## When GLAM & Education Come Together:

Educational Potential of Cultural Heritage in Wikidata

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# A (short) Introduction







#### Webinar's Focus:



### This presentation:



## My perspective

### 1) Open Knowledge advocate:

Working with a variety of institutions

#### 2) Educator:

Experimenting with Wikidata in the classroom

#### 3) Researcher:

PhD focuses on Wikidata as a learning platform

- Interactions: Data Curation & Data Extraction
- Life-long learning
- Aspects that may influence learning

## Focus Today

- Educational perspective on Cultural Heritage in Wikidata
- A global overview
- Revealing usage patterns of early adopters
- Benefits to learners

# Case studies & Wikidata uses of GLAM and Education

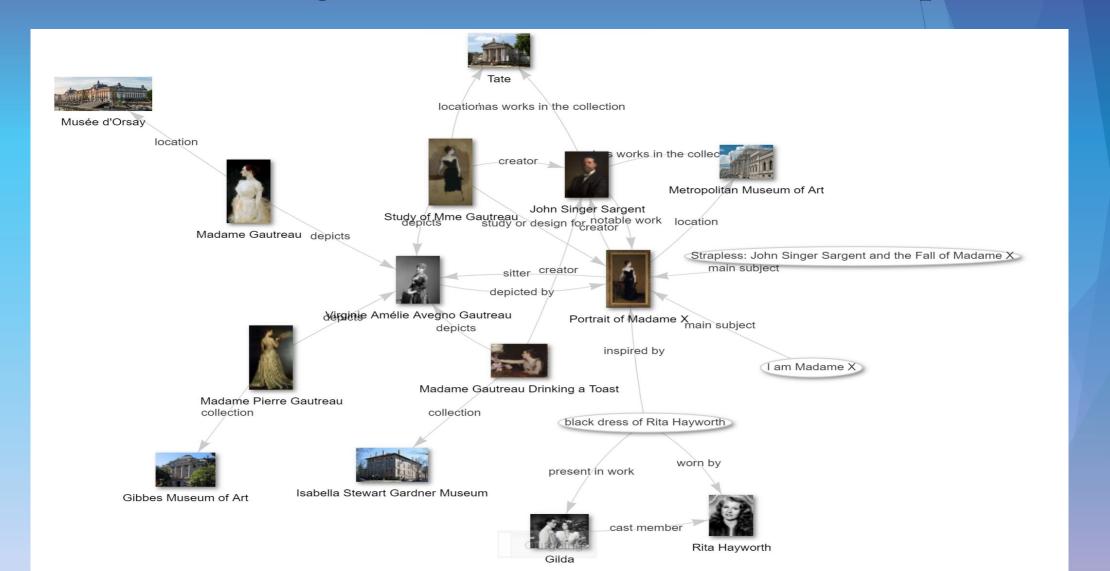






## 1. The Metropolitan Museum of Art

#### Unraveling links, connections and relationships



# The Met museum Dashboard a.k.a. the Met Open Access Portal on Wikidata

#### Wikidata:GLAM/Metropolitan Museum of Art/All objects

< Wikidata:GLAM | Metropolitan Museum of Art

#### Dashboards for The Metropolitan Museum of Art Open Access project



All objects

Timeline of Art History

Timeline inventory

Highlights

Highlights inventory

Issues

Popular works

Other tools

This table describes the completeness of properties in Wikidata for all Met objects (10,000+). A good reference for item structure for visual works: Wikidata:WikiProject\_Visual\_arts/Item\_structure.

all entities┏미 count┏미 all groupings┏미 without grouping property┏미 below threshold (1)┏미

