200 fiches du fichier héraldique de l'IRHT ont été versées dans Bibale, créant ainsi autant de provenances (principalement des armoiries, quelques devises et mots), reliées à des personnes et des livres. Les fiches originales ont toutes été numérisées et sont mises à disposition dans Bibale.
- Les bibliothèques des dominicains du Sud de la France : la bibliothèque du couvent de Toulouse a fait l'objet d'une étude approfondie (comprenant des descriptions codicologiques et quelques descriptions textuelles) et quelque 150 manuscrits ont été versés dans Bibale, avec les sources (cotes anciennes, ex-libris) et les personnes associées. Cet ensemble est complété par la saisie de tous les couvents dominicains du Sud-Est de la France et des livres, personnes, sources et marques de provenance correspondantes. Le dernier couvent de la zone, celui d'Avignon, est intégralement publié.

### Derniers ajouts

04/06/2018

[France, Paris, Bibliothèque nationale de France, Manuscrits, fr. 23007](#)

04/06/2018

[France, Paris, Conservatoire national des arts et métiers. Bibliothèque Centrale, Pt Fol Ca 1 Res](#)

04/06/2018

[France, Paris, Bibliothèque nationale de France, Manuscrits, fr. 23006](#)

04/06/2018

[France, Paris, Bibliothèque nationale de France, Manuscrits, fr. 23005](#)

04/06/2018

[France, Paris, Bibliothèque nationale de France, Manuscrits, fr. 23004](#)

### Derniers articles de blog

21/01/2018

[test avec Flo](#)

18/01/2018

[test rédacteur 2 publié](#)

15/01/2018

[Bonne année !](#)

[Voir tous les articles](#)

### Actualités

21/12/2017



## SUISSE, COLOGNY, Fondation Martin Bodmer, 076

**Type** Livre  
**Permalien** <http://bibale2.irht.cnrs.fr/view/14751>  
**Publié par** IRHT



### ► General

**Cote livre** SUISSE, COLOGNY, Fondation Martin Bodmer, 076  
**Type composant** Volume conservé  
**Date** 1101 - 1200  
**Lieu** Italie  
**Medium commentaire** Gregorius Magnus, Homiliae en Ezechielem

### ► Associations (7)

| Type asso          | Notice  | Date |
|--------------------|---|------|
| est mentionné dans | <a href="#">E. Pellegrin, <i>Manuscrits latins de la Bodmeriana</i>, Cologny-Genève, Fondation Martin Bodmer, 1982</a> , p. 132-133 |      |
| fait partie de     | <a href="#">Collection Phillipps</a>  |      |
| fait partie de     | <a href="#">Fonds du libraire Thomas Thorpe</a>   |      |
| fait partie de     | <a href="#">Collection de Sydney Cockerell</a>  |      |
| fait partie de     | <a href="#">Fonds de la librairie Dawsons (Pall Mall, Londres)</a>  |      |
| fait partie de     | <a href="#">Fonds de libraire de Philip Duschnes</a>  |      |

### Recherche simple

Utiliser '%' comme signe de troncature

Pays   
 Ville   
 Etablissement   
 Manuscrit (cote)   
 Lien vers les bases de l'IRHT   
 Lien vers un site externe (type)   
 Lien vers un site externe (origine)

Vider le formulaire

Rechercher

[Recherche avancée](#)



Medium est un répertoire des manuscrits reproduits et recensés à l'IRHT :

- manuscrits du Moyen Age et de la Renaissance conservés dans les bibliothèques de France (hors BNF) ;
- certaines incunables, livres anciens, manuscrits de la BNF et d'autres bibliothèques dans le monde sélectionnés en fonction des [programmes de recherche de l'IRHT](#).



La recherche simple se fait sur la cote.

Des recherches multicritères sont possibles en [Recherche avancée](#) par exemple : date, langue, contenu(auteur, titre), support, décoration...

Les reproductions conservées à l'IRHT sont consultables soit en [bibliothèque](#) et dans les [sections](#), soit sur internet, via Medium :

Fiche ms. |   
 Liens

- Liens vers des Bibliothèques virtuelles externes à l'IRHT
- Liens vers la Bibliothèque virtuelle des manuscrits médiévaux : BVMM

Contact

[Véronique Trémault](#)

### Liste des Manuscrits : Pays: États-Unis | Ville: New York | Etablissement: Morgan Library and Museum |

121 réponses , page 1/13

 > >>

 Nombre de lignes par page: 

| <input type="checkbox"/> | PAYS      | VILLE | ETABLISSEMENT | COTE                      | AUTRES COTES          | REPRODUCTIONS | LIEU DE STOCKAGE             | CLASSEMENT | SECTIONS | DATATION  | CONTENU       | DÉCORATION  | RÉSERVE DE DIFFUSION                    |   |
|--------------------------|-----------|-------|---------------|---------------------------|-----------------------|---------------|------------------------------|------------|----------|-----------|---------------|---|---|---|
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | 0043                  |               | décor numérique (à faire)    |            | HEB.     |           |               |   | consultation libre, pas de reproduction |   |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | 0638                  |               |                              |            | HEB.     |           |               |   | consultation libre, pas de reproduction |   |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | 0739                  |               | décor numérique (à faire)    |            | HEB.     |           |               |   | consultation libre, pas de reproduction |   |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | B. 012                |               | intégral argentine (FAIT)    | IRHT       | MF 45505 | LAT. MUS. | 15e s.        | Traité d'Astronomie, de Mathématiques et de Musique | sans                                    | consultation libre, pas de reproduction |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | Census de Seymour 115 |               | intégral argentine (FAIT)    | IRHT       | MF 65475 | LAT. MUS. | 15e s. (1470) | Graduel de Dijon                                    | iconographie ornement                   | consultation libre, pas de reproduction |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | Census de Seymour 377 |               | intégral argentine (FAIT)    | IRHT       | MF 18169 | LAT.      | ?             | Missel  | ?                                       | consultation libre, pas de reproduction |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | Colt Papyri           |               | intégral argentine (FAIT)    | IRHT       | MF 47588 | AR. GR.   | ?             | Papyrus bilingues (grec-arabe)                      | sans                                    | consultation libre, pas de reproduction |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | Colt. pap. 064        |               | intégral numérique (à faire) |            |          | AR.       |               |   |   | consultation libre, pas de reproduction |
| <input type="checkbox"/> | Fiche ms. | USA   | New York      | Morgan Library and Museum | Colt. pap. 065        |               | intégral numérique (FAIT)    |            |          | AR.       |               |   |   | consultation libre, pas de reproduction |



# Generic Research Questions

- Trace the history and movement across time and space of a single manuscript
- Trace the history and movement across time and space of a group of manuscripts, selected using one or more of the following criteria:
  - similar place of origin; same current location (place / institution / collection);
  - same language; similar subject; similar text; same period of origin;
  - same current or previous owner(s); same collection at the same time
- For manuscripts of a particular type, or from a particular group:
  - Find the number or proportion which are now in institutional collections;
  - Find the number or proportion which are in private collections;
  - Show how these numbers and proportions changed over time
- Find the connections between specific actors, and also between specific manuscripts or groups of manuscripts

# Broader Research Questions

- A general analysis of the history and movement of medieval and Renaissance manuscripts over the centuries, including such questions as: how many manuscripts have survived; where they are now; and which people and institutions have been involved in their history;
- A more specific analysis of the mobility of manuscripts and its traceability, within and from French space, since the Wars of Religion;
- A comparison of the respective significance of institutional and individual manuscript collectors in the 19<sup>th</sup> and 20<sup>th</sup> centuries



# Specific Research Questions

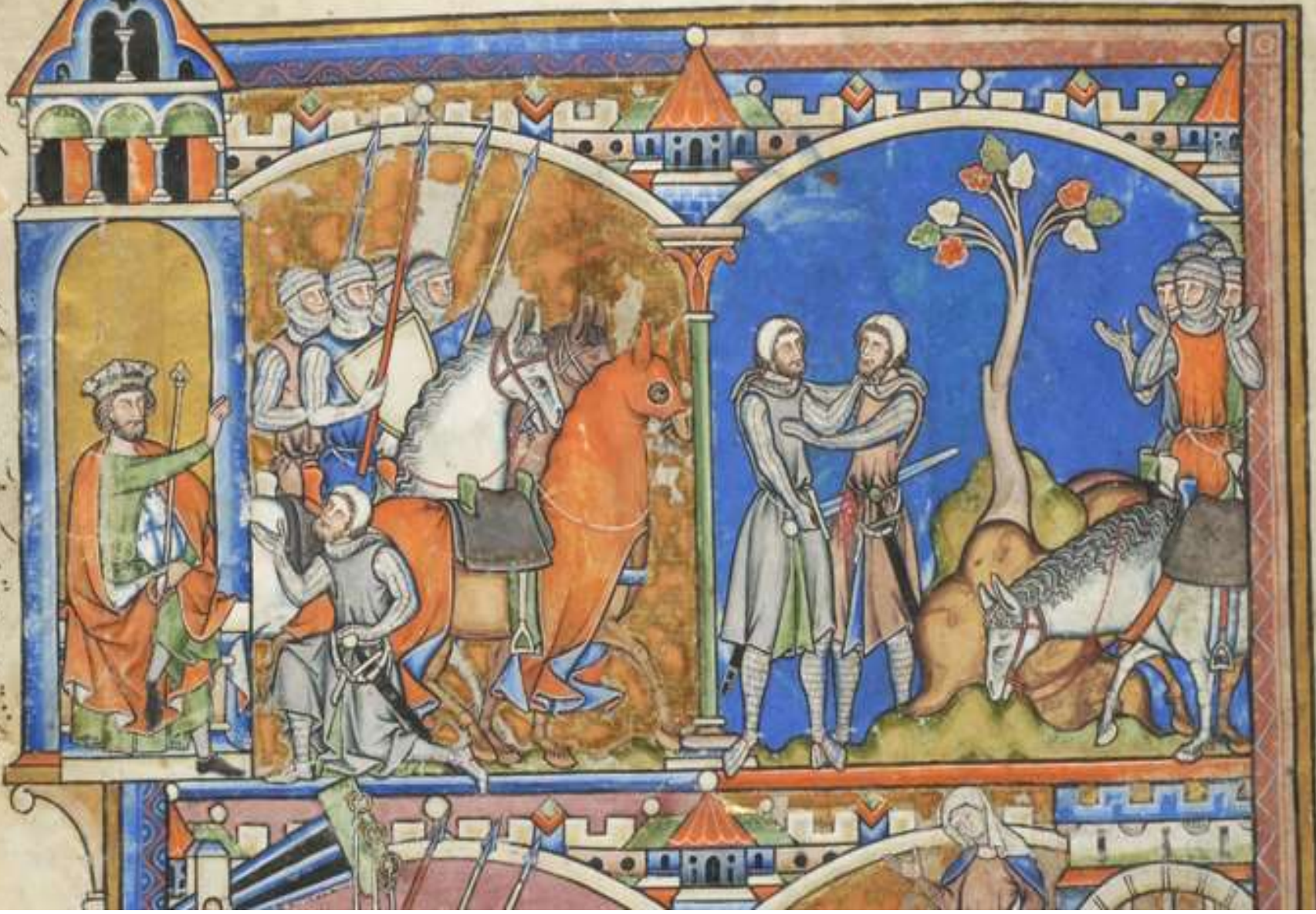
- [A1] How many manuscripts from pre-1600 produced in European countries survive?
- [A2] How many manuscripts survive that contain Spanish texts written in gothic rotunda were produced in Castile for an abbey or convent? Then show me those which were owned during the nineteenth century by English private collectors. Then show me those which are now owned by an institution in North America.
- [A3] What French collectors purchased manuscripts since the end of the Wars of Religion (after 1598)? Where are their manuscripts now?
- [A4] How many manuscripts did French collectors acquire from dissolved English monasteries?
- [A5] How many manuscripts formerly owned by Sir Thomas Phillipps are in British Libraries?
- [B1] How many manuscripts containing texts by Ramon Llul were sold in the 19th century? (Must consider all spelling variations of name)
- [B2] Where are Ramon Llul manuscripts today?

