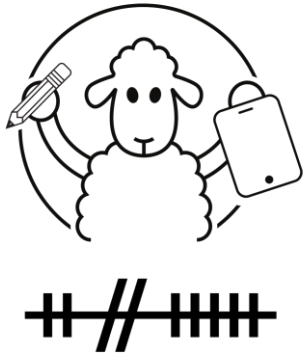
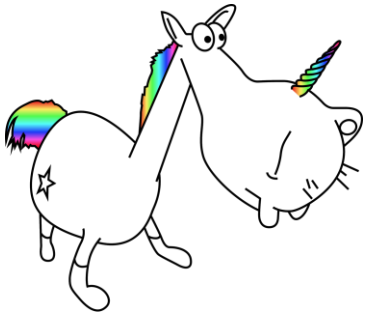
Sophie C. Schmidt &. Florian Thiery





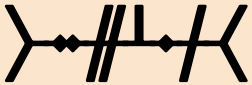
SPARQLing Stones

New options for analysing analog editions by digitisation in Wikidata

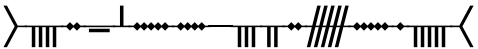
CC BY

Graph Technologies in the Digital Humanities - Modelling the Scholarly Process, Vienna, Austria - 21st-22nd February 2020

We are Research Squirrels and interested in Open Science, **Linked Data** and



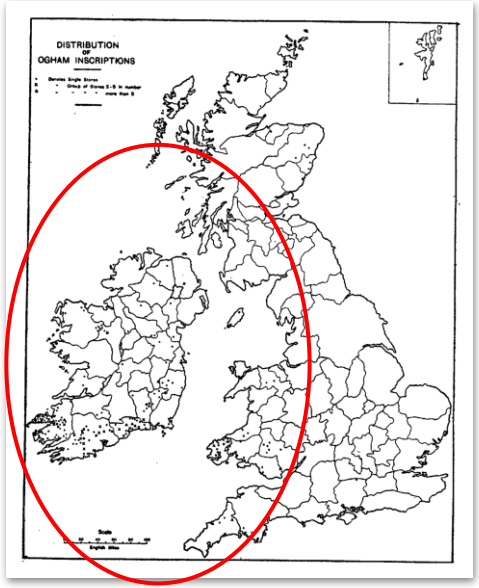
Sophie & Florian



@idhrenil @fthierygeo

Martina & Timo

http://squirrel.link



R.A.S. Macalister, Corpus inscriptionum insularum Celticarum, vol. I (1945) / p.502

4th-9th century AD

Distribution:
Ireland
(+*Wales, England, Isle of Man)*

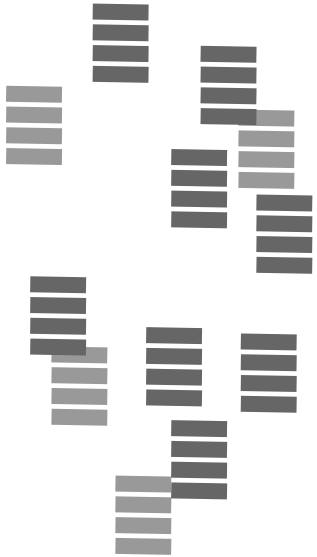
Information on people and their families / tribal affiliation

UCC Stone Corridor, Stone 4, CIIC 81 (Florian Thiery) CC BY 4.0

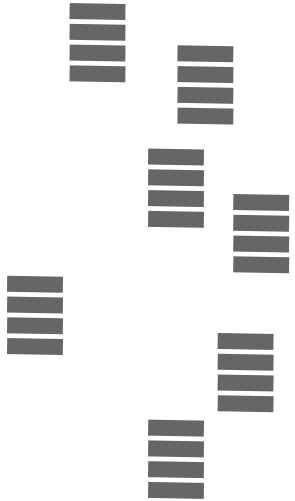
Ogham Inscriptions

local (offline)

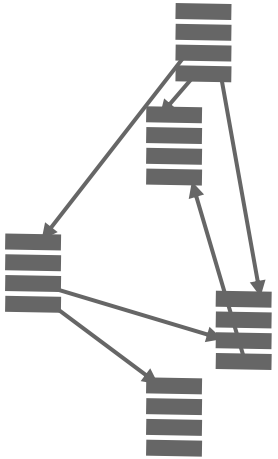
online



online & open



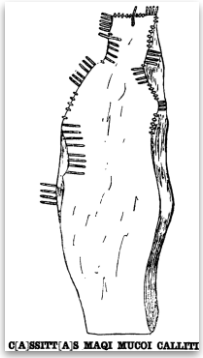
part of LOD



Not many databases are online. Few of them are openly available and accessible. Even less are part of the Linked Open Data Cloud.

I want to look at all Ogham Stones from Ireland.. Where do I find them?