lanually updater₽

| Top groupings (Minimum 1 item   | Top Properties (used at least 0 times per grouping) |                 |                    |                  |                 |                 |                              |                            |                            |
|---------------------------------|---|-----------------|--------------------|------------------|-----------------|-----------------|------------------------------|----------------------------|----------------------------|
| Name ¢                          | Count +   | image (P18) ◆   | inception (P571) ◆ | height (P2048) • | width (P2049)   |                 | The Met object ID (P3634)  ◆ | inventory number<br>(P217) | described at URL<br>(P973) |
| painting (Q3305213)             | 11024   | 67.77% (7471) 🔾 | 98.71% (10882) 🔍   | 71.77% (7912) 🔾  | 71.62% (7895) 🔾 | 95.5% (10528) 🔍 | 100.0% (11024) 🔍             | 100.0% (11024) 🔍           | 2.5% (276) 🔍               |
| sculpture (Q860861)             | 419   | 67.78% (284) 🔾  | 82.1% (344) 🔍      | 11.46% (48) 🔍    | 8.83% (37) 🔦    | 50.84% (213) 🔍  | 100.0% (419) 🔍               | 100.0% (419) 🔍             | 1.91% (8) 🔍                |
| drawing (Q93184)                | 356   | 65.17% (232) 🔾  | 82.87% (295) 🔍     | 42.42% (151) 🔾   | 42.13% (150) 💊  | 79.78% (284) 🔾  | 100.0% (356) 🔍               | 100.0% (356) 🔍             | 0.28% (1) 🔍                |
| woodcut print (Q18219090)       | 172   | 99.42% (171) 🔍  | 84.3% (145) 🔍      | 20.35% (35) 🔍    | 20.35% (35) 🔍   | 100.0% (172) 🔍  | 100.0% (172) 🔍               | 98.84% (170) 🔍             | 17.44% (30) 🔍              |
| watercolor painting (Q18761202) | 138   | 93.48% (129) 🥄  | 90.58% (125) 🥄     | 84.06% (116) 🔍   | 84.06% (116) 🔍  | 89.13% (123) 🔦  | 100.0% (138) 🔍               | 100.0% (138) 🔍             | 0% (0) 🔍                   |
| literary work (Q7725634)        | 119   | 86.55% (103) 🔦  | 99.16% (118) 🥄     | 13.45% (16) 🔍    | 3.36% (4) 🔍     | 14.29% (17) 🔍   | 100.0% (119) 🔍               | 100.0% (119) 🥄             | 0.84% (1) 🔍                |
| figure (Q29527347)              | 104   | 8.65% (9) 🔍     | 31.73% (33) 🔍      | 0% (0) 🔍         | 0% (0) 🔍        | 0% (0) 🔍        | 100.0% (104) 🔍               | 100.0% (104) 🔍             | 0% (0) 🔍                   |
| photograph (Q125191)            | 89  | 92.13% (82) 🔍   | 93.26% (83) 🔍      | 13.48% (12) 🔍    | 13.48% (12) 🔍   | 55.06% (49) 🔍   | 100.0% (89) 🔍                | 98.88% (88) 🥄              | 3.37% (3) 🔍                |
| vase (Q191851)                  | 88  | 57.95% (51) 🔍   | 64.77% (57) 🔾      | 7.95% (7) 🔍      | 3.41% (3) 🔍     | 22.73% (20) 🔍   | 100.0% (88) 🔍                | 100.0% (88) 🥄              | 1.14% (1) 🔍                |
| print (Q11060274)               | 63  | 55.56% (35) 🔍   | 84.13% (53) 🔦      | 9.52% (6) 🔍      | 9.52% (6) 🔍     | 68.25% (43) 🔾   | 100.0% (63) 🔍                | 100.0% (63) 🥄              | 3.17% (2) 🔍                |