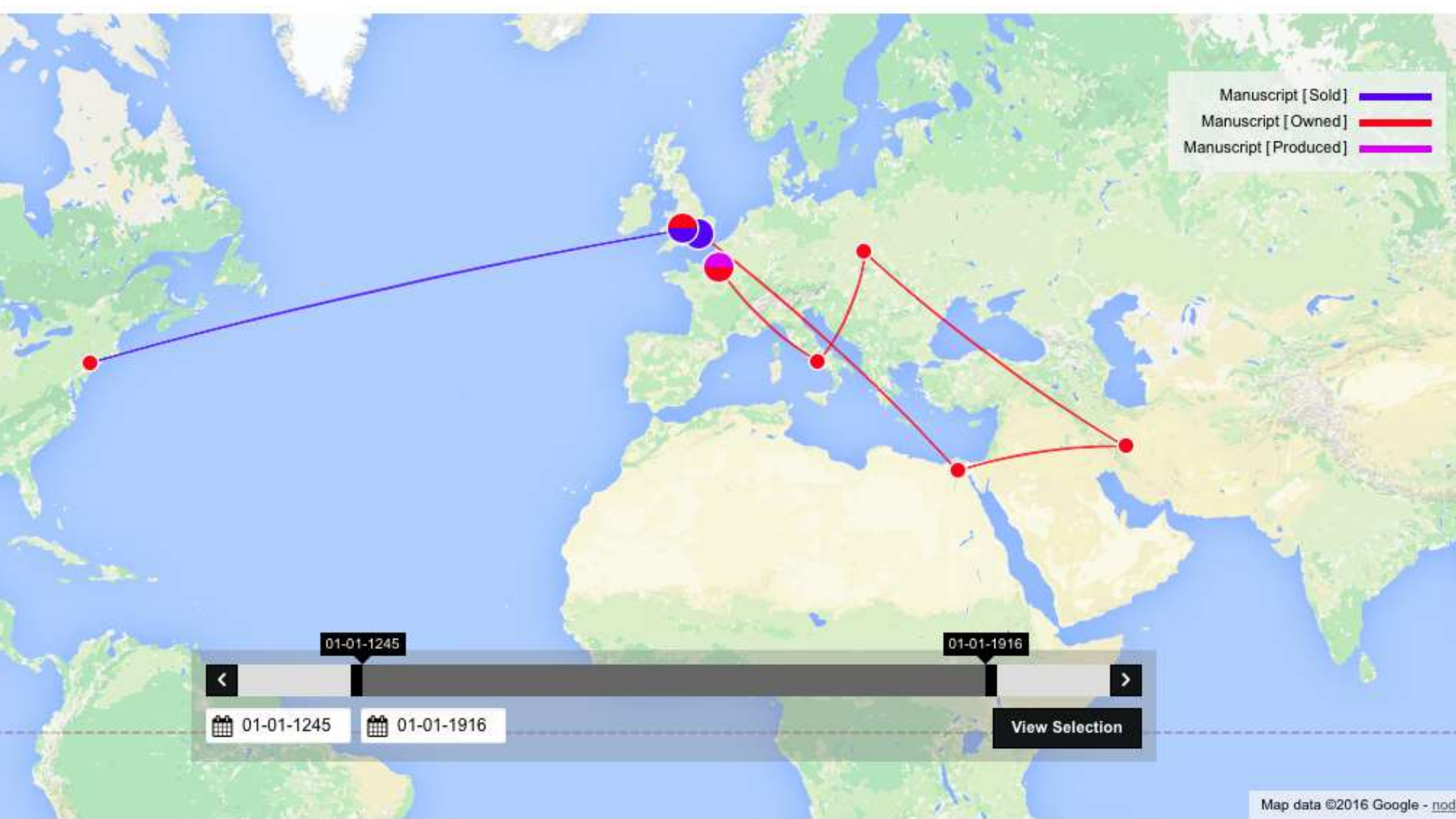
**D**

...at dante dicitur... Joab... amicum... interfecit.

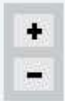
Handwritten marginal notes in Arabic script, top left.

Handwritten marginal notes in Arabic script, left side.

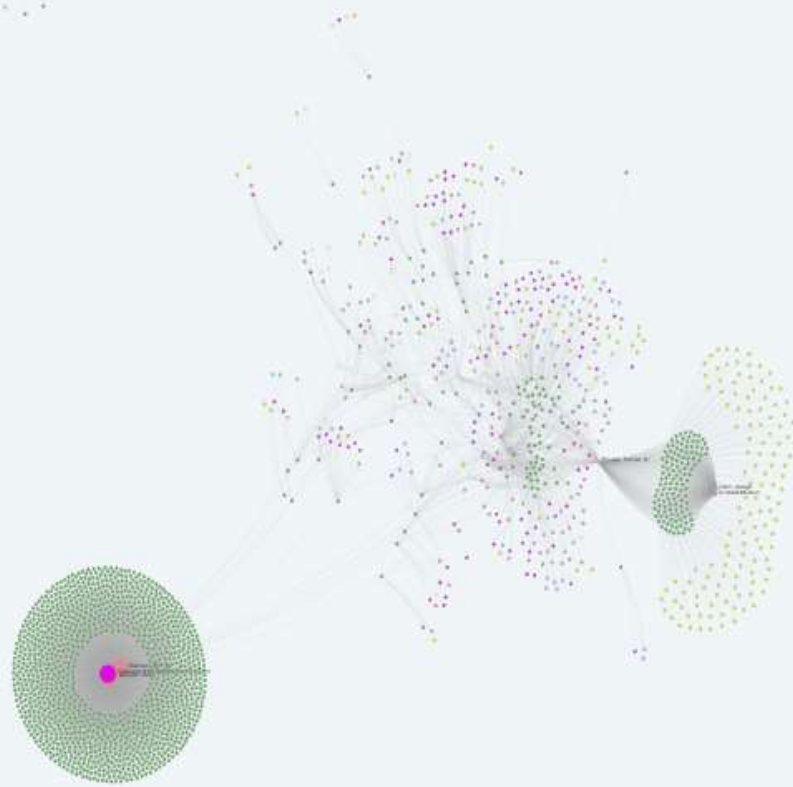








- Manuscript —
- Organization —
- Person —
- Source of Data —
- Text —



Catalogue of the topographical collecti...

|                    |           |
|--------------------|-----------|
| out-Links          | 0/0       |
| in-Links           | 1170/1170 |
| Manuscript [Owned] | 1170      |
| Phillipps MS 19884 | 1 (3)     |
| Phillipps MS 3     | 1 (3)     |
| Phillipps MS 57    | 1 (3)     |
| Phillipps MS 66    | 1 (3)     |
| Phillipps MS 92    | 1 (3)     |
| Phillipps MS 108   | 1 (3)     |
| Phillipps MS 140   | 1 (3)     |
| Phillipps MS 141   | 1 (3)     |
| Phillipps MS 142   | 1 (3)     |
| Phillipps MS 143   | 1 (3)     |

Catalogue of the topographical collections

30-03-17 CE      30-03-2017 CE

30-03-17    30-03-2017    | 1    year    ▶    ◻

**View Selection**

# Mapping Manuscript Migrations

- More information at:  
<http://mappingmanuscriptmigrations.org>
- Twitter: @MSMigrations
- Toby Burrows: toby.burrows@oerc.ox.ac.uk



- Trans-Atlantic Platform:

# **Bodleian MSs catalogues**

# MEDIEVAL MANUSCRIPTS IN OXFORD LIBRARIES

[HOME](#) [ABOUT](#) [HELP](#)

A catalogue of Western manuscripts at the Bodleian Libraries and selected Oxford colleges

[ADVANCED SEARCH](#)

OR BROWSE BY

[MANUSCRIPTS](#)[WORKS](#)[PEOPLE](#)[PLACES](#)

## ABOUT US

### Scope

This catalogue provides descriptions of all known Western medieval manuscripts in the Bodleian Library, and of medieval manuscripts in selected Oxford colleges (currently Christ Church). It is the result of a project generously funded by the Tolkien Trust.

"Western" denotes manuscripts written in Latin, Greek, and the European vernaculars (including Slavonic languages). "Medieval" denotes manuscripts written before approximately 1500 and includes papyri from the classical period. The distinction between "medieval" and "renaissance" or "early modern" manuscripts naturally varies according to region and subject-matter and is frequently a matter of judgement. We have aimed towards an inclusive treatment.



# Source Data

- TEI P5 XML
  - Customized to focus on recording catalogue descriptions of manuscripts
  - Still more of a document format than typical for metadata, more like Word than Excel
- GitHub for storage and open access
  - Keeps track of versions
  - Distributed contributors
- Local authority files
  - Controlled vocabulary for names of people, places and titles of works

```
<history>
  <origin resp="#MLH">
    <origDate calendar="Gregorian" notAfter="1175" notBefore="1150">12th century, third
      quarter</origDate>
    <origPlace cert="low">
      <country key="place_7002445">English</country>
    </origPlace>
  </origin>
  <provenance resp="#MLH">Annotations in pencil, 15th cent. (?), and ink, 16th cent.
</provenance>
  <provenance resp="#Q2">Possibly the manuscript seen at the Benedictine abbey of
    <orgName key="org_141158386" role="formerOwner" cert="unknown">Abingdon</orgName> by John
    Leland (<title>English Benedictine Libraries: The Shorter Catalogues</title>,
    B3.2)
  </provenance>
  <provenance notAfter="1572" resp="#Q2">Possibly the manuscript recorded by John Bale 'ex
    museo Thome Keye, Oxon.' (<title>Index Brittanie Scriptorum</title>, pp. 96, and cf. p.
    478): <persName role="formerOwner" key="person_2780">Thomas Kay, master of University
    College Oxford, d. 1572</persName> (Emden, <title>BRUO 1501-1540</title>, pp. 325-6,
    723).
  </provenance>
  <provenance notAfter="1621" resp="#Q2"><persName role="formerOwner" key="person_25374986">
    Thomas Allen, 1542-1632</persName>.
  </provenance>
  <provenance notBefore="1621" resp="#Q2">
    Given by Allen to <persName role="formerOwner" key="person_37261411">Sir Robert Cotton,
    1571-1631</persName>, as recorded in the 1621 catalogue of Cotton's library (BL MS Harley
    6018, fol. 131), where this is no. 359: cf. '359' (fol. 1, cropped).
  </provenance>
  <provenance resp="#Q2">
    <persName role="formerOwner" key="person_49357645">Kenelm Digby, 1603-1665</persName>
  </provenance>
  <acquisition when="1634" resp="#Q2">Presented by him to the Bodleian in 1634.</acquisition>
</history>
```

# XQuery

- Used to transform documents into single XML file
- Conform to a structured list of metadata fields, ready for mapping to target ontologies in 3M
- Reference local authority files
- Normalize some data (e.g. languages)
- Build URIs

```

1 declare namespace tei="http://www.tei-c.org/ns/1.0";
2 declare option saxon:output "indent=yes";
3
4 declare variable $website := 'https://medieval.bodleian.ox.ac.uk';
5
6 declare function local:logging($level as xs:string, $msg as xs:string, $values)
7 { [3 lines]
11
12 declare function local:languageCodeLookup($lang as xs:string) as xs:string*
13 { [73 lines]
87
88 declare function local:dateConversion($datestring as xs:string, $begin as xs:boolean) as xs:dateTime*
89 { [32 lines]
122
123 declare function local:listItems($manuscript as element(tei:TEI), $mscontent as element(tei:msContents)) as element()*
124 { [47 lines]
172
173 declare function local:extractPhysicalFields($physdesc as element(tei:physDesc)?) as element()*
174 { [70 lines]
245
246 declare function local:extractDates($history as element(tei:history)?) as element()*
247 { [59 lines]
307
308 declare function local:listPlacesOrgsPeople($container as element()) as element()*
309 { [47 lines]
357
358 declare function local:listProvenances($msorpart as element()) as element()*
359 { [41 lines]
401
402 processing-instruction xml-model {'href="simplified4oxlod.xsd" type="application/xml" schamtypens="http://www.w3.org/2001/XMLSchema"},
403 <manuscripts>
404 {
405   for $manuscript at $pos in collection('../..../collections/?select=*.xml;recurse=yes')/tei:TEI
406
407     return if (true()) then
408       (: To process everything, change above line to: return if (true()) then :)
409       (: To get a small random-ish sample, use: return if ($pos mod 200 = 0) then :)
410
411     <manuscript>
412
413       <uri>{ $website }/catalog/{ $manuscript/@xml:id/data() }</uri>
414       <classmark>{ $manuscript/tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:idno[1]/text() }</classmark>
415       <collection>{ $manuscript/tei:teiHeader/tei:fileDesc/tei:titleStmt/tei:title[@type="collection"]/text() }</collection>
416       <repository>{ $manuscript/tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:repository/text() }</repository>
417       <institution>{ $manuscript/tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:institution/text() }</institution>
418
419     {
420       (: All manuscripts have at least one msContents element, but in multi-part manuscripts each is a child of an msPart :)
421       for $mscontent in $manuscript//tei:msContents
422         return
423           if ($mscontent/parent::tei:msPart) then
424             let $partid :=
425               if ($mscontent/parent::tei:msPart/@xml:id) then
426                 $mscontent/parent::tei:msPart/@xml:id/data()
427             else
428               repeat($partid, 1) / count($mscontent/parent::tei:msPart/preceding-sibling::tei:msPart) + 1))

```

```

<date context="origin">
  <from>1150-01-01T00:00:00</from>
  <to>1175-12-31T23:59:59</to>
</date>
<place context="origin">
  <uri>https://medieval.bodleian.ox.ac.uk/catalog/place_7002445</uri>
  <label>English</label>
</place>
<provenance xml:id="manuscript_4436_prov2">
  <org cert="unknown">
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/org_141158386</uri>
    <label>Abingdon</label>
    <role>formerOwner</role>
  </org>
</provenance>
<provenance xml:id="manuscript_4436_prov3">
  <date><to>1572-12-31T23:59:59</to></date>
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_2780</uri>
    <label>Thomas Kay, master of University College Oxford, d. 1572</label>
    <role>formerOwner</role>
  </person>
</provenance>
<provenance xml:id="manuscript_4436_prov4">
  <date><to>1621-12-31T23:59:59</to></date>
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_25374986</uri>
    <label>Thomas Allen, 1542-1632</label>
    <role>formerOwner</role>
  </person>
</provenance>
<provenance xml:id="manuscript_4436_prov5">
  <date><from>1621-01-01T00:00:00</from></date>
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_37261411</uri>
    <label>Sir Robert Cotton, 1571-1631</label>
    <role>formerOwner</role>
  </person>
</provenance>
<provenance xml:id="manuscript_4436_prov6">
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_49357645</uri>
    <label>Kenelm Digby, 1603-1665</label>
    <role>formerOwner</role>
  </person>
</provenance>
<date context="acquisition">
  <from>1634-01-01T00:00:00</from>
  <to>1634-12-31T23:59:59</to>
</date>

```

# Mapping MMM data with 3M

# Mapping MMM data with 3M



**DIGGING INTO DATA CHALLENGE**

AWARDS ROUND 4 AWARDS Mapping Manuscript Migrations: digging into data for the history and provenance of pre-modern European manuscripts

AWARDS NAVIGATION Select Awards Round

## Mapping Manuscript Migrations: Digging Into Data For The History And Provenance Of Pre-Modern European Manuscripts

**Abstract**

Hundreds of thousands of pre-modern European manuscripts have survived until the present day. As the result of changes in their ownership over the centuries, they are now spread all over the world. Collectively they constitute a great cultural and scholarly treasure. There are many sources of data relating to them, and new sources continue to proliferate in the digital environment. This project will link disparate datasets from Europe and North America to provide an international view of the history and provenance of these manuscripts. The aggregated data will enable researchers to analyse and visualise these topics at scales ranging from individual manuscripts to thousands of manuscripts. Our research will address their origins and movements, and the collectors and owners involved in their history. We will be able to show how these manuscripts have travelled across time and space to their current locations, where they continue to find new audiences.

