



Exploring Cultural Heritage Collections: The Sloane Lab Knowledge Base

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**'THE SLOANE LAB':
LOOKING BACK TO BUILD SHARED COLLECTIONS**
UNIVERSITY COLLEGE LONDON & TU DARMSTADT



**'UNPATH'D WATERS':
MARINE AND MARITIME COLLECTIONS IN THE UK**
HISTORIC ENGLAND



**TOWARDS
A NATIONAL
COLLECTION**



UKRI Arts and
Humanities
Research Council

DISCOVERY PROJECTS



**'THE CONGRUENCE ENGINE':
DIGITAL TOOLS FOR NEW COLLECTIONS-BASED
INDUSTRIAL HISTORIES**
SCIENCE MUSEUM GROUP



**OUR HERITAGE, OUR STORIES:
LINKING AND SEARCHING
COMMUNITY-GENERATED DIGITAL CONTENT TO
DEVELOP THE PEOPLE'S NATIONAL COLLECTION**
UNIVERSITY OF GLASGOW



**TRANSFORMING COLLECTIONS:
REIMAGINING ART, IDENTITY AND NATION**
UNIVERSITY OF ARTS LONDON

Technical Team, UCL



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Sloane's Collections



Hans Sloane (1660–1753), British physician, naturalist and collector

Collected **70,000+ objects**, now scattered among multiple institutions

One of the founding collections of the **British Museum, Natural History Museum** and **British Library**

<http://sloanelab.org>

The origins of the collection connect to the Transatlantic Slave Trade and African enslavement

Knowledge Base

A technology to store, interconnect and retrieve information

- Structured and Unstructured information
- A Repository
- A Management System

Digital / Computer Systems – Process and Analysis

- Expert Systems
- Decision Support Systems
- Artificial Intelligence System



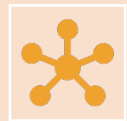
Preservation of Information

Degradation - Organisation
Manuscripts, Artifacts, Artwork



Accessibility and Dissemination

Global Audience
Public Engagement and Education



Interoperability and Integration

Standardised Formats
Ontologies



Enhanced Research Capabilities

Multidisciplinary Research
Multimodality, Cultural Identity - Continuity

'Collections as data entails thinking about ways to increase meaning making capacity by making collections more amenable to use across an expanded set of methods and tools, typically but not exclusively computational in nature'
(Padilla, 2017, 2).

- Augmenting stakeholder's understanding
- Complex and cross-institutional data environments
- Instrument for data collection, inventory and exploration