| furniture (Q14745)              | 53  | 79.25% (42) 🔾   | 96.23% (51) 🔦      | 5.66% (3) 🔍      | 5.66% (3) 🔍     | 43.4% (23) 🔾    | 100.0% (53) 🔍                | 100.0% (53) 🥄              | 0% (0) 🔍                   |
| statuette (Q16738862)           | 49  | 93.88% (46) 🔍   | 95.92% (47) 🔦      | 4.08% (2) 🔍      | 2.04% (1) 🔍     | 6.12% (3) 🔍     | 100.0% (49) 🔍                | 100.0% (49) 🥄              | 0% (0) 🔍                   |
| textile artwork (Q22075301)     | 44  | 9.09% (4) 🔍     | 90.91% (40) 🥄      | 0% (0) 🔍         | 0% (0) 🔍        | 81.82% (36) 🔍   | 100.0% (44) 🔍                | 100.0% (44) 🥄              | 0% (0) 🔍                   |
| evening wear (Q1908472)         | 44  | 0% (0) 🔍        | 47.73% (21) 🔾      | 0% (0) 🔦         | 0% (0) 🔍        | 22.73% (10) 🔍   | 100.0% (44) 🔍                | 100.0% (44) 🥄              | 0% (0) 🔍                   |
| tapestry (Q184296)              | 40  | 92.5% (37) 🔍    | 95.0% (38) 🥄       | 55.0% (22) 🔾     | 55.0% (22) 🔾    | 70.0% (28) 🕓    | 100.0% (40) 🔍                | 100.0% (40) 🥄              | 0% (0) 🔍                   |
| codex (Q213924)                 | 38  | 100.0% (38) 🔍   | 100.0% (38) 🔍      | 23.68% (9) 🔾     | 15.79% (6) 🔍    | 13.16% (5) 🔍    | 100.0% (38) 🔍                | 100.0% (38) 🥄              | 0% (0) 🔍                   |
| evening dress (Q2144456)        | 36  | 11.11% (4) 🔍    | 55.56% (20) 🔾      | 0% (0) 🔍         | 0% (0) 🔍        | 30.56% (11) 🔍   | 100.0% (36) 🔍                | 100.0% (36) 🥄              | 0% (0) 🔍                   |
| bowl (Q153988)                  | 35  | 57.14% (20) 🔍   | 71.43% (25) 🔾      | 11.43% (4) 🔦     | 5.71% (2) 🔍     | 8.57% (3) 🔍     | 100.0% (35) 🔍                | 100.0% (35) 🥄              | 0% (0) 🔍                   |
| metal artwork (Q29382731)       | 29  | 100.0% (29) 🔍   | 100.0% (29) 🔍      | 17.24% (5) 🔦     | 17.24% (5) 🔍    | 10.34% (3) 🔍    | 100.0% (29) 🔍                | 100.0% (29) 🥄              | 0% (0) 🔍                   |
| illuminated manuscript (Q48498) | 27  | 100.0% (27) 🔍   | 100.0% (27) 🔍      | 74.07% (20) 🔾    | 74.07% (20) 🔾   | 77.78% (21) 🔾   | 100.0% (27) 🔍                | 100.0% (27) 🥄              | 7.41% (2) 🔍                |
| bronze sculpture (Q928357)      | 27  | 100.0% (27) 🔍   | 100.0% (27) 🔍      | 11.11% (3) 🔍     | 7.41% (2) 🔍     | 29.63% (8) 🔍    | 100.0% (27) 🥄                | 100.0% (27) 🥄              | 0% (0) 🔍                   |
| stained glass (Q1473346)        | 26  | 100.0% (26) 🔍   | 100.0% (26) 🔍      | 19.23% (5) 🔦     | 19.23% (5) 🔍    | 76.92% (20) 🔾   | 100.0% (26) 🥄                | 100.0% (26) 🥄              | 0% (0) 🔍                   |
| hanging scroll (Q2188827)       | 26  | 65.38% (17) 🔍   | 96.15% (25) 🔍      | 26.92% (7) 🔍     | 26.92% (7) 🔦    | 65.38% (17) 🔍   | 100.0% (26) 🔍                | 100.0% (26) 🔍              | 0% (0) 🔍                   |