R.A.S. Macalister, Corpus inscriptionum insularum Celticarum, vol. I (1945)



UCC Stone Corridor, Stone 4, CIIC 81 (Florian Thiery) CC BY 4.0

Linked Ogham??

Online & Open:

3D Ogham Project:
https://ogham.celt.dias.ie

Heritage Management:
http://webgis.archaeology.ie/historicenvironment/

Online: CISP
https://www.ucl.ac.uk/archaeology/cisp/database/

Offline:
CIIC by Macàlister
div. publications

Comparative analysis of records across multiple datasets is difficult

I could use...

WIKIDATA

wikidata.org

Do you know Wikidata?

How do I link these data sets?

- **A free and open knowledge base**
  → everybody can add and edit

- central storage for structured data of **Wikimedia** projects

data in **Wikidata** is:

- available under a free license (CC 0)
- multilingual
- accessible to humans and machines (GUI & API & SPARQL)
- exportable using standard formats (JSON, RDF, XML)
- interlinked to other open data sets on the LOD Cloud

WIKIDATA

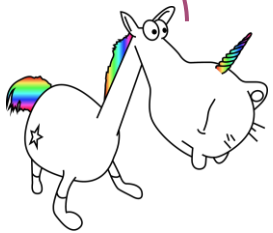
What is Wikidata?

link to existing information: OSM data, CISP data set

input into wikidata, link to existing datasets in wikidata

extract information on ogham stones: townland, barony, county

map databases via location and textual information (content of stones)