**Principal Investigators**

Toby Burnes, University of Oxford, United Kingdom, [AHRC/ESRC](#)  
Eero Hyötyläinen, Aalto University, Finland, [AKA](#)  
Lynn Ransom, University of Pennsylvania, United States, [RFLS](#)  
Hanna Rippon, Institut de recherche et d'histoire des textes, France, [IARH](#)



**3M** Mapping Memory Manager

User Login

Username

Password

**Log in**

- Sign Up
- Request New Password

Copyright FORTHCS EURL Version 2.1

FORTH FORTH INSTITUTE OF CULTURAL SCIENCE

ISL Informative Systems Laboratory

Centre for Cultural Informatics

# MMM integration tasks

- Across project partners
- Within Bodleian
  - Main MS TEI files
  - Works TEI file
  - Places authority
  - People authority



# Mapping to CRM and FRBRoo

- Bodleian work (TEI bibl)
  - F1 Work → Concept in one's mind

# F1 Work

**This class comprises distinct concepts or combinations of concepts identified in artistic and intellectual expressions, such as poems, stories or musical compositions.** Such concepts may appear in the course of the coherent evolution of an original idea into one or more expressions that are dominated by the original idea. A Work may be elaborated by one or more Actors simultaneously or over time. **The substance of Work is ideas.** A Work may have members that are works

# Mapping to CRM and FRBRoo

- Bodleian work (TEI bibl)
  - F1 Work → Concept in one's mind
- TEI msItem
  - F22 Self-Contained Expression → Symbols (i.e. the same set of symbols on different carriers is the same expression)

# F22 Self-Contained Expression

This class comprises the immaterial realisations of individual works at a particular time that are regarded as a complete whole. The quality of wholeness reflects the intention of its creator that this expression should convey the concept of the work. Such a whole can in turn be part of a larger whole.

Inherent to the notion of work is the completion of recognisable outcomes of the work. These outcomes, i.e. the Self-Contained Expressions, are regarded as the symbolic equivalents

# Mapping to CRM and FRBRoo

- Bodleian work (TEI bibl)
  - F1 Work → Concept in one's mind
- TEI msItem
  - F22 Self-Contained Expression → Symbols (i.e. the same set of symbols on different carriers is the same expression)
- TEI msDesc
  - E24 Physical Man-Made Thing, F4 Manifestation Singleton → Physical (i.e. the book on the shelf)

# F4 Manifestation Singleton

This class comprises physical objects that each carry an instance of F2 Expression, and that were produced as unique objects, with no siblings intended in the course of their production. It should be noted that if all but one copy of a given publication are destroyed, then that copy does not become an instance of F4 Manifestation Singleton, because it was produced together with sibling copies, even though it now happens to be unique. Examples of instances of F4 Manifestation Singleton include

# Mapping to CRM and FRBRoo

- Bodleian work (TEI bibl)
    - F1 Work → Concept in one's mind
  - TEI msItem
    - F22 Self-Contained Expression → Symbols (i.e. the same set of symbols on different carriers is the same expression)
  - TEI msDesc
    - E24 Physical Man-Made Thing, F4 Manifestation Singleton → Physical (i.e. the book on the shelf)
- R3 is realised in
- R42 is representative manifestation singleton for
-

# Mapping to CRM and FRBRoo

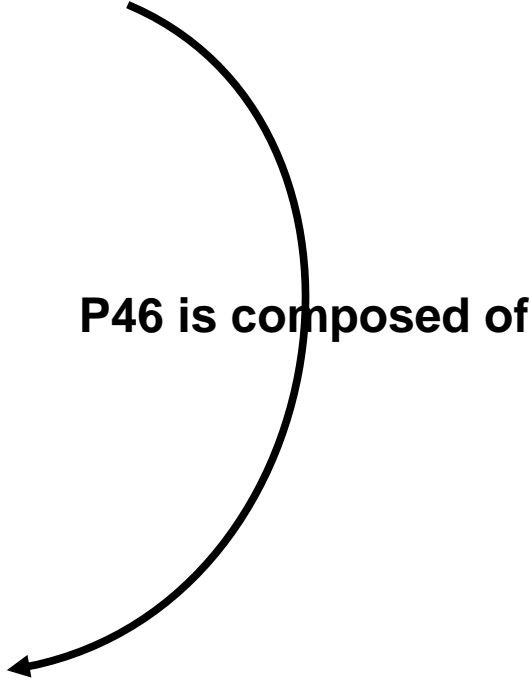
- composite manuscript (with parts)
  - E24 Physical Man-Made Thing
- manuscript (without parts)
  - E24 Physical Man-Made Thing
  - F4 Manifestation Singleton



# Mapping to CRM and FRBRoo

- composite manuscript (with parts)
  - E24 Physical Man-Made Thing
- manuscript (without parts)
  - E24 Physical Man-Made Thing
  - F4 Manifestation Singleton
- part
  - E24 Physical Man-Made Thing
  - F4 Manifestation Singleton

# Mapping to CRM and FRBRoo

- composite manuscript (with parts)
    - E24 Physical Man-Made Thing
  - manuscript (without parts)
    - E24 Physical Man-Made Thing
    - F4 Manifestation Singleton
  - part
    - E24 Physical Man-Made Thing
    - F4 Manifestation Singleton
- 
- P46 is composed of

MS. Gr. class. d. 35 (P)@en [ E24\_Physical\_Man-Made\_Thing 🗑 ]

P52\_has\_current\_owner

University of Oxford@en [ F44\_Bibliographic\_Agency 🗑 ]

P46\_is\_composed\_of

MS. Gr. class. d. 35 (P) - Part 1@en [ E24\_Physical\_Man-Made\_Thing, F4\_Manifestation\_Singleton 🗑 ]

P45\_consists\_of

Papyrus@en [ E57\_Material 🗑 ]

R42\_is\_representative\_manifestation\_singleton\_for

Expression of 'MS. Gr. class. d. 35 (P) - Part 1'@en [ F22\_Self-Contained\_Expression 🗑 ]

R3i\_realises

Petition from a woman@und [ F1\_Work 🗑 ]

P108i\_was\_produced\_by

Production of MS. Gr. class. d. 35 (P) - Part 1@en [ E12\_Production 🔄 ]

P7\_took\_place\_at

Egyptian@en [ E53\_Place, F9\_Place 🗑 ]

P4\_has\_time-span

Time-span of production of MS. Gr. class. d. 35 (P) - Part 1@en [ E52\_Time-Span 🗑 ]

P82b\_end\_of\_the\_end

-0200-12-31T23:59:59@en

P82a\_begin\_of\_the\_begin

-0300-01-01T00:00:00@en

MS. Gr. class. d. 35 (P) - Part 2@en [ F4\_Manifestation\_Singleton, E24\_Physical\_Man-Made\_Thing 🗑 ]

P108i\_was\_produced\_by

Production of MS. Gr. class. d. 35 (P)@en [ E12\_Production 🔄 ]

P48\_has\_preferred\_identifier

MS. Gr. class. d. 35 (P)@und [ F13\_Identifier, E42\_Identifier 🗑 ]

P46i\_forms\_part\_of

MSS. Gr. class. (Greek classical)@und [ E78\_Collection 🗑 ]


















P30i\_custody\_transferred\_through

Transfer of custody of MS. Gr. class. d. 35 (P)@en [ E10\_Transfer\_of\_Custody 🗑 ]

```

<date context="origin">
  <from>1150-01-01T00:00:00</from>
  <to>1175-12-31T23:59:59</to>
</date>
<place context="origin">
  <uri>https://medieval.bodleian.ox.ac.uk/catalog/place_7002445</uri>
  <label>English</label>
</place>
<provenance xml:id="manuscript_4436_prov2">
  <org cert="unknown">
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/org_141158386</uri>
    <label>Abingdon</label>
    <role>formerOwner</role>
  </org>
</provenance>
<provenance xml:id="manuscript_4436_prov3">
  <date><to>1572-12-31T23:59:59</to></date>
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_2780</uri>
    <label>Thomas Kay, master of University College Oxford, d. 1572</label>
    <role>formerOwner</role>
  </person>
</provenance>
<provenance xml:id="manuscript_4436_prov4">
  <date><to>1621-12-31T23:59:59</to></date>
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_25374986</uri>
    <label>Thomas Allen, 1542-1632</label>
    <role>formerOwner</role>
  </person>
</provenance>
<provenance xml:id="manuscript_4436_prov5">
  <date><from>1621-01-01T00:00:00</from></date>
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_37261411</uri>
    <label>Sir Robert Cotton, 1571-1631</label>
    <role>formerOwner</role>
  </person>
</provenance>
<provenance xml:id="manuscript_4436_prov6">
  <person>
    <uri>https://medieval.bodleian.ox.ac.uk/catalog/person_49357645</uri>
    <label>Kenelm Digby, 1603-1665</label>
    <role>formerOwner</role>
  </person>
</provenance>
<date context="acquisition">
  <from>1634-01-01T00:00:00</from>
  <to>1634-12-31T23:59:59</to>
</date>

```

| #   | SOURCE   | TARGET   |
|-----|--|--|
| 7   | D  //provenance |  E5_Event   |
| 7.1 | P ↓ org  | ↓ <i>P11_had_participant</i>   |
|     | R  org          |  E74_Group  |
| 7.2 | P ↓ person   | ↓ <i>P11_had_participant</i>   |
|     | R  person       |  E21_Person<br>F10_Person   |
| 7.3 | P ↓ place  | ↓ <i>P7_took_place_at</i>  |
|     | R  place        |  E53_Place<br>F9_Place  |
| 7.4 | P ↓ date/from  | ↓ <i>P4_has_time-span</i><br> E52_Time-Span  [ets]     |
|     | R  date/from  | ↓ <i>P82a_begin_of_the_begin</i><br> XMLSchema#dateTime   |
| 7.5 | P ↓ date/to  | ↓ <i>P4_has_time-span</i><br> E52_Time-Span  [ets] |
|     | R  date/to    | ↓ <i>P82b_end_of_the_end</i><br> XMLSchema#dateTime   |
| 7.6 | P ↓ text   | ↓ <i>P3_has_note</i>   |
|     | R  text       |  rdf-schema#Literal   |

MS. Lat. th. f. 20@en [ F4\_Manifestation\_Singleton ○ ]  
R42\_is\_representative\_manifestation\_singleton\_for

Expression of 'MS. Lat. th. f. 20'@en [ F22\_Self-Contained\_Expression ○ ] -

R5\_has\_component

Expression of 'Litany of the saints, Use of Sarum'@en [ F22\_Self-Contained\_Expression ○ ] -

R3i\_realises

Litany of the saints, Use of Sarum@und [ F1\_Work ○ ]

Expression of 'Prayers for use before and after Mass'@en [ F22\_Self-Contained\_Expression ○ ] +

Expression of 'Meditationes circa septem Psalmos paenitentiales'@en [ F22\_Self-Contained\_Expression ○ ] +

expand list (4 entries) ▾

P43\_has\_dimension

Dimension for MS. Lat. th. f. 20@en [ E54\_Dimension ○ ] -

P2\_has\_type

min width leaf@en [ E55\_Type ○ ]

P90\_has\_value

90@en

P91\_has\_unit

mm@en [ E58\_Measurement\_Unit ○ ]