https://w.wiki/Q9J

### "Depiction" Wikidata Game

#### **Depiction**

Decide whether the image depicts the named item.

Entry type: Horse Soldier Dresses House Flower Boat Tree Leaf

#### Javanese Temple in Ruins [Q20503317]

Reruntuhan candi Jawa Tempelruinen auf Java

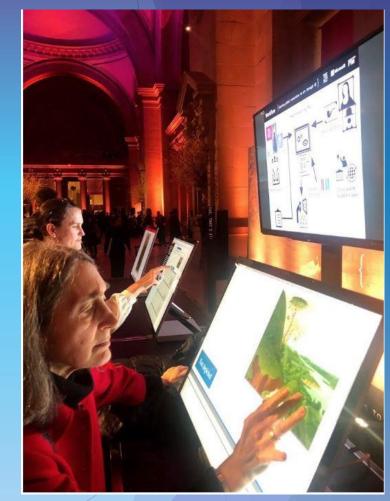


Painting by Raden Saleh, from 1860



Depicts a tree Skip

Not depicted



Fuzheado, CC-BY-SA 4.0

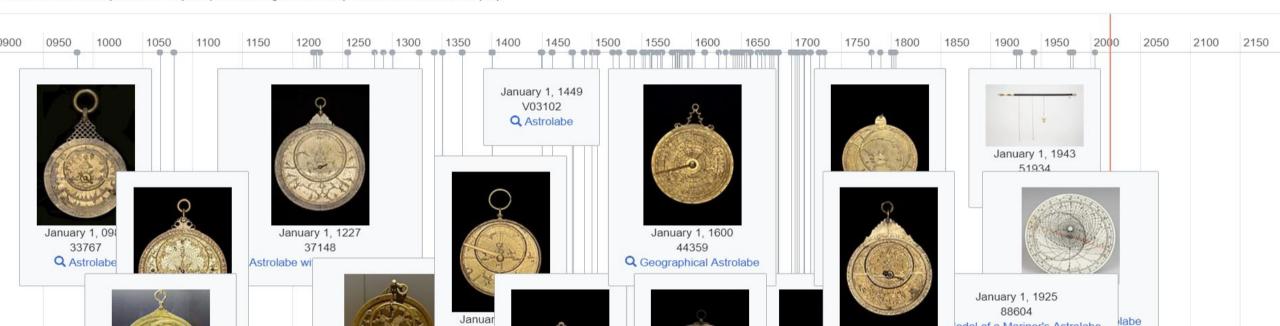
# 2. The Bodleian Libraries, University of Oxford, UK: <a href="https://doi.org/10.108/10.108/">The Astrolabe Explorer</a>



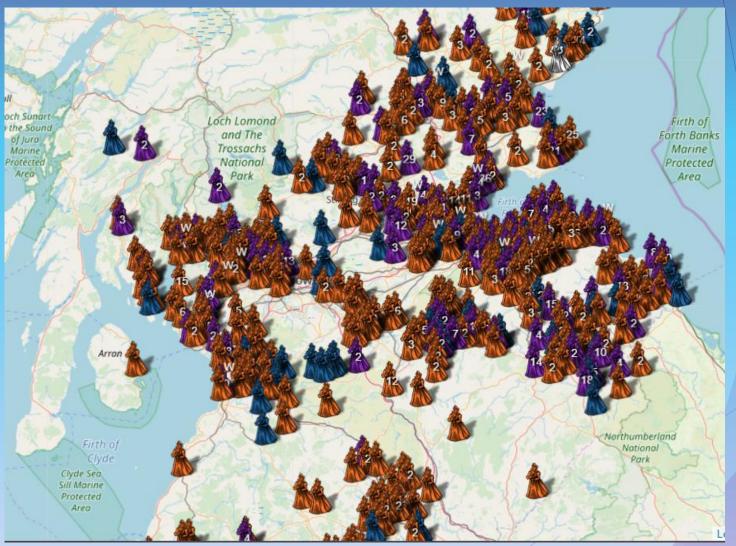
#### Dates of creation of Astrolabes

Use ctrl and the mouse wheel to zoom.

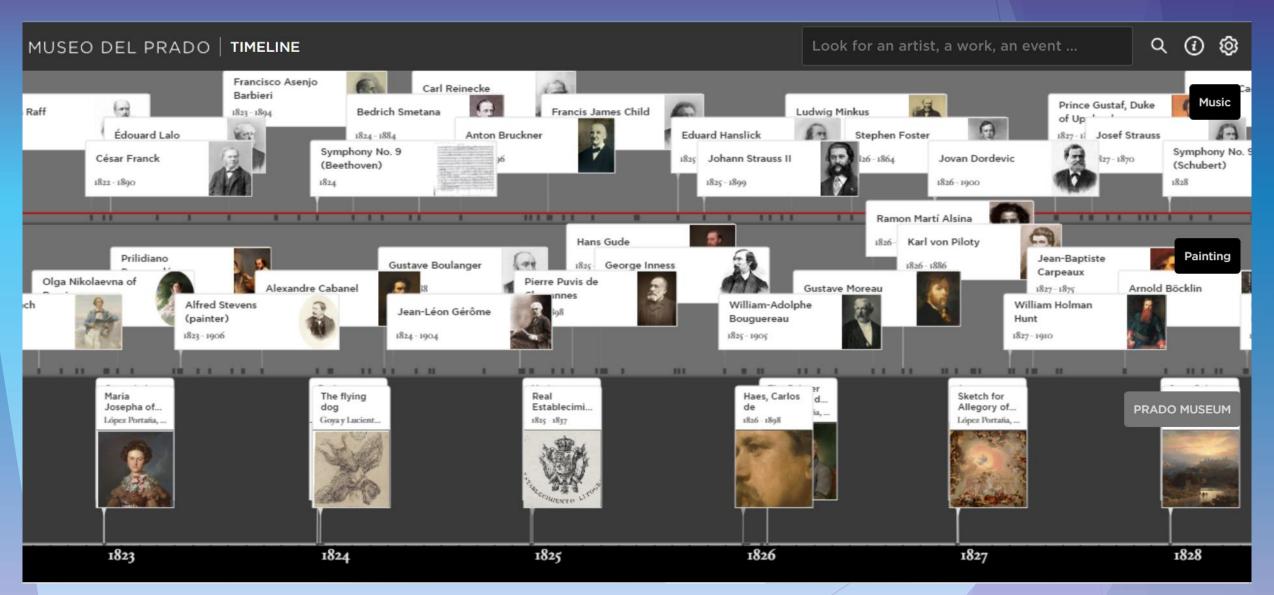
Data are to century, decade or year precision: ignore the days and months in this display.