The Sloane Lab Knowledge Base

Overarching Goals

1

Aggregate
multiple records
from different
sources

2

Develop a
common **data
model** for all
records

3

Integrate the
records into a
single
knowledge base

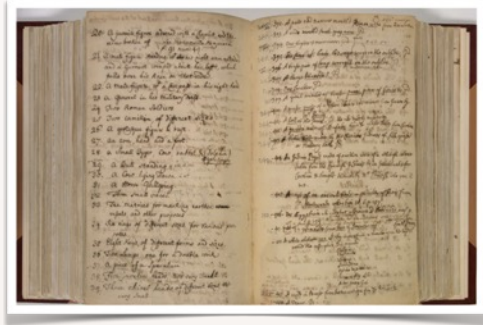
4

Ensure
interoperability
with existing
standards

5

Enable
multivocality

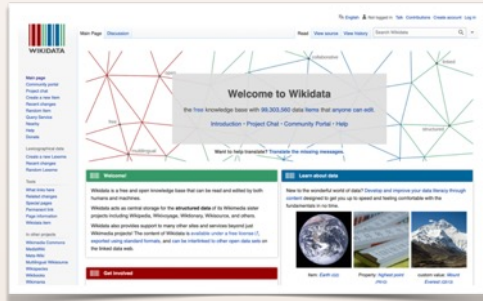
Sloane Lab Knowledge Base



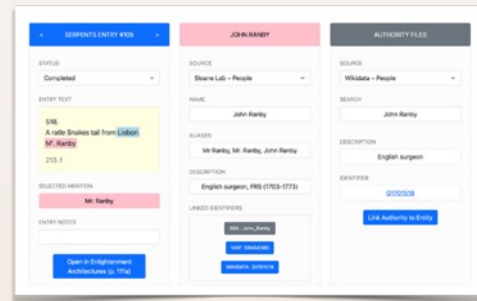
Historical Catalogues



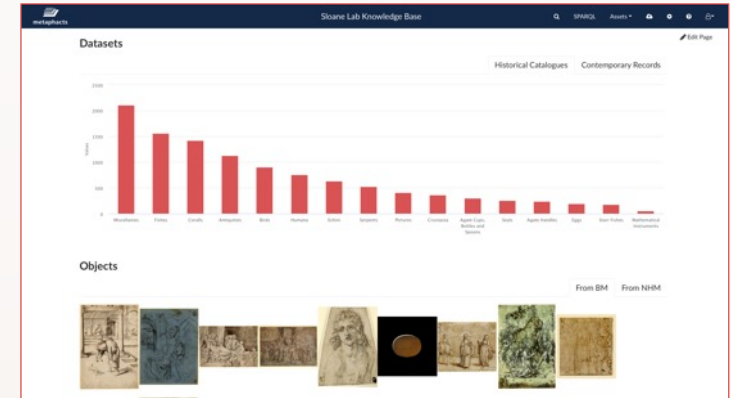
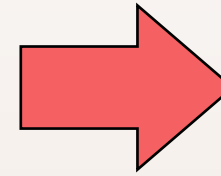
Contemporary Records



External Sources



Newly Annotated Data

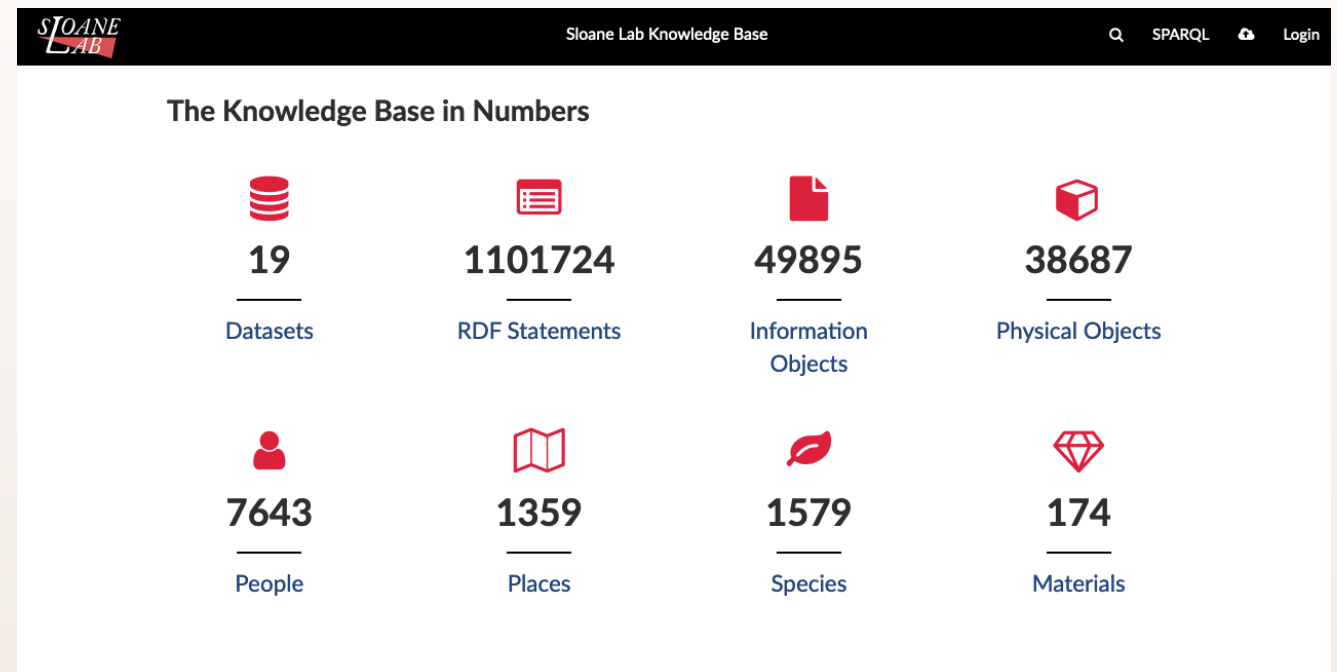


Sloane Lab Knowledge Base

The screenshot displays the details for 'BM Object A_SLMisc-184'. It includes a description: 'Cup, surrounded with an openwork lattice of flowers. Made of soapstone or steatite.' There is an image of the cup and a map of the region. Other information includes 'Held by British Museum', 'Dataset BM Dataset', 'Record BM Record A_SLMisc-184', and 'Related People Mr. Pinfold'.