Dimension for MS. Lat. th. f. 20@en [ E54\_Dimension ○ ] +

Dimension for MS. Lat. th. f. 20@en [ E54\_Dimension ○ ] +

expand list (8 entries) ▾

P12i\_was\_present\_at

Provenance event of MS. Lat. th. f. 20@en [ E5\_Event ↻ ] -

P3\_has\_note

Syon monastery : identifiable by content and 2o fo. with MS. M 95 in the 16th cent. catalogue@en

P11\_had\_participant

Syon monastery@und

Provenance event of MS. Lat. th. f. 20@en [ E5\_Event ↻ ] +

Provenance event of MS. Lat. th. f. 20@en [ E5\_Event ↻ ] +

expand list (6 entries) ▾

P51\_has\_former\_or\_current\_owner

John Trotter Brockett@und [ F10\_Person, E21\_Person 👤 ]

William Greenwell@und [ E21\_Person, F10\_Person 👤 ]

Wilfred Merton@und [ E21\_Person, F10\_Person ○ ]

expand list (4 entries) ▾

P52\_has\_current\_owner

University of Oxford@en [ F44\_Bibliographic\_Agency ○ ]

P30i\_custody\_transferred\_through

Transfer of custody of MS. Lat. th. f. 20@en [ E10\_Transfer\_of\_Custody ○ ] -

P29\_custody\_received\_by

University of Oxford@en

P128\_carries

Inscription of MS. Lat. th. f. 20@en [ E34\_Inscription 🏹 ] -

P67\_refers\_to

J. Raine@und [ F10\_Person, E21\_Person 👤 ]

P3\_has\_note

' J. Raine , York, Jan. 1862'@en

P48\_has\_preferred\_identifier

MS. Lat. th. f. 20@und [ F13\_Identifier, E42\_Identifier ○ ]

P108i\_was\_produced\_by

Production of MS. Lat. th. f. 20@en [ E12\_Production ↻ ] -

P4\_has\_time-span

Time-span of production of MS. Lat. th. f. 20@en [ E52\_Time-Span ○ ] -

P82a\_begin\_of\_the\_begin

1400-01-01T00:00:00@en

P82b\_end\_of\_the\_end

1410-12-31T23:59:59@en

P7\_took\_place\_at

English@en [ F9\_Place, E53\_Place 📍 ]

P46i\_forms\_part\_of

MSS. Lat. th. (Latin theology)@und [ E78\_Collection 📖 ] -

P46i\_forms\_part\_of

Bodleian Library@en [ E78\_Collection 📖 ]

P45\_consists\_of

Parchment@en [ E57\_Material ○ ]

MS. Lat. th. f. 20@en [ F4\_Manifestation\_Singleton ]

R42\_is\_representative\_manifestation\_singleton\_for

Expression of 'MS. Lat. th. f. 20'@en [ F22\_Self-Contained\_Expression ]

R5\_has\_component

Expression of 'Litany of the saints, Use of Sarum'@en [ F22\_Self-Contained\_Expression ]

R3i\_realises

Litany of the saints, Use of Sarum@und [ F1\_Work ]

Expression of 'Prayers for use before and after Mass'@en [ F22\_Self-Contained\_Expression ]

Expression of 'Meditationes circa septem Psalmos paenitentiales'@en [ F22\_Self-Contained\_Expression ]

expand list (4 entries)

P43\_has\_dimension

Dimension for MS. Lat. th. f. 20@en [ E54\_Dimension ]

P2\_has\_type

min width leaf@en [ E55\_Type ]

P90\_has\_value

90@en

P91\_has\_unit

mm@en [ E58\_Measurement\_Unit ]

Dimension for MS. Lat. th. f. 20@en [ E54\_Dimension ]

Dimension for MS. Lat. th. f. 20@en [ E54\_Dimension ]

expand list (8 entries)

P12i\_was\_present\_at

Provenance event of MS. Lat. th. f. 20@en [ E5\_Event ]

P3\_has\_note

Syon monastery : identifiable by content and 2o fo. with MS. M 95 in the 16th cent. catalogue@en

P11\_had\_participant

Syon monastery@und

Provenance event of MS. Lat. th. f. 20@en [ E5\_Event ]

Provenance event of MS. Lat. th. f. 20@en [ E5\_Event ]

expand list (6 entries)

P51\_has\_former\_or\_current\_owner

John Trotter Brockett@und [ F10\_Person, E21\_Person ]

William Greenwell@und [ E21\_Person, F10\_Person ]

Wilfred Merton@und [ E21\_Person, F10\_Person ]

expand list (4 entries)

general classes and properties  
cannot identify seller/buyer

P51\_has\_former\_or\_current\_owner

John Trotter Brockett@und [ F10\_Person, E21\_Person ]

William Greenwell@und [ E21\_Person, F10\_Person ]

Wilfred Merton@und [ E21\_Person, F10\_Person ]

expand list (4 entries)

P52\_has\_current\_owner

University of Oxford@en [ F44\_Bibliographic\_Agency ]

P30i\_custody\_transferred\_through

Transfer of custody of MS. Lat. th. f. 20@en [ E10\_Transfer\_of\_Custody ]

P29\_custody\_received\_by

University of Oxford@en

P128\_carries

Inscription of MS. Lat. th. f. 20@en [ E34\_Inscription ]

P67\_refers\_to

J. Raine@und [ F10\_Person, E21\_Person ]

P3\_has\_note

' J. Raine , York, Jan. 1862 '@en

we separate evidence on text  
from Bodleian knowledge, i.e.  
inscriptions require interpretation

P48\_has\_preferred\_identifier

MS. Lat. th. f. 20@und [ F13\_Identifier, E42\_Identifier ]

P108i\_was\_produced\_by

Production of MS. Lat. th. f. 20@en [ E12\_Production ]

P4\_has\_time-span

Time-span of production of MS. Lat. th. f. 20@en [ E52\_Time-Span ]

P82a\_begin\_of\_the\_begin

1400-01-01T00:00:00@en

P82b\_end\_of\_the\_end

1410-12-31T23:59:59@en

P7\_took\_place\_at

English@en [ F9\_Place, E53\_Place ]

P46i\_forms\_part\_of

MSS. Lat. th. (Latin theology)@und [ E78\_Collection ]

P46i\_forms\_part\_of

Bodleian Library@en [ E78\_Collection ]

P45\_consists\_of

Parchment@en [ E57\_Material ]



[A1] How many manuscripts from 1550-1600 produced in European countries survive?

[A1] How many manuscripts **from 1550-1600** produced in European countries survive?

# Manuscripts produced between 1550-1600

```
SELECT DISTINCT ?msl ?tse {  
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events  
  ?ms rdfs:label ?msl . #get the MSs labels  
  ?p crm:P4_has_time-span ?ts . #productions with period  
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period  
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period  
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .  
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .  
} LIMIT 1000
```

# Reasoning with time

past time in history



# Reasoning with time

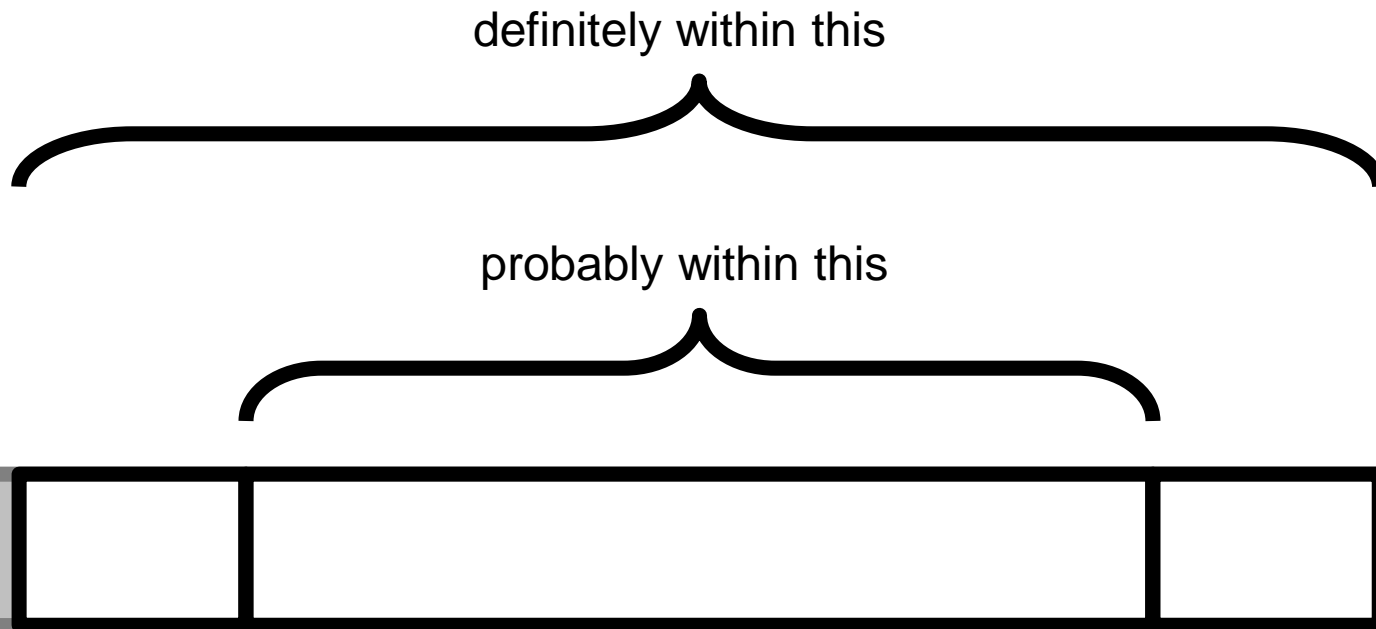
event



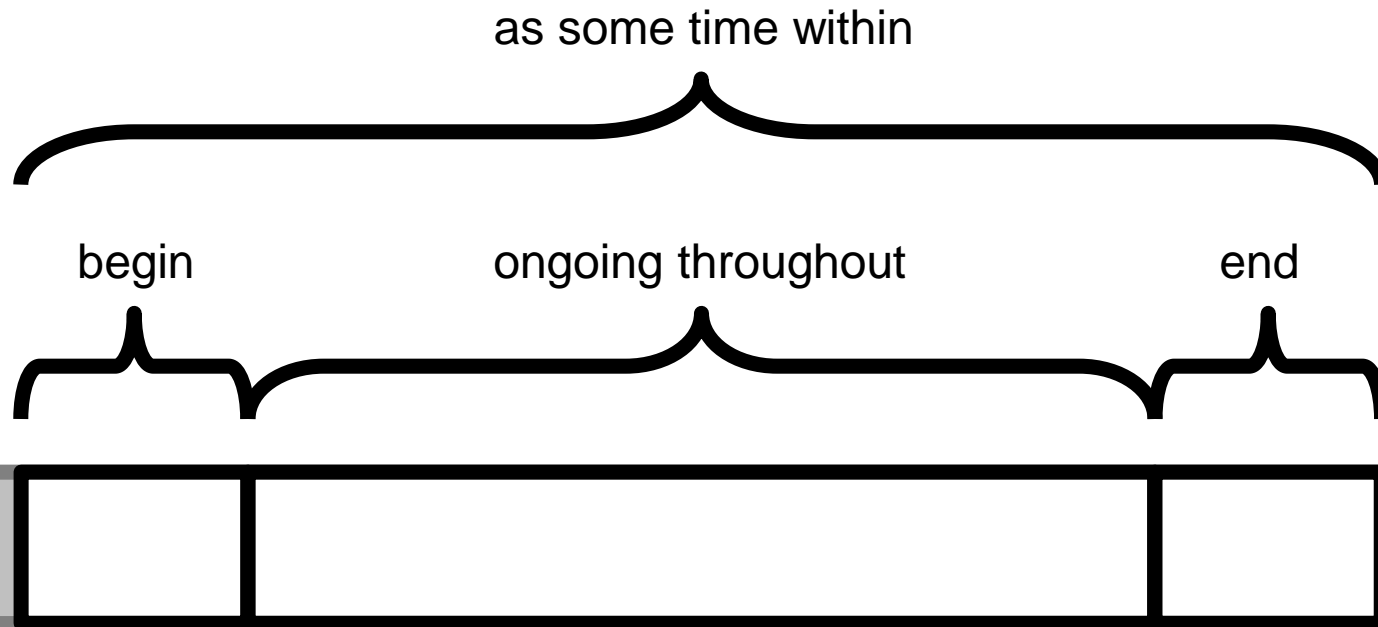
# Manuscripts produced between 1550-1600

```
SELECT DISTINCT ?msl ?tse {  
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events  
  ?ms rdfs:label ?msl . #get the MSs labels  
  ?p crm:P4_has_time-span ?ts . #productions with period  
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period  
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period  
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .  
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .  
} LIMIT 1000
```