# 3. University of Edinburgh, Scotland: Scottish Witch Hunts



## 4. The Prado: Multiple timelines



## 5A. Tel Aviv University, Israel

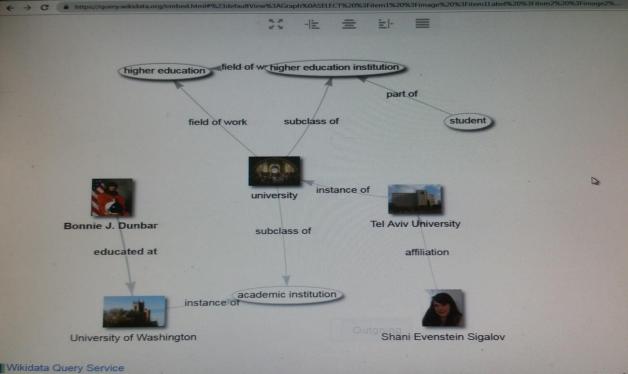


"From Web 2.0 to Web 3.0, from Wikipedia to Wikidata" Elective course at TAU, Class of 2018-2019

CC-BY-SA 4.0 Shani Evenstein

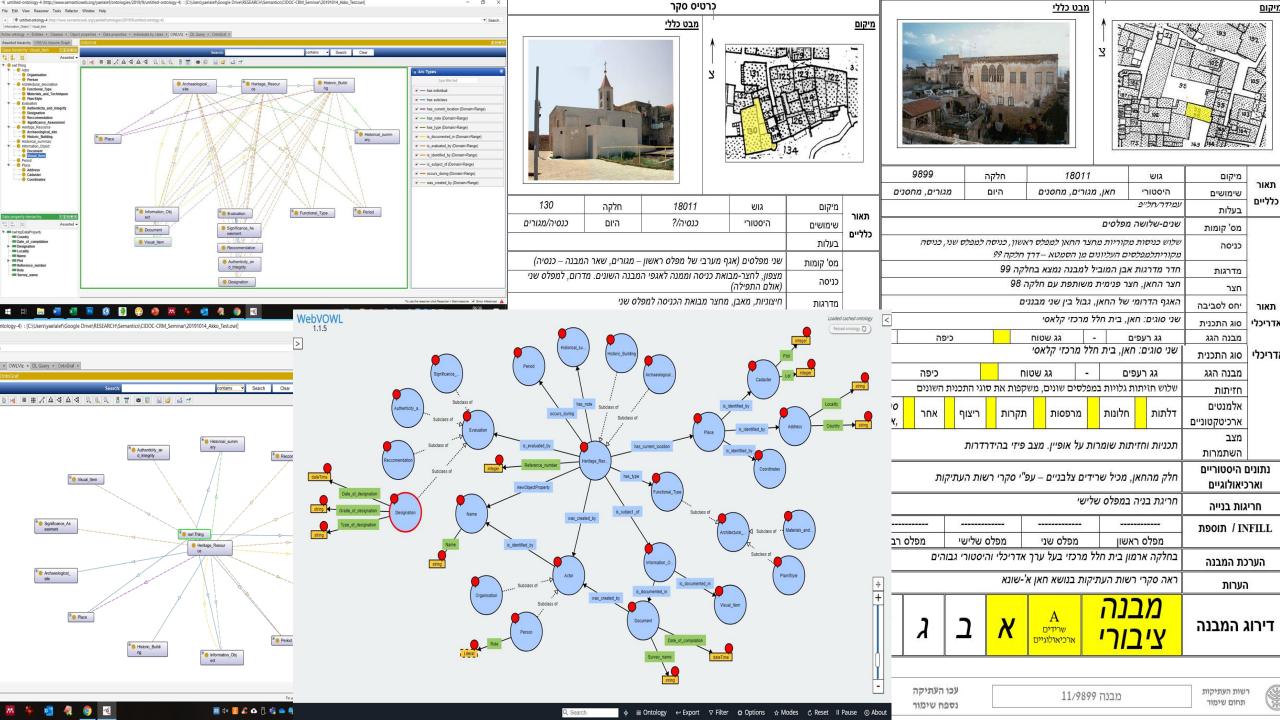


#### In-class exe to explore relationships



## 5B. The Bar Ilan University, Israel

- Focus on Alternative Assessment aims to teach:
  - Semantic Web and Open Linked Data
- The Project:
  - Information System program at Bar Ilan
  - Semantic Web Course
  - Practical with social impact
  - A collaboration with the Israel Antiquities Authority



# 6. Reconcile Data from Heterogeneous Sources: School of Journalism, Faculdade Cásper Líbero, Brazil

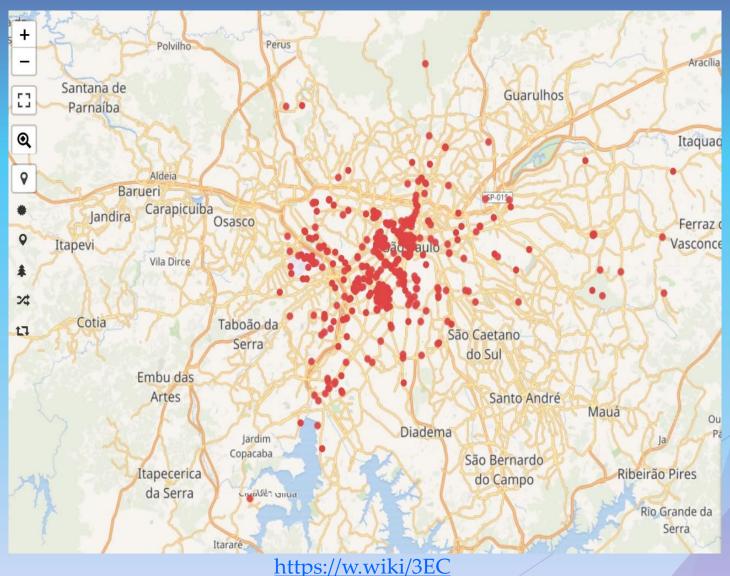




# 7. Auto-Generating Content in Wikis: Using WD to create a Wikibook from GLAM Collection



# 8. Creating New Digital Objects: Mapping monuments in São Paulo



## 9. Digitally Recreating Lost Museum Artifacts



Emperor Pedro II stands in front of his burning palace—and the site of the National Museum of Brazil..

Felipe Milanez, CC-BY-SA 4.0

# "Data Archaeology"

| # | Item  | Label   | Description   | of  | collection   | part of                                | image  |
|---|---|---|---|---|--|--|--|