A rich environment for data discovery and query

- Keyword Search
- Structured Search
- Constant Search
- Linked Data View
- Graph View
- SPARQL endpoint
- Statements View

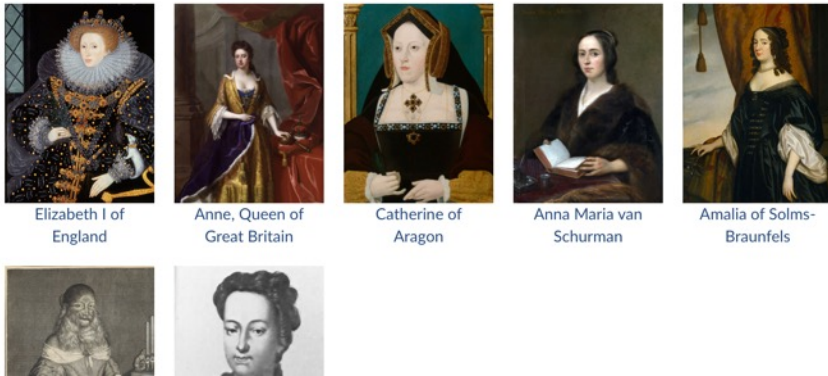


Visualisations

People of the Sloane Collections

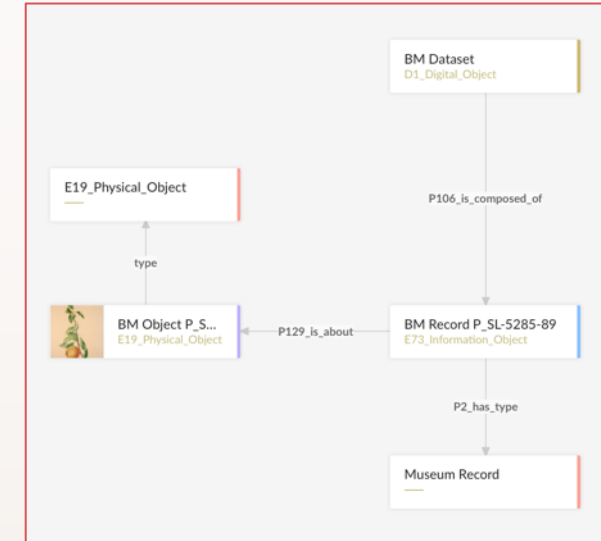
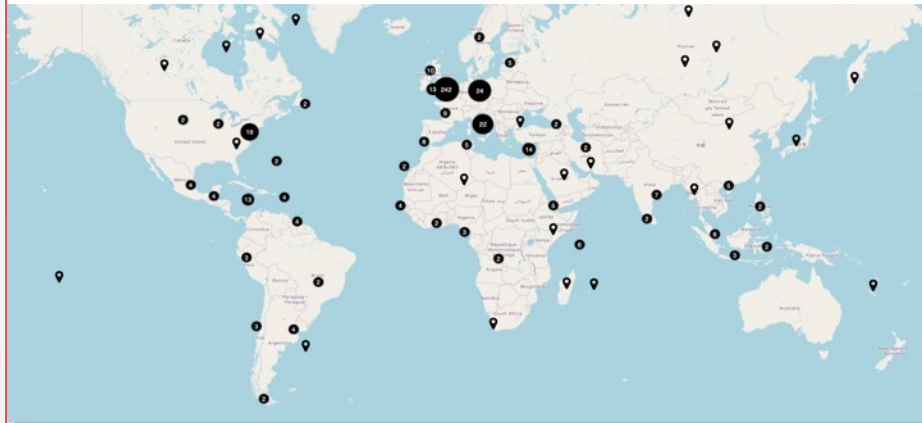
Most Mentioned People | Women | Enslaved People | Historical Catalogue Statistics