# Reasoning with time

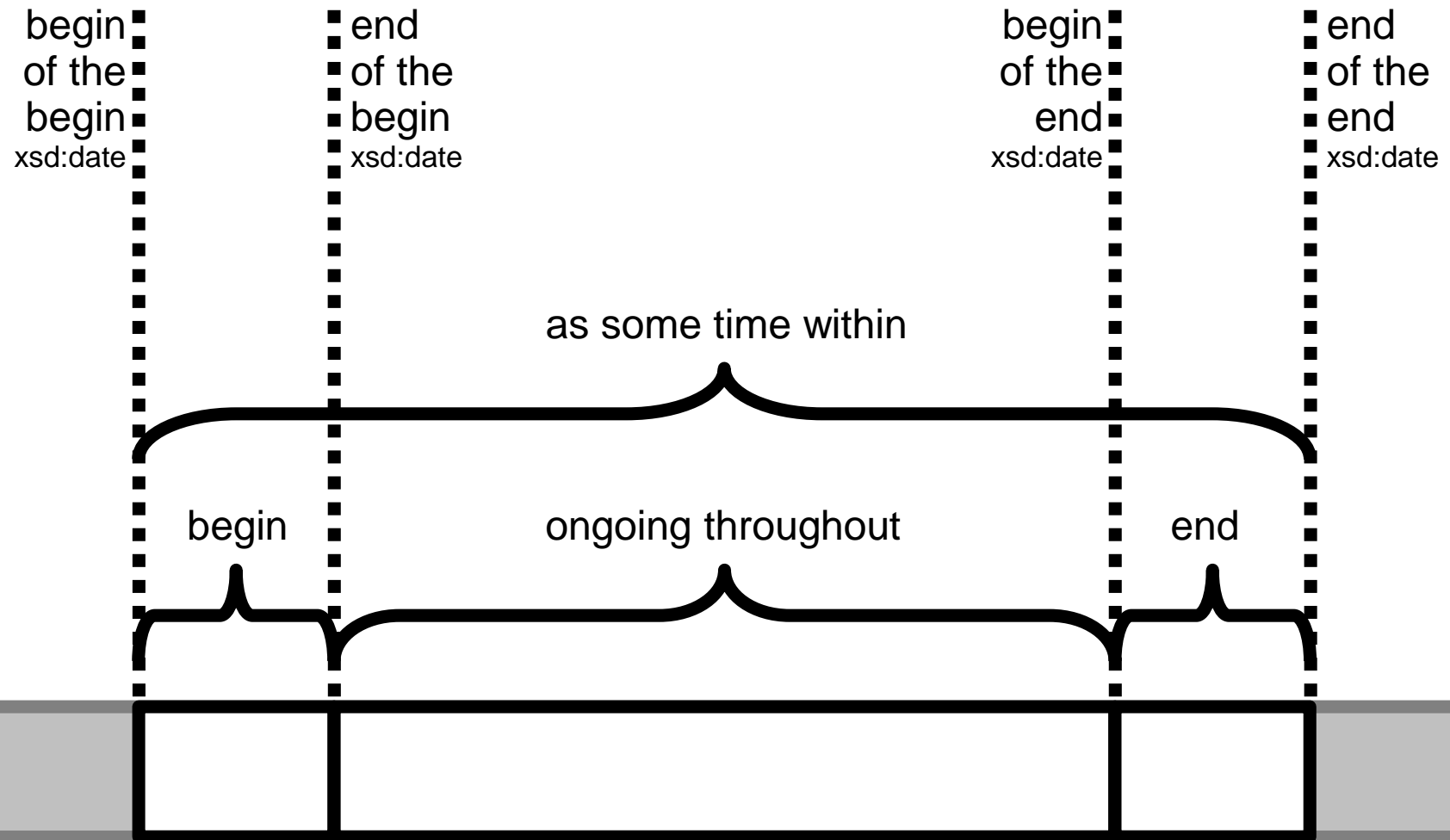


# Reasoning with time





# Reasoning with time



# Manuscripts produced between 1550-1600

```
SELECT DISTINCT ?msl ?tse {  
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events  
  ?ms rdfs:label ?msl . #get the MSs labels  
  ?p crm:P4_has_time-span ?ts . #productions with period  
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period  
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period  
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .  
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .  
} LIMIT 1000
```

# Manuscripts produced between 1550-1600

```

SELECT DISTINCT ?msl ?tse {
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events
  ?ms rdfs:label ?msl . #get the MSs labels
  ?p crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #begining of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
} LIMIT 1000

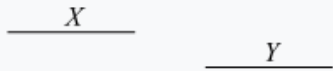
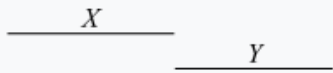
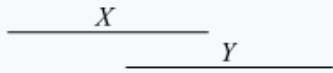
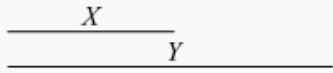
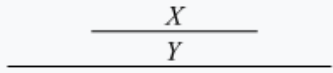
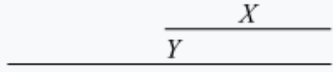
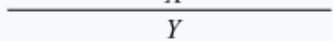
```

| msl                           | tse                 | msl                           | tse                 |
|-------------------------------|---------------------|-------------------------------|---------------------|
| MS. Add. D. 43                | 1553-12-31T23:59:59 | MS. Douce d. 11               | 1578-12-31T23:59:59 |
| MS. Digby 71 - Part 2         | 1557-12-31T23:59:59 | MS. Eng. poet. b. 1           | 1556-12-31T23:59:59 |
| MS. Barocci 189 - Part 1      | 1598-12-31T23:59:59 | MS. Ashmole 812               | 1560-12-31T23:59:59 |
| MS. Barocci 36                | 1565-12-31T23:59:59 | MS. Cherry 30                 | 1587-12-31T23:59:59 |
| Christ Church MS. 150         | 1580-12-31T23:59:59 | MS. Ashmole 820 - Part 1      | 1560-12-31T23:59:59 |
| MS. Auct. F. 6. 6             | 1580-12-31T23:59:59 | Christ Church MS. 125         | 1587-12-31T23:59:59 |
| MS. Add. D. 83                | 1565-12-31T23:59:59 | Christ Church MS. 180         | 1599-12-31T23:59:59 |
| MS. Eng. poet. e. 59          | 1556-12-31T23:59:59 | Christ Church MS. 456         | 1595-12-31T23:59:59 |
| MS. Laud Misc. 710            | 1552-12-31T23:59:59 | Christ Church MS. 486         | 1583-12-31T23:59:59 |
| MS. Laud Misc. 711            | 1564-12-31T23:59:59 | Christ Church MS. 578         | 1576-12-31T23:59:59 |
| MS. Laud Misc. 713            | 1572-12-31T23:59:59 | MS. Add. A. 189               | 1573-12-31T23:59:59 |
| MS. Auct. T. 2. 12            | 1573-12-31T23:59:59 | MS. Douce 387                 | 1595-12-31T23:59:59 |
| MS. Add. E. 3 (R)             | 1553-12-31T23:59:59 | MS. Douce 69                  | 1553-12-31T23:59:59 |
| MS. Selden Supra 68           | 1563-12-31T23:59:59 | MS. Douce b. 5 - Part 10      | 1590-12-31T23:59:59 |
| MS. Span. c. 18               | 1570-12-31T23:59:59 | MS. Auct. E. 2. 7             | 1564-12-31T23:59:59 |
| MS. Bodl. 431                 | 1555-12-31T23:59:59 | MS. Douce 225 - Part 1        | 1570-12-31T23:59:59 |
| MS. Barocci 33                | 1595-12-31T23:59:59 | MS. Bywater 37, fols. 118-175 | 1575-12-31T23:59:59 |
| MS. Barocci 40                | 1572-12-31T23:59:59 | MS. Barocci 170               | 1577-12-31T23:59:59 |
| MS. Barocci 42                | 1551-12-31T23:59:59 | MS. Barocci 176               | 1562-12-31T23:59:59 |
| MS. Add. A. 288               | 1578-12-31T23:59:59 | MS. Add. D. 42                | 1580-12-31T23:59:59 |
| MS. Arch. Selden. A. 2        | 1560-12-31T23:59:59 | MS. Bodl. 972                 | 1554-12-31T23:59:59 |
| MS. Canon. Ital. 143          | 1559-12-31T23:59:59 | MS. Canon. Ital. 142          | 1553-12-31T23:59:59 |
| MS. Ashmole 1481 - Part 6     | 1565-12-31T23:59:59 | MS. Auct. E. 2. 21            | 1568-12-31T23:59:59 |
| MS. Canon. Ital. 274 - Part 2 | 1591-12-31T23:59:59 | MS. Laud Misc. 714            | 1576-12-31T23:59:59 |
| MS. Rawl. D. 649              | 1595-12-31T23:59:59 | MS. Laud Misc. 715            | 1578-12-31T23:59:59 |
| MS. Ashmole 1119              | 1552-12-31T23:59:59 | MS. Canon. Ital. 58           | 1566-12-31T23:59:59 |
| MS. Dugdale 44                | 1556-12-31T23:59:59 | MS. Ashmole 771               | 1593-12-31T23:59:59 |
| MS. D. 620                    | 1552-12-31T23:59:59 | MS. Ashmole 770               | 1552-12-31T23:59:59 |

# Reasoning with time

- Presentation about time relations, including Allen relations (Martin Doerr)

- [http://www.cidoc-crm.org/sites/default/files/EMF2015-TemporalPrimitives3\\_0.pptx](http://www.cidoc-crm.org/sites/default/files/EMF2015-TemporalPrimitives3_0.pptx)

| Relation            | Illustration   | Interpretation                                   |
|---------------------|--|--|
| $X < Y$<br>$Y > X$  |    | X takes place before Y                           |
| $X m Y$<br>$Y mi X$ |    | X meets Y ( <i>i</i> stands for <i>inverse</i> ) |
| $X o Y$<br>$Y oi X$ |   | X overlaps with Y                                |
| $X s Y$<br>$Y si X$ |  | X starts Y                                       |
| $X d Y$<br>$Y di X$ |  | X during Y                                       |
| $X f Y$<br>$Y fi X$ |  | X finishes Y                                     |
| $X = Y$             |  | X is equal to Y                                  |

# Reasoning with time

- Presentation about time relations, including Allen relations (Martin Doerr)
  - [http://www.cidoc-crm.org/sites/default/files/EMF2015-TemporalPrimitives3\\_0.pptx](http://www.cidoc-crm.org/sites/default/files/EMF2015-TemporalPrimitives3_0.pptx)
- Paper on fuzziness of time (Christian Emil Ore)
  - <http://www.cidoc-crm.org/sites/default/files/Documents/some%20time%20notes%28byCEO%29.docx>
  - [https://proceedings.caaconference.org/paper/17\\_holmen\\_ore\\_caa2009/](https://proceedings.caaconference.org/paper/17_holmen_ore_caa2009/)

[A1] How many manuscripts from 1550-1600 produced in **European countries** survive?



# Continent of a TGN place

| s   | slt                     | o   | olt    |
|---|-------------------------|---|--------|
| <a href="http://vocab.getty.edu/tgn/7024699">http://vocab.getty.edu/tgn/7024699</a> | Aa                      | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7016532">http://vocab.getty.edu/tgn/7016532</a> | Adriatic Sea            | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7011488">http://vocab.getty.edu/tgn/7011488</a> | Adygeya                 | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/1120767">http://vocab.getty.edu/tgn/1120767</a> | Águeda, Río             | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/1108688">http://vocab.getty.edu/tgn/1108688</a> | Albères, Monts          | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7443560">http://vocab.getty.edu/tgn/7443560</a> | Alina, Lough            | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/1121089">http://vocab.getty.edu/tgn/1121089</a> | Alcarrache, Río         | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/6000160">http://vocab.getty.edu/tgn/6000160</a> | Alemannia               | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7007847">http://vocab.getty.edu/tgn/7007847</a> | Alpes Cottiennes        | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7007763">http://vocab.getty.edu/tgn/7007763</a> | Alpes Grées             | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/1109327">http://vocab.getty.edu/tgn/1109327</a> | Alpes Maritimes         | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7015600">http://vocab.getty.edu/tgn/7015600</a> | Alpi Aurine             | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7007746">http://vocab.getty.edu/tgn/7007746</a> | Alps                    | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7024265">http://vocab.getty.edu/tgn/7024265</a> | Alsace                  | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7002851">http://vocab.getty.edu/tgn/7002851</a> | Alsace-Lorraine         | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/1121154">http://vocab.getty.edu/tgn/1121154</a> | Alzette                 | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/4000818">http://vocab.getty.edu/tgn/4000818</a> | Arkhangel'skaya Oblast' | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7024275">http://vocab.getty.edu/tgn/7024275</a> | Andalucía               | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/1000061">http://vocab.getty.edu/tgn/1000061</a> | Andorra                 | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7013200">http://vocab.getty.edu/tgn/7013200</a> | Baltic Sea              | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/8711728">http://vocab.getty.edu/tgn/8711728</a> | Angevin Empire          | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |
| <a href="http://vocab.getty.edu/tgn/7015933">http://vocab.getty.edu/tgn/7015933</a> | Aóös Potamós            | <a href="http://vocab.getty.edu/tgn/1000003">http://vocab.getty.edu/tgn/1000003</a> | Europe |

```

SELECT ?s ?slt ?o ?olt {
  ?s gvp:broaderPartitive+ ?o . #place ?s has multiple partitive broader parents
  ?s gvp:prefLabelGVP ?sl . #label for place ?s
  ?sl gvp:term ?slt . #value of label of ?s
  ?o gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #?o needs to be a continent
  ?o gvp:prefLabelGVP ?ol . #label for continent ?o
  ?ol gvp:term ?olt . #value for label of ?o
  ?s skos:inScheme <http://vocab.getty.edu/tgn/> #get ?s from the TGN thesaurus
} LIMIT 100