| 2 | Ring bracelets<br>Q56810425<br>Xangô figure | en Ring bracelets  pt Pulseiras de argola  pt-br Pulseiras de argola  en Xangô figure | en object in the Polícia da Corte Collection at the National Museum (Rio de Janeiro)  pt objeto da Coleção Polícia da Corte do Museu Nacional (Rio de Janeiro)  pt-br objeto da Coleção Polícia da Corte do Museu Nacional (Rio de Janeiro)  fr objet dans la Collection Polícia da Corte du Museu Nacional (Brésil)  en object in the Polícia da Corte Collection at the | item of collection or exhibition bracelet | Coleção Polícia da Corte  Coleção Polícia da Corte | Africans in Brazil  Africans in Brazil | Argolas de metal (pulseiras) MN 01.jpg  Representação de Xangô MN 03.jpg |
|   | Q56810426                                   | pt Representação<br>de Xangô<br>pt-br Representação<br>de Xangô                       | pt objeto da Coleção Polícia da Corte do Museu  | collection or exhibition                  |  |  |  |
| 3 | Arrow<br>Q56810427                          | en Arrow pt Flecha pt-br Flecha   | en object in the Polícia da Corte Collection at the National Museum (Rio de Janeiro)  pt objeto da Coleção Polícia da Corte do Museu Nacional (Rio de Janeiro)  pt-br objeto da Coleção Polícia da Corte do Museu Nacional (Rio de Janeiro)   | item of collection or exhibition          | Coleção Polícia da Corte                           | Africans in<br>Brazil                  | Flecha de Oxossi MN 03.jpg   |