Contemporary Catalogue Statistics



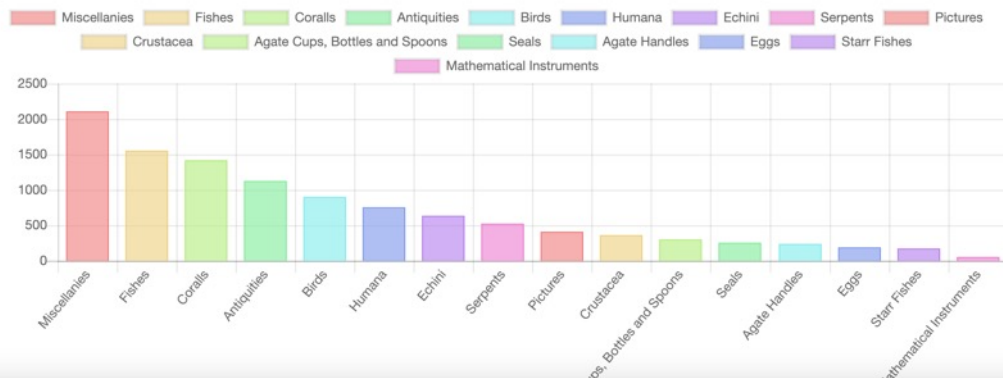
Places in the Sloane Collections

Map | Places | Statistics



Datasets in the Knowledge Base

Historical Catalogues | Contemporary Records



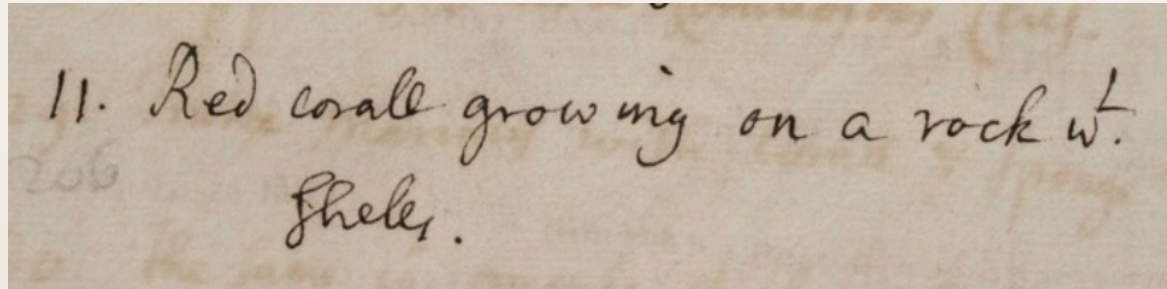
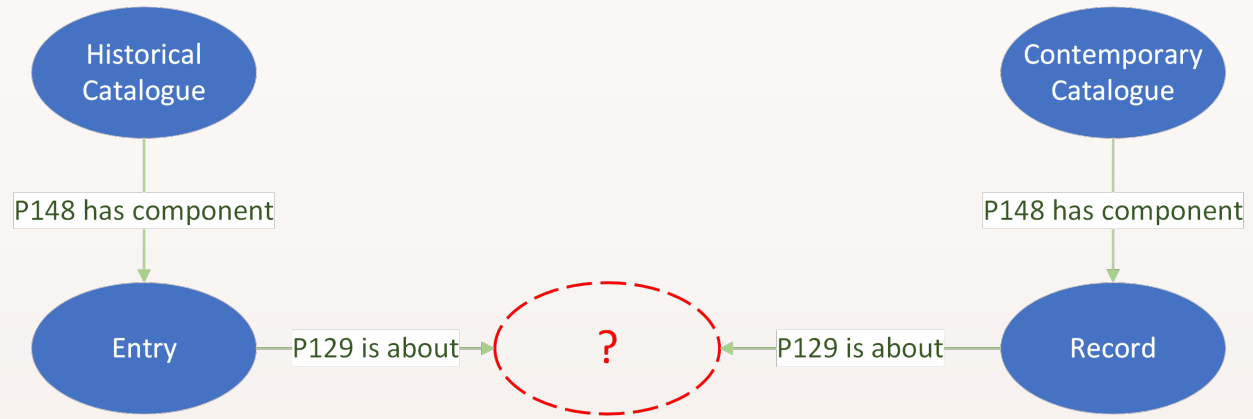
Objects in the Knowledge Base