```

```

SELECT ?s ?slt ?o ?olt {
  ?s gvp:broaderPartitive+ ?o . #place ?s has multiple partitive broader parents
  ?s gvp:prefLabelGVP ?sl . #label for place ?s
  ?sl gvp:term ?slt . #value of label of ?s
  ?o gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #?o needs to be a continent
  ?o gvp:prefLabelGVP ?ol . #label for continent ?o
  ?ol gvp:term ?olt . #value for label of ?o
  ?s skos:inScheme <http://vocab.getty.edu/tgn/> #get ?s from the TGN thesaurus
} LIMIT 100

```

```

SELECT DISTINCT ?msl ?tse {
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events
  ?ms rdfs:label ?msl . #get the MSs labels
  ?p crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
} LIMIT 1000

```

```

SELECT DISTINCT ?msl ?tse ?s ?olt {
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events
  ?ms rdfs:label ?msl . #get the MSs labels
  ?p crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?p crm:P7_took_place_at ?place . #production events at a place
  ?place owl:sameAs ?s . #only reconciliated places
  SERVICE <http://vocab.getty.edu/sparql> {
    ?s gvp:broaderPartitive+ ?o . #place ?s has multiple partitive broader parents
    ?s gvp:prefLabelGVP ?sl . #label for place ?s
    ?sl gvp:term ?slt . #value of label of ?s
    ?o gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #?o needs to be a continent
    ?o gvp:prefLabelGVP ?ol . #label for continent ?o
    ?ol gvp:term ?olt . #value for label of ?o
    ?s skos:inScheme <http://vocab.getty.edu/tgn/> #get ?s from the TGN thesaurus
  }
} LIMIT 1000

```



```

SELECT ?s ?slt ?o ?olt {
  ?s gvp:broaderPartitive+ ?o . #place ?s has multiple partitive broader parents
  ?s gvp:prefLabelGVP ?sl . #label for place ?s
  ?sl gvp:term ?slt . #value of label of ?s
  ?o gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #?o needs to be a continent
  ?o gvp:prefLabelGVP ?ol . #label for continent ?o
  ?ol gvp:term ?olt . #value for label of ?o
  ?s skos:inScheme <http://vocab.getty.edu/tgn/> #get ?s from the TGN thesaurus
} LIMIT 100

```

```

SELECT DISTINCT ?msl ?tse {
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events
  ?ms rdfs:label ?msl . #get the MSs labels
  ?p crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
} LIMIT 1000

```

```

SELECT DISTINCT ?msl ?tse ?s ?olt {
  ?ms crm:P108i_was_produced_by ?p . #MSs with production events
  ?ms rdfs:label ?msl . #get the MSs labels
  ?p crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?p crm:P7_took_place_at ?place . #production events at a place
  ?place owl:sameAs ?s . #only reconciliated places
  SERVICE <http://vocab.getty.edu/sparql> {
    ?s gvp:broaderPartitive+ ?o . #place ?s has multiple partitive broader parents
    ?s gvp:prefLabelGVP ?sl . #label for place ?s
    ?sl gvp:term ?slt . #value of label of ?s
    ?o gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #?o needs to be a continent
    ?o gvp:prefLabelGVP ?ol . #label for continent ?o
    ?ol gvp:term ?olt . #value for label of ?o
    ?s skos:inScheme <http://vocab.getty.edu/tgn/> #get ?s from the TGN thesaurus
  }
} LIMIT 1000

```

```
<place xml:id="place_6" type="settlement" source="bodl">
  <placeName type="index" source="bodl">Bescaby [in Sproxton], Leicestershire</placeName>
  <location source="http://placenames.org.uk/id/placename/78/013606">
    <geo>52.82937376956659, -0.775360354719512</geo>
  </location>
  <note type="links">
    <list type="links">
      <item>
        <ref target="http://placenames.org.uk/id/placename/78/013606">
          <title>The Historical Gazetteer of England's Placenames</title>
        </ref>
      </item>
    </list>
  </note>
</place>
```

```
[~]$ wget http://placenames.org.uk/id/placename/78/013606
--2018-06-11 11:31:46--
http://placenames.org.uk/id/placename/78/013606
Resolving placenames.org.uk (placenames.org.uk)... 143.117.16.43
Connecting to placenames.org.uk
(placenames.org.uk)|143.117.16.43|:80... connected.
HTTP request sent, awaiting response... 404 Not Found
2018-06-11 11:31:46 ERROR 404: Not Found.
```

Place:

Clayton Lancashire

Location

Historical places and writing

Historical photographs

Units and statistics

Related websites

Place names



Click on the map for other historical maps of this place



In 1870-72, John Marius Wilson's *Imperial Gazetteer of England and Wales* described **Clayton** like this:

“ **CLAYTON**, a village in Droylsden township, Manchester parish, Lancashire; on the Manchester and Staleybridge railway, at Clayton-Bridge station, 3½ miles E of Manchester.

# Data Access

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[GB1900 Gazetteer](#)

[Statistics by location](#)

[Statistics by topic](#)

[GBHDB](#)

GB1900 is a project to computerise all the place names on six-inch-to-one-mile maps covering the whole of Great Britain, published by the Ordnance Survey between 1888 and 1914 -- 1900 for short. It is a collaboration between the GB Historical GIS, the creators of *A Vision of Britain through Time*, the National Library of Scotland, the Royal Commission on the Ancient and Historical Monuments of Wales, the University of Wales Centre for Advanced Welsh and Celtic Studies, the National Library of Wales and the People's Collection Wales.

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## # Columns

EntryID = unique identifier for a record.

Frequency = Number of attempts at transcription.

GridRef = Latitude, Longitude (WGS84).

DateStamp = Date and time of last update to the record.

Transcription = Text string transcription contained within quotations marks. Multiple transcriptions are in the order made and separated by commas.

Comments = Comments added by the transcriber.

AlternateNames = Any alternate names added by the transcriber

Memories - any memories added by the transcriber.

Continent of 53.4833,-2.1500?

Continent of 53.4833,-2.1500?

Maybe wikidata can help?





@MusiCog



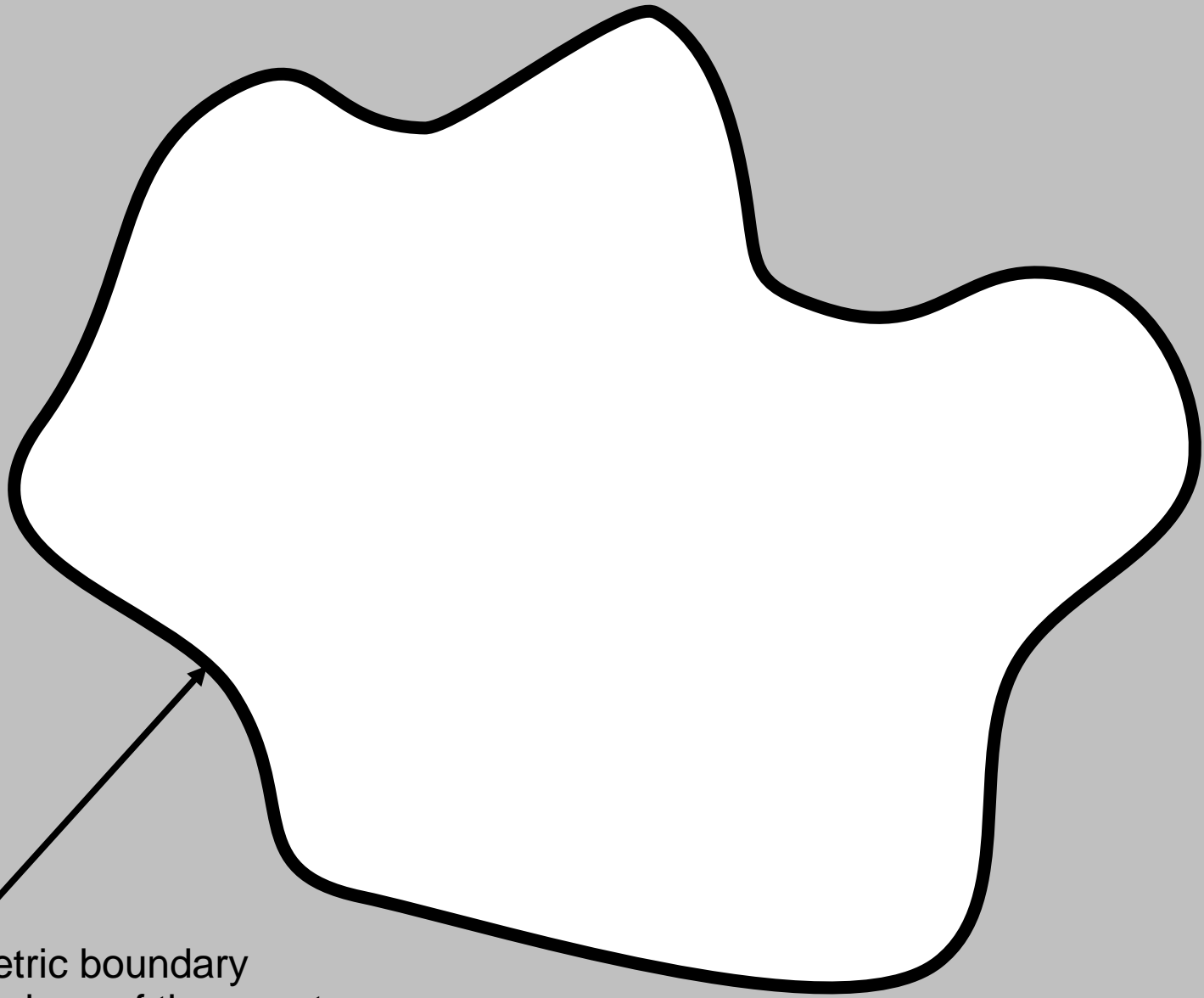
@mlpoulter



@gklyne

# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ","), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```



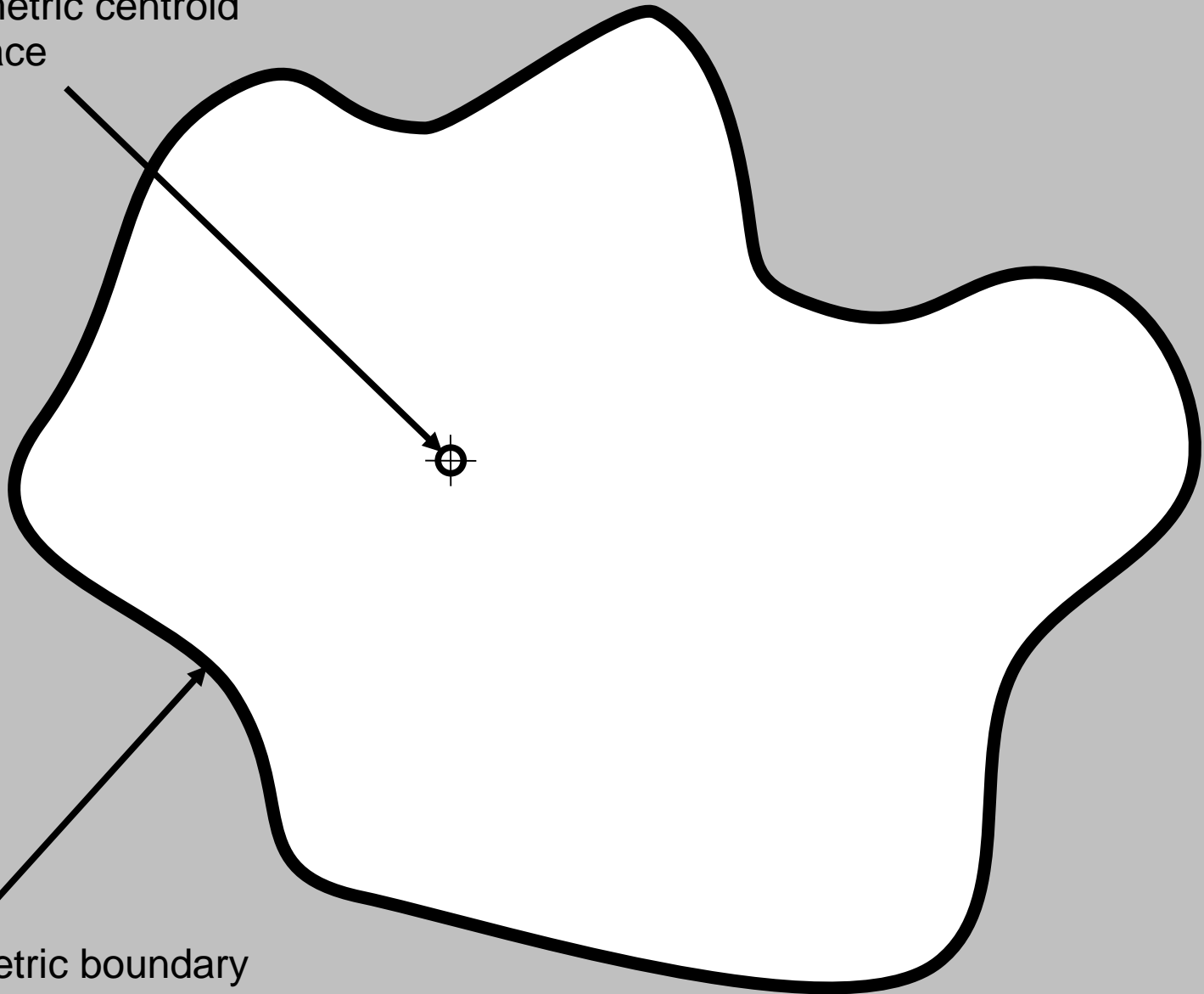
geometric boundary  
of the place of the event  
(not reconciled)

# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,""), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```

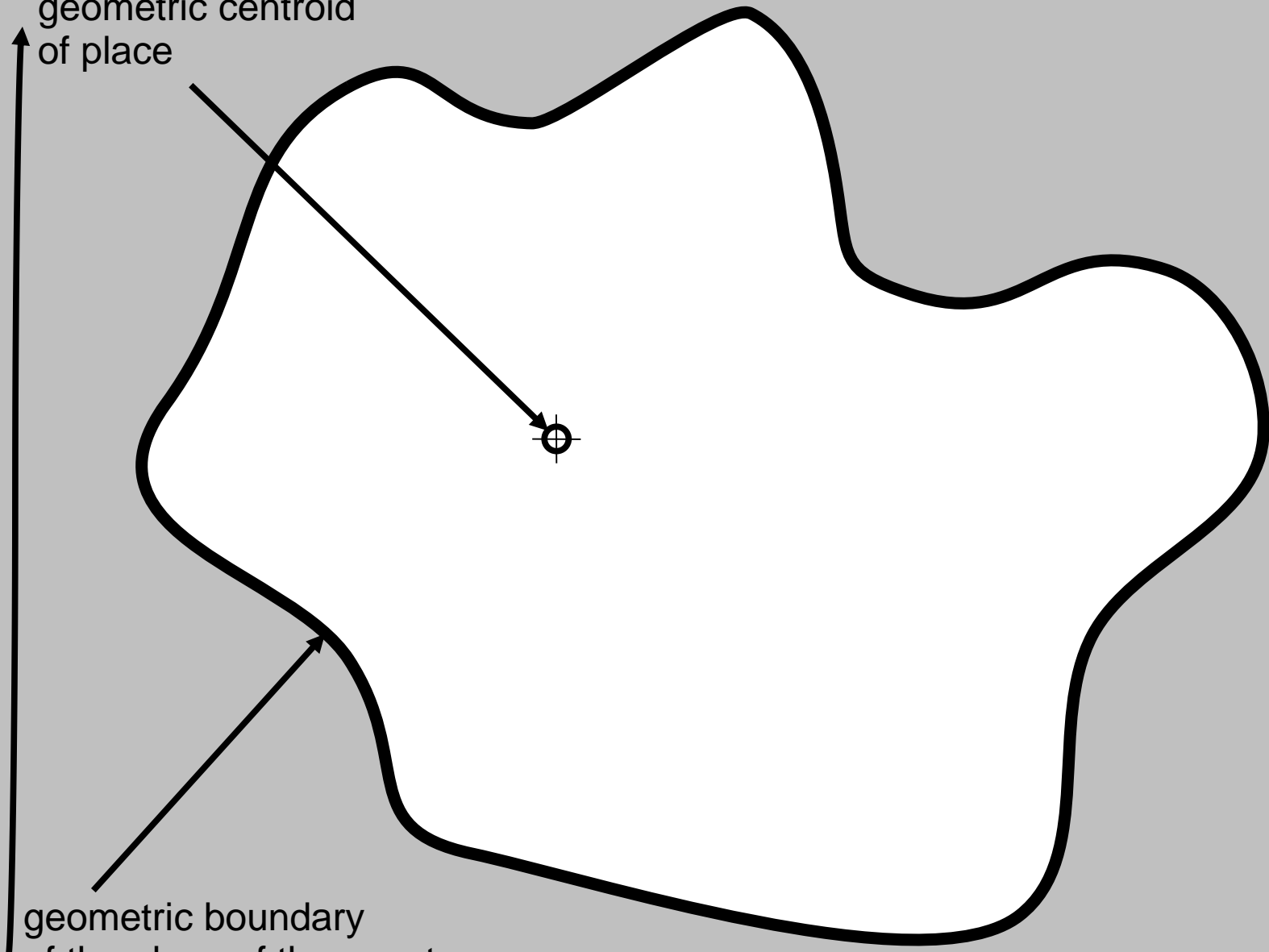
```
<place xml:id="place_6" type="settlement" source="bodl">
  <placeName type="index" source="bodl">Bescaby [in Sproxton], Leicestershire</placeName>
  <location source="http://placenames.org.uk/id/placename/78/013606">
    <geo>52.82937376956659, -0.775360354719512</geo>
  </location>
  <note type="links">
    <list type="links">
      <item>
        <ref target="http://placenames.org.uk/id/placename/78/013606">
          <title>The Historical Gazetteer of England's Placenames</title>
        </ref>
      </item>
    </list>
  </note>
</place>
```

geometric centroid  
of place



geometric boundary  
of the place of the event  
(not reconciled)

geometric centroid  
of place

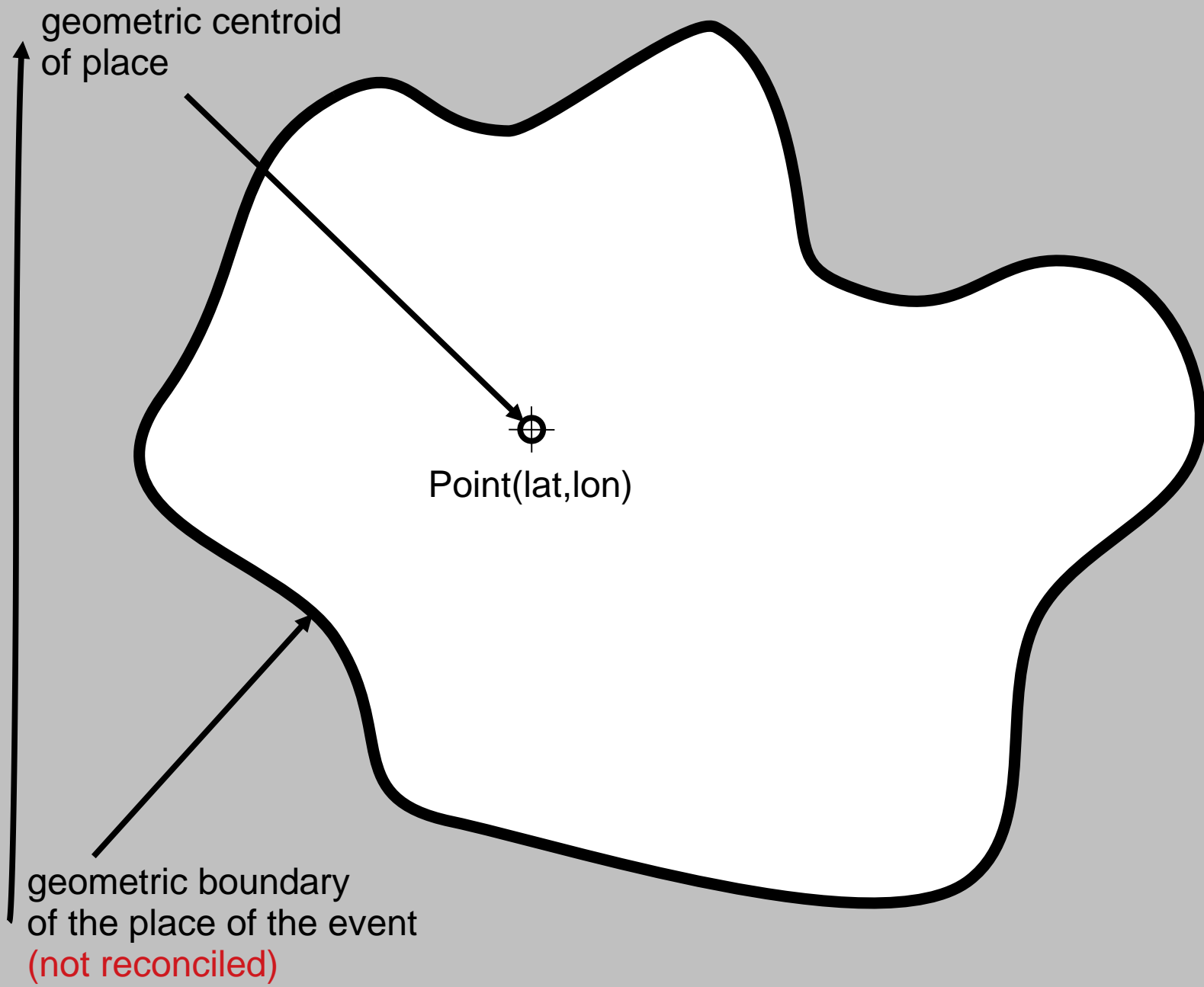


geometric boundary  
of the place of the event  
(not reconciled)

# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,""), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```





geometric centroid  
of place

Point(lat,lon)

geometric boundary  
of the place of the event  
(not reconciled)

# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,""), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```

# Manuscripts produced in Europe between 1550-1600

From:

- Point(52.82 -0.77)

To:

- 52.82

- -0.77

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?contid
?ms crm:P108i_was_produced_by ?production . #MS with a prod
?production crm:P4_has_time-span ?ts . #productions with pe
?ts crm:P82a_begin_of_the_begin ?tsb . #begining of the per
?ts crm:P82b_end_of_the_end ?tse . #end of the period
FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
?production crm:P7_took_place_at ?msplace . #production at a place
?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ","), "("), xsd:decimal) AS ?lat) .
BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ")"), ","), xsd:decimal) AS ?long) .
SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
  ?place wgs:lat ?lat ; #use the lat and long
    wgs:long ?long .
  ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
  ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
    gvp:broaderPartitive+ ?continent . #find all the parent terms
  ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
  ?continent xl:prefLabel ?continentLabel . #get label
  ?continentLabel gvp:term ?continentTerm . #get value of label
  FILTER ( lang(?continentTerm) = "en" ) #only the English
}
} LIMIT 100
```

# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,""), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,""), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```



Point(lat lon)



# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ","), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```



TGN place with  
broaderPartitive  
properties

Point (lat lon)



# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,""), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw,")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```

# Manuscripts produced in Europe between 1550-1600

```
SELECT DISTINCT ?ms ?geocoorsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P108i_was_produced_by ?production . #MS with a production
  ?production crm:P4_has_time-span ?ts . #productions with period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #beginning of the period
  ?ts crm:P82b_end_of_the_end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7_took_place_at ?msplace . #production at a place
  ?msplace crm:P89i_contains ?mscentroidplace . #place contains centroid
  ?mscentroidplace crm:P168_place_is_defined_by ?geocoorsraw . #geodata needs to be split
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ","), "("), xsd:decimal) AS ?lat) .
  BIND (STRDT(STRAFTER(STRBEFORE(?geocoorsraw, ")"), ","), xsd:decimal) AS ?long) .
  SERVICE <http://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace omgeo:nearby(?lat ?long "4mi" ) . #find places around this lat lon
    ?nearbyplaceconcept foaf:focus ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/aat/300128176> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
} LIMIT 100
```

# Manuscripts produced in Europe between 1550-1600

| ms   | lat       | long      | contnt |
|--|-----------|-----------|--------|
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_658>                          | 48.866667 | 2.333333  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_659>                          | 48.866667 | 2.333333  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6579#MS_Lat_misc_c_17-part7>  | 46.195602 | 6.148113  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6434#MS_Lat_hist_e_2-part1>   | 51.210933 | 3.225971  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2575>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2576>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_55>                           | 52.5      | 5.75      | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2769>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_35>                           | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2018#MS_Bywater_37-part4>     | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1912>                         | 51.5      | 10.5      | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_8932>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1000>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1278>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7487>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7489>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7490>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7491>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_4708>                         | 49.8333   | 5.3333    | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_4764>                         | 49.8333   | 5.3333    | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6434#MS_Lat_hist_e_2-part1>   | 49.8333   | 5.3333    | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_554>                          | 41.011046 | 28.957798 | Asia   |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_554>                          | 41.011046 | 28.957798 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_8458>                         | 52.633333 | 1.3       | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_3954>                         | 51.75     | -1.25     | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_3957>                         | 51.75     | -1.25     | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2711#MS_Canon_Ital_274-part2> | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_8932>                         | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1000>                         | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2018#MS_Bywater_37-part4>     | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_3926>                         | 49.25     | 4.033333  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7486>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_35>                           | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2575>                         | 45.438611 | 12.326667 | Europe |