# Preliminary Conclusions







### Main Uses 1

1) Exploring a database visually in an engaging way

Cases: Libraries at Oxford, University of Edinburgh, Met

2) Salvaging unused databases

Cases: University of Edinburgh

3) Enriching an existing database or collection

Cases: University of Edinburgh, Met - depicts game

4) Exposing relationships and connections

Case: Met – dress example

5) Custom-tailoring queries on a large scale

Case: Met –InteGraality

### Main Uses 2

6) Teaching data literacy or related topics

Cases: Tel Aviv University, University of Edinburgh

7) Fighting fake news by reconciling contradicting sources

Cases: Brazil death's during dictatorship

8) Autogenerating content

Cases: Brazil - WikiBooks; Met - Mbabel

9) Creating new digital objects

Cases: University of Edinburgh, Met, Brazil

10) Digitally reconstructing lost physical item - Data archeology

Case: Brazil's Burnt National Museum

#### Benefits

- Specific answers to questions
- Data visualization!
- Tell stories with data
- Critical thinking and analysis curation and extraction



**Better Data Literacy** 

#### Webinar's Focus:



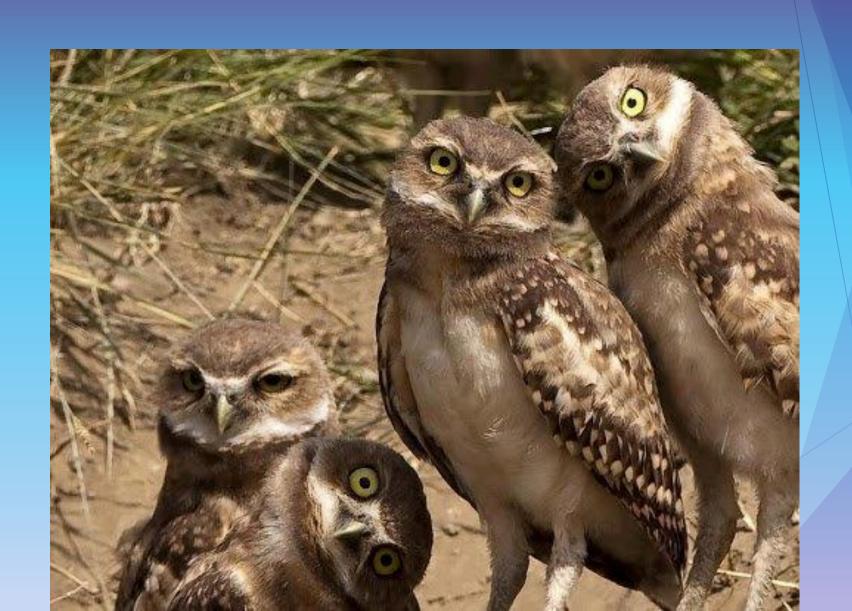
### This presentation:



# This is just the beginning

The challenges are learning opportunities

# Let's discuss!



# Thank you for participating!







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#### **Tel Aviv University**

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EdTech Innovation Strategist, NY/American Medical Program, Sackler School of Medicine

Lecturer: for-credit courses focused on Wikipedia and Wikidata



Former Chairperson, Wikipedia & Education User Group.

Former Chairperson, WikiProject Medicine Foundation.

Currently a member of the Wikimedia Foundation's **Board of Trustees**.

Chairperson, <u>The Hebrew Literature Digitization Society</u>, supports Project Ben-Yehuda (similar to Project Gutenberg).