From BM | From NHM

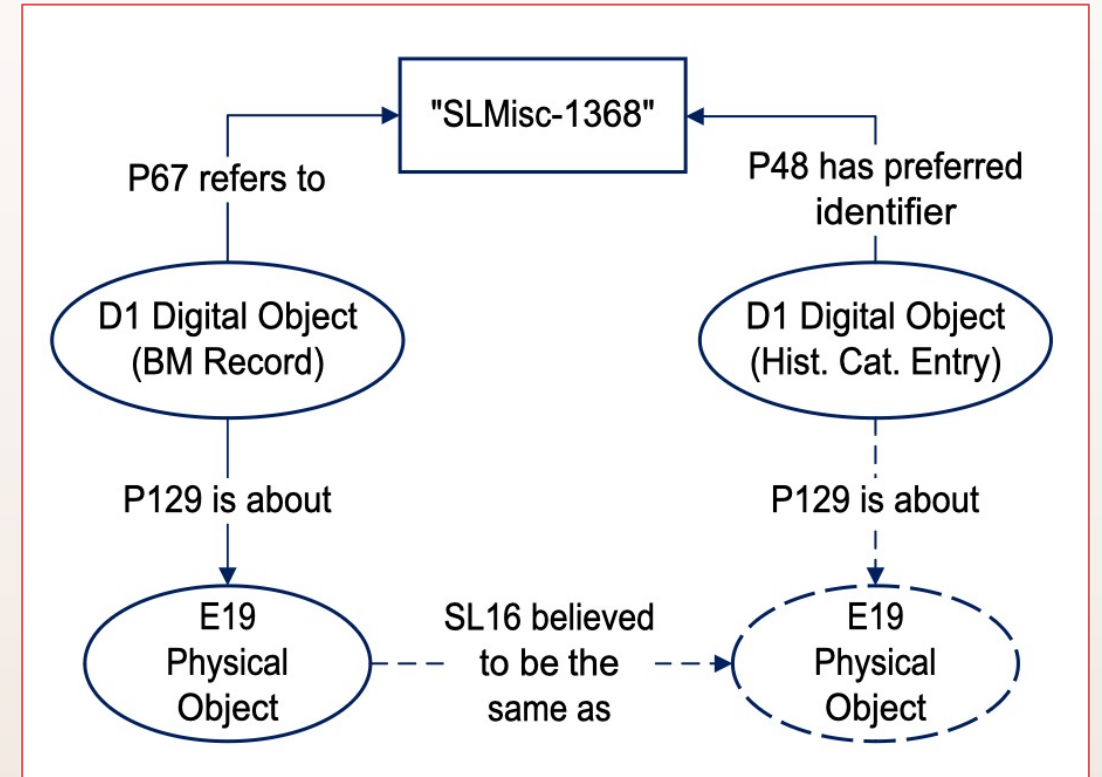
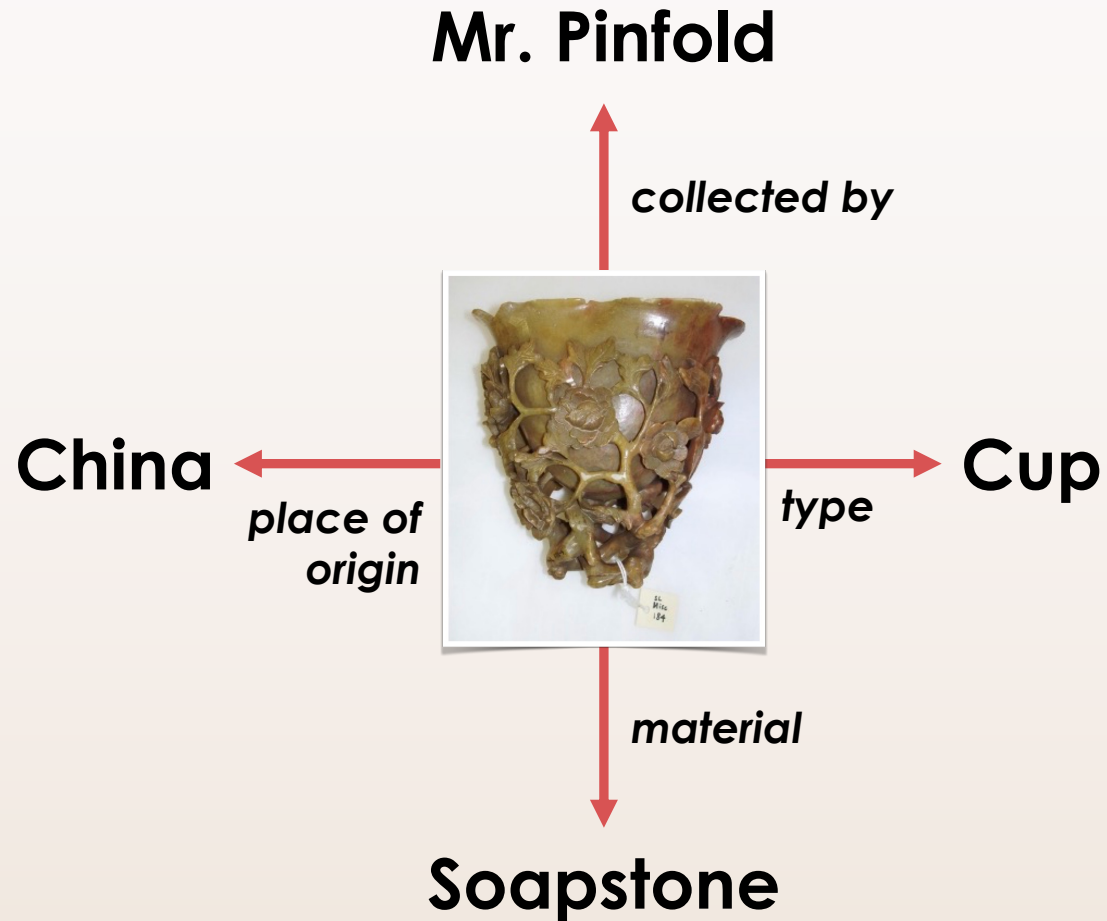