```

SELECT DISTINCT ?ms ?geocoordsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P1881 was produced by ?production . #MS with a production
  ?production crm:P4 has time-span ?ts . #productions with period
  ?ts crm:P82a begin of the begin ?tsb . #beginning of the period
  ?ts crm:P82b end of the end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7 took place at ?splace . #production at a place
  ?splace crm:P891 contains ?scentroidplace . #place contains centroid
  ?scentroidplace crm:P168 place is defined by ?sgeocoordsraw . #geodata needs to be split
  BIND (STRDT(STR(AFTER(STR(BEFORE(?geocoordsraw, ",", 1)), " "), xsd:decimal) AS ?lat) .
  BIND (STRDT(STR(AFTER(STR(BEFORE(?geocoordsraw, ",", 2)), " "), xsd:decimal) AS ?long) .
  SERVICE <https://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?splace wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace oswgeo:nearby(?lat ?long "km" ) . #find places around this lat lon
    ?nearbyplace rdfs:label ?slabel . #find the name of the places
    ?slabel rdfs:broaderPartitive+ ?continent . #find all the parent terms
    ?continent wgs:placeTypePreferred <http://vocab.getty.edu/001/2017en . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel wgs:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
}
LIMIT 100

```

# Manuscripts produced in Europe between 1550-1600

| ms   | lat       | long      | contnt |
|--|-----------|-----------|--------|
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_658>                          | 48.866667 | 2.333333  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_659>                          | 48.866667 | 2.333333  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6579#MS_Lat_misc_c_17-part7>  | 46.195602 | 6.148113  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6434#MS_Lat_hist_e_2-part1>   | 51.210933 | 3.225971  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2575>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2576>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_55>                           | 52.5      | 5.75      | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2769>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_35>                           | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2018#MS_Bywater_37-part4>     | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1912>                         | 51.5      | 10.5      | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_8932>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1000>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1278>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7487>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7489>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7490>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7491>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_4708>                         | 49.8333   | 5.3333    | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_4764>                         | 49.8333   | 5.3333    | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6434#MS_Lat_hist_e_2-part1>   | 49.8333   | 5.3333    | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_554>                          | 41.011046 | 28.957798 | Asia   |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_554>                          | 41.011046 | 28.957798 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_8458>                         | 52.633333 | 1.3       | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_3954>                         | 51.75     | -1.25     | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_3957>                         | 51.75     | -1.25     | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2711#MS_Canon_Ital_274-part2> | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_8932>                         | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_1000>                         | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2018#MS_Bywater_37-part4>     | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_3926>                         | 49.25     | 4.033333  | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_7486>                         | 42.8333   | 12.8333   | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_35>                           | 45.438611 | 12.326667 | Europe |
| <https://medieval.bodleian.ox.ac.uk/catalog/manuscript_2575>                         | 45.438611 | 12.326667 | Europe |

```

SELECT DISTINCT ?ms ?geocoordsraw ?lat ?long ?continent ?continentTerm {
  ?ms crm:P1881 was produced by ?production . #MS with a production
  ?production crm:P4 has time-span ?ts . #productions with period
  ?ts crm:P82a begin of the begin ?tsb . #beginning of the period
  ?ts crm:P82b end of the end ?tse . #end of the period
  FILTER (xsd:dateTime(?tsb) > "1550-01-01T00:00:00"^^xsd:dateTime) .
  FILTER (xsd:dateTime(?tse) < "1600-01-01T00:00:00"^^xsd:dateTime) .
  ?production crm:P7 took place at ?place . #production at a place
  ?place crm:P891 contains ?scentroidplace . #place contains centroid
  ?scentroidplace crm:P168 place is defined by ?geocoordsraw . #geodata needs to be split
  BIND (STRDT(STR(AFTER(STR(BEFORE(?geocoordsraw, ",", 1)), " "), xsd:decimal) AS ?lat)) .
  BIND (STRDT(STR(AFTER(STR(BEFORE(?geocoordsraw, ",", 2)), " "), xsd:decimal) AS ?long)) .
  SERVICE <https://vocab.getty.edu/sparql> { #go to the Getty endpoint
    ?place wgs:lat ?lat ; #use the lat and long
      wgs:long ?long .
    ?nearbyplace ogeo:nearby(?lat ?long "km") . #find places around this lat lon
    ?nearbyplace concept ?concept ?nearbyplace ; #find the name of the places
      gvp:broaderPartitive+ ?continent . #find all the parent terms
    ?continent gvp:placeTypePreferred <http://vocab.getty.edu/ontology/30012017#> . #only continents
    ?continent xl:prefLabel ?continentLabel . #get label
    ?continentLabel gvp:term ?continentTerm . #get value of label
    FILTER ( lang(?continentTerm) = "en" ) #only the English
  }
LIMIT 100

```

[A1] How many manuscripts **[in a period]**  
produced in **[a place]** survive?

[A2] How many manuscripts survive that contain Spanish texts written in gothic rotunda were produced in Castile for an abbey or convent? Then show me those which were owned during the nineteenth century by English private collectors; Then show me those which are now owned by an institution in North America.

[A2] How many manuscripts survive that contain **Spanish texts** written in gothic rotunda were **produced in Castile** for an **abbey or convent**? Then show me those which were owned during the nineteenth century by English private collectors; Then show me those which are now owned by an institution in North America.

```
SELECT DISTINCT ?msl ?wtl ?msppl ?mspgl {
  ?ms frbr:R42_is_representative_manifestation_singleton_for ?sce . #manuscript with an expression
  ?ms rdfs:label ?msl . #shelfmark
  ?sce frbr:R3i_realises ?w . #expression matches with work
  ?w crm:P102_has_title ?wt . #title of work
  ?wt rdfs:label ?wtl . #value of title
  ?w crm:P72_has_language <https://medieval.bodleian.ox.ac.uk/catalog/authority/language/es> . #spanish texts only

  ?ms crm:P108i_was_produced_by ?msp . #manuscript production event
  ?msp crm:P7_took_place_at ?mspp . #production event place
  ?mspp rdfs:label ?msppl . #label of place

  ?ms crm:P51_has_former_or_current_owner ?mspg . #owner at sometime being
  ?mspg a crm:E74_Group . #a group (we have not expressed types of groups)
  ?mspg rdfs:label ?mspgl #group label
}
```



```
SELECT DISTINCT ?msl ?wtl ?msppl ?mspgl {
  ?ms frbr:R42_is_representative_manifestation_singleton_for ?sce . #manuscript with an expression
  ?ms rdfs:label ?msl . #shelfmark
  ?sce frbr:R3i_realises ?w . #expression matches with work
  ?w crm:P102_has_title ?wt . #title of work
  ?wt rdfs:label ?wtl . #value of title
  ?w crm:P72_has_language <https://medieval.bodleian.ox.ac.uk/catalog/authority/language/es> . #spanish texts only

  ?ms crm:P108i_was_produced_by ?msp . #manuscript production event
  ?msp crm:P7_took_place_at ?mspp . #production event place
  ?mspp rdfs:label ?msppl . #label of place
  ?msp crm:P11_had_participant ?mspg . #production event participant is a →
  ?mspg a crm:E74_Group . #group (types are not expressed)
  ?mspg rdfs:label ?mspgl #label of group
}
```

[A2] How many manuscripts survive that contain **[texts of a language]** written in gothic rotunda were produced **[in a place]** for a **[type of maker/owner]**?

[A3] What French collectors purchased manuscripts since the end of the Wars of Religion (after 1598)?

[A3] What **French collectors** purchased manuscripts since the end of the Wars of Religion (**after 1598**)?

# People (+ birth places) involved in provenance events after 1598

| plabel                     | tsb                 | placeLabel        |
|----------------------------|---------------------|-------------------|
| F. J. Furnivall            | 1891-01-01T00:00:00 | Egham             |
| Morris, William, 1834-1896 | 1890-01-01T00:00:00 | Walthamstow       |
| Phillipps                  | 1824-01-01T00:00:00 | Manchester        |
| Hearne, Thomas, 1678-1735  | 1731-01-01T00:00:00 | White Waltham     |
| Cotton, Robert             | 1621-01-01T00:00:00 | Denton            |
| John Adrian Louis Hope     | 1860-01-01T00:00:00 | South Queensferry |
| Foucault, Nicolas-Joseph   | 1677-01-01T00:00:00 | Paris             |
| John Locke                 | 1701-09-30T00:00:00 | Wrington          |

```
SELECT DISTINCT ?plabel ?tsb ?placeLabel WHERE {
  ?e crm:P11_had_participant ?p . #provenance events with participants
  ?p a crm:E21_Person . #participants who are persons as opposed to groups
  { #get a label for the person
    SELECT ?p (MIN(?l) AS ?plabel) { #magic by Graham
      ?p rdfs:label ?l
    } GROUP BY ?p
  } .
  ?p owl:sameAs ?er . #get only the reconciled persons
  ?e crm:P4_has_time-span ?ts . #provenance events at a specific period
  ?ts crm:P82a_begin_of_the_begin ?tsb . #period starting
  FILTER (xsd:dateTime(?tsb) > "1598-12-31T23:59:59"^^xsd:dateTime) . #at the end of 1598
  SERVICE <https://query.wikidata.org/sparql> { #go to wikidata
    SELECT ?er ?erLabel ?place ?placeLabel WHERE { #return the label
      SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } #find reconciled label
      ?er wdt:P19 ?place. #find the place of birth of the reconciled person
    }
  }
} LIMIT 1000
```

People (+ birth places)  
 born between:  
 1598-1698  
 and involved in  
 provenance events

```

SELECT DISTINCT ?plabel ?betsb ?placeLabel WHERE {
  ?e crm:P11_had_participant ?p . #provenance event with participant
  ?p a crm:E21_Person . #participants who are persons not groups
  { #get a label for the person
    SELECT ?p (MIN(?l) AS ?plabel) { #magic by Graham
      ?p rdfs:label ?l
    } GROUP BY ?p
  } .
  ?p crm:P98i_was_born ?be . #participants birth event
  ?be crm:P4_has_time-span ?bets . #period of birth
  ?bets crm:P82a_begin_of_the_begin ?betsb . #begin of the period
  ?bets crm:P82b_end_of_the_end ?betse . #end of the period
  ?p owl:sameAs ?er . #only reconciled persons
  FILTER (xsd:dateTime(?betsb) > "1598-12-31T23:59:59"^^xsd:dateTime) . #persons born after 1598
  FILTER (xsd:dateTime(?betse) < "1698-12-31T23:59:59"^^xsd:dateTime) . #person born before 1698
  SERVICE <https://query.wikidata.org/sparql> { #go to wikidata
    SELECT ?er ?erLabel ?place ?placeLabel WHERE {
      SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". } #fetch label
      ?er wdt:P19 ?place. #places of birth of reconciled persons
    }
  }
}
LIMIT 1000

```

| plabel                             | betsb               | placeLabel      |
|------------------------------------|---------------------|-----------------|
| Abp Wake's                         | 1657-01-01T00:00:00 | Blandford Forum |
| 'Honest' Thomas Martin of Palgrave | 1697-01-01T00:00:00 | Thetford        |
| Aldrich, Henry                     | 1647-01-01T00:00:00 | Westminster     |
| Leycester, Peter, Sir, 1614-1678   | 1614-01-01T00:00:00 | Cheshire        |
| Giovan Battista Recanti            | 1687-01-01T00:00:00 | Venice          |
| Hearne, Thomas, 1678-1735          | 1678-01-01T00:00:00 | White Waltham   |
| Comes Donatus Silva                | 1690-01-01T00:00:00 | Milan           |
| Cardinal Alderano Cibo             | 1613-01-01T00:00:00 | Genoa           |
| John, Baron Somers (1651-1716)     | 1651-01-01T00:00:00 | Claines         |
| Carlo Archinto                     | 1670-01-01T00:00:00 | Milan           |
| Philip, Landgrave of Hesse         | 1671-01-01T00:00:00 | Darmstadt       |
| Tenison, Thomas, 1636-1715         | 1636-01-01T00:00:00 | Cottenham       |
| Anthony Wood                       | 1632-01-01T00:00:00 | Oxford          |
| Bentley, Richard                   | 1662-01-01T00:00:00 | Wakefield       |
| Ames, Joseph                       | 1689-01-01T00:00:00 | Great Yarmouth  |
| Foucault, Nicolas-Joseph           | 1643-01-01T00:00:00 | Paris           |
| John Locke                         | 1632-01-01T00:00:00 | Wroughton       |
| Giuseppe Valletta (1636-1714)      | 1636-01-01T00:00:00 | Naples          |

[A3] What owners from a **[place]** purchased manuscripts after **[a period]**?

# Mapping for research questions

- Research questions:
  - Domain (e.g. Investigate the history of the book)
  - Project (e.g. Map movement of MSs in Europe)
  - Data (e.g. Books made in Europe 1550-1600)
- Consider data questions to express in SPARQL
- Granularity of questions depends on granularity of data
- Reconciliation gives access to other datasets (not only an identifier)
- Generalise to make queries widely applicable / build sane UIs





# Next Open Workshop

10 July 2018 - OeRC

Musical instruments – Bate collection (+?)