The Object Problem

- Often we cannot rely on objects to connect historical and contemporary catalogues
- Moreover, it is challenging to “identify the boundaries between ‘object names’ and their qualifying descriptions”



Object vs. Record



Absences

Many Different Kinds of Absences

- **Objects** that are unidentified, lost, destroyed or elsewhere
- **People** who are mentioned but whose identity is unknown
- **People** who are not mentioned at all
- **People/Places** that are mentioned in vague terms
- ... and more

Absences – Case Study

- **Quantify** absent objects
- **Classify** their status
- **Visualise** an overview

Miscellanies

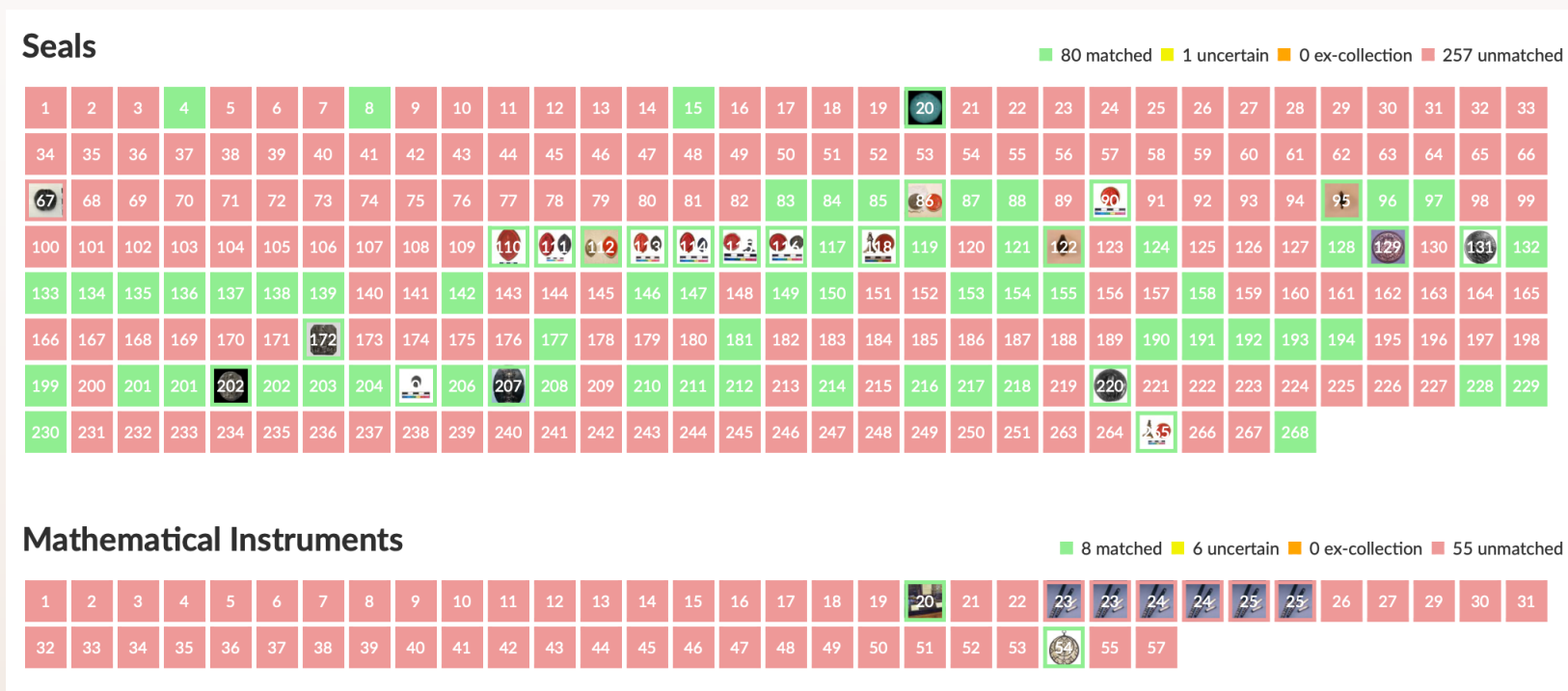
260 matched 8 uncertain 2 ex-collection 2109 unmatched

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Miscellanies historical catalogue (partial view)

Absences – Case Study

- **Compare** different catalogues
- **Investigate** why the objects are not digitally recorded

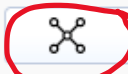






Seals and Mathematical Instruments historical catalogues

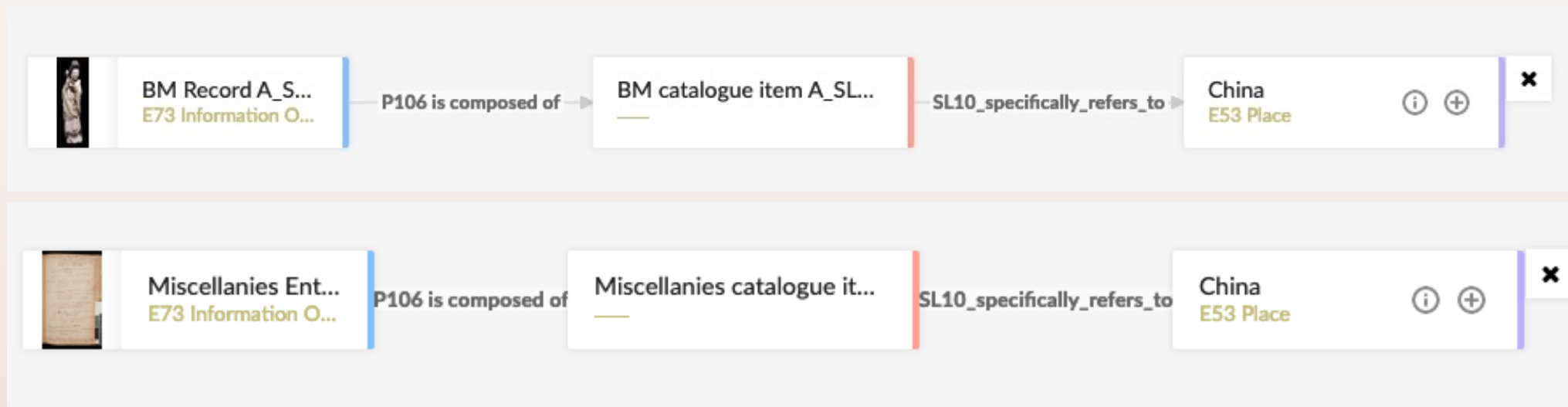
- Keyword Search
 - Search for “**Chinese Compass**” and view the British Museum Record *A_As-SLMisc-1044*
 - Inspect the page, read the curators comment
 - Navigate to the Historic Record “Miscellanies Entry 1044” via Linked Entries
 - Who is Dr Houston according to the Linked Data page from VIAF?
 - Does the Linked Data resolution agree with British Museum Web portal version of who Dr Houston is? (*Hint – Find the page from Original Entry (external link)*)
 - You may repeat for other keywords eg “abacus, artefact, cup, figure, teapot”

- Advanced Search
 - Use the Advanced Search facility to find **all Chinese compasses** that are catalogued in *Cotemporary Records*.
(Hint – Build your search by using the AND operator to connect two statements)
 - How many compasses exist in the collection?
 - What do we know about Mr Hodson?

- Graph Exploration

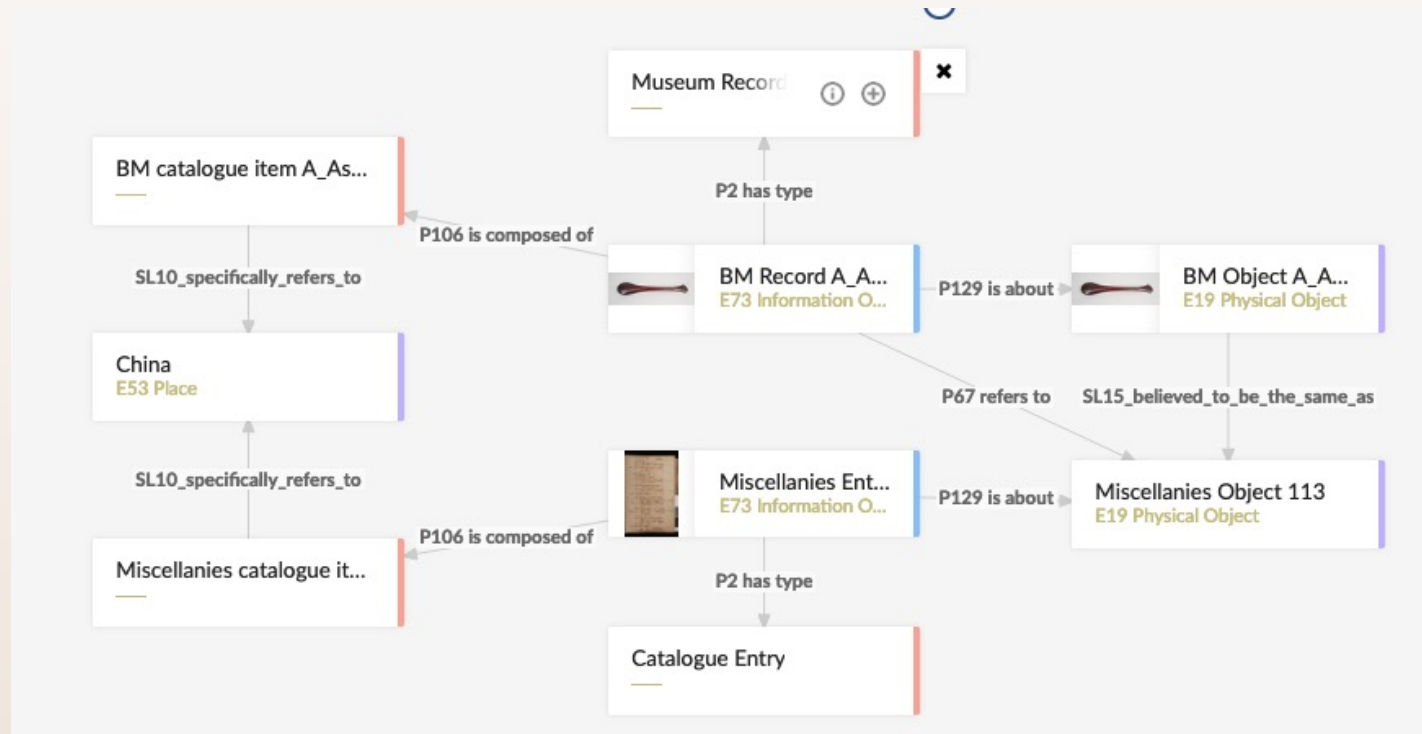
- From the home page and from *Datasets Available in Private Beta* **click on** *Miscellanea (7 catalogues)*
- Inspect the page, and click on any object of your preference in **green** background
- From the landing (metadata record) page access the graph view by clicking on the respective icon   
- From the **Connections** (Navigation Menu) select the top option **All** and click in **Add all** button
- Every box (entity) provides access to Navigation Menu and Knowledge Panel via the round button ! and +  
- Explore the graph to find the linked object via the property **SL15_believed to be the same as**

- Select all records that refer to China as a Place (i.e. E53 Place).
- How the query ensures that matches come from place China?
- How many items the query retrieves?
- Alter the query to retrieve only matches for records originating from the British Museum collection



Hands On – Querying the Knowledge Graph

- Select all *Museum records* that relate to China as a place and matched against *Historic records* (catalogue entries) that are **believed to be about** the same physical object
- Both Museum and Historic records should refer to China (E53 Place)
- The SL15_believed_to_be_the_same_as property should be used





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