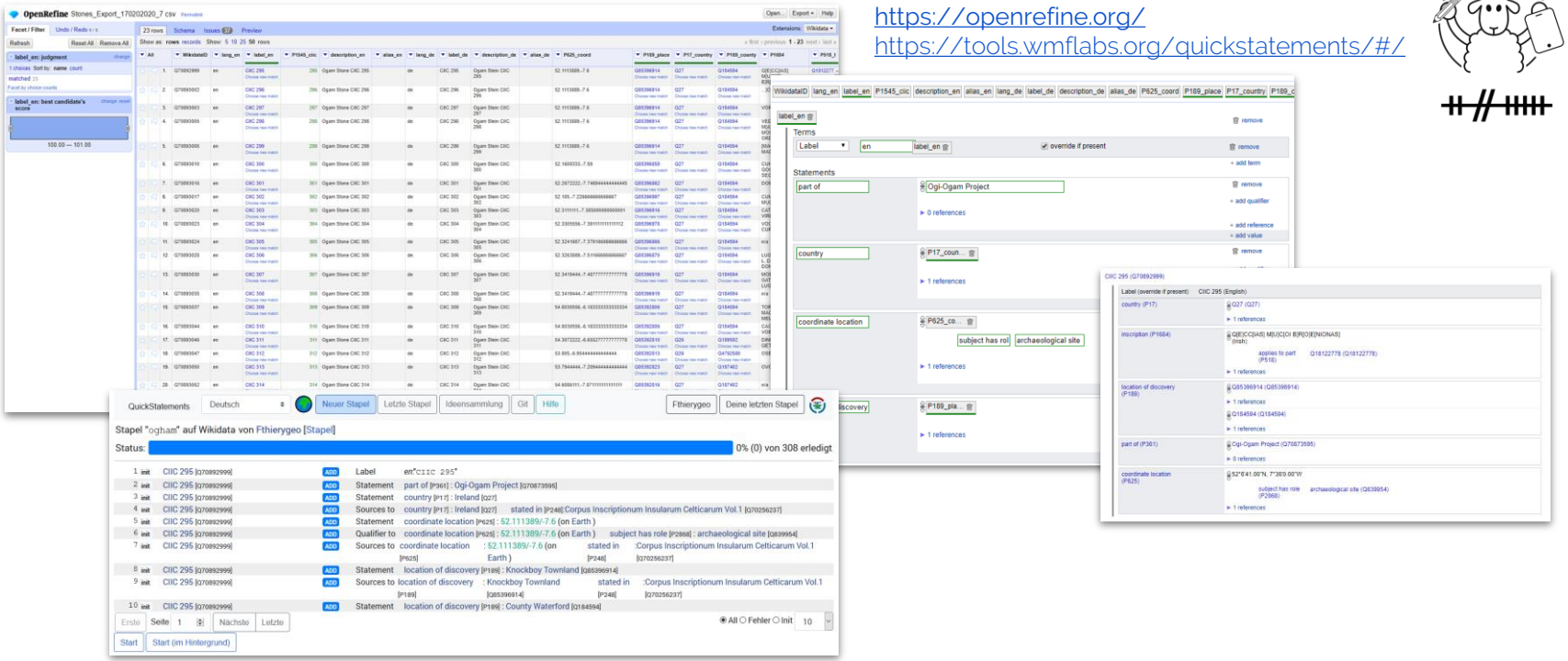


extract enriched data with the help of the **SPARQL unicorn**

Macálister 1945

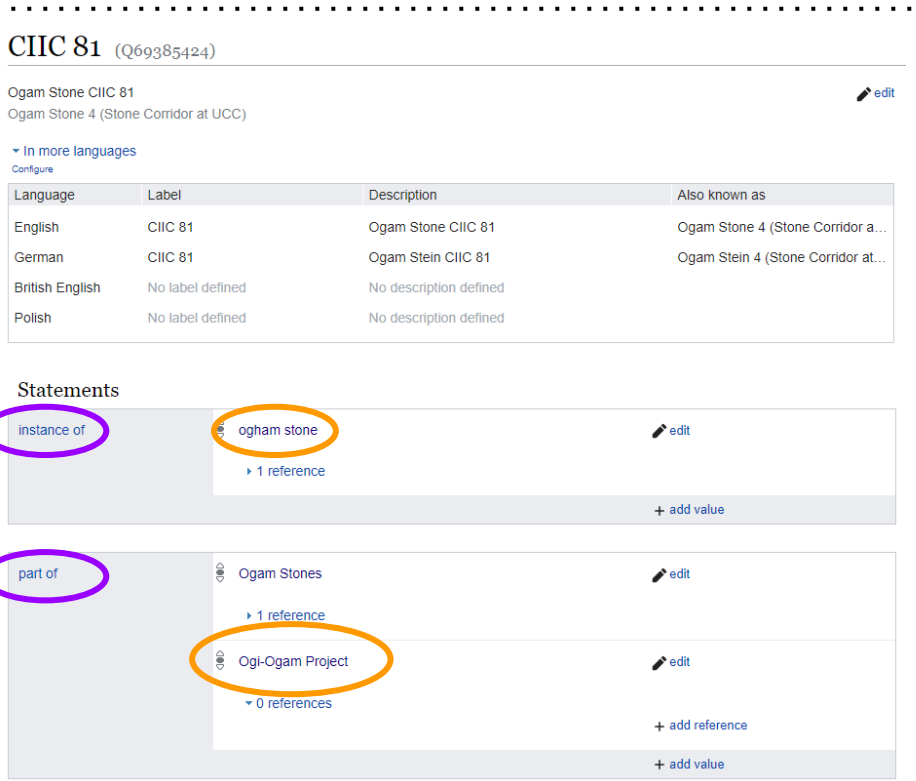
further analysis with open source software

From analog catalogues to LOD and further…



https://openrefine.org/
https://tools.wmflabs.org/quickstatements/#/

Wikidata import using OpenRefine & QuickStatements



CIIC 81 (Q69385424)

Ogam Stone CIIC 81
Ogam Stone 4 (Stone Corridor at UCC)

edit

In more languages
Configure

Language	Label	Description	Also known as
English	CIIC 81	Ogam Stone CIIC 81	Ogam Stone 4 (Stone Corridor a…
German	CIIC 81	Ogam Stein CIIC 81	Ogam Stein 4 (Stone Corridor at…
British English	No label defined	No description defined	
Polish	No label defined	No description defined	

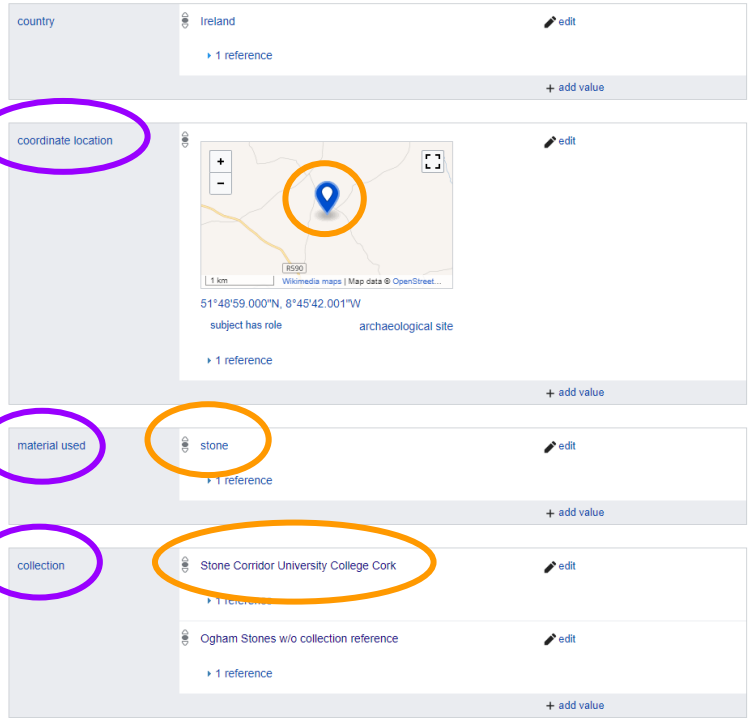
Statements

instance of — ogham stone — edit
1 reference
add value

part of — Ogam Stones — edit
1 reference
Ogi-Ogam Project — edit
0 references
add reference
add value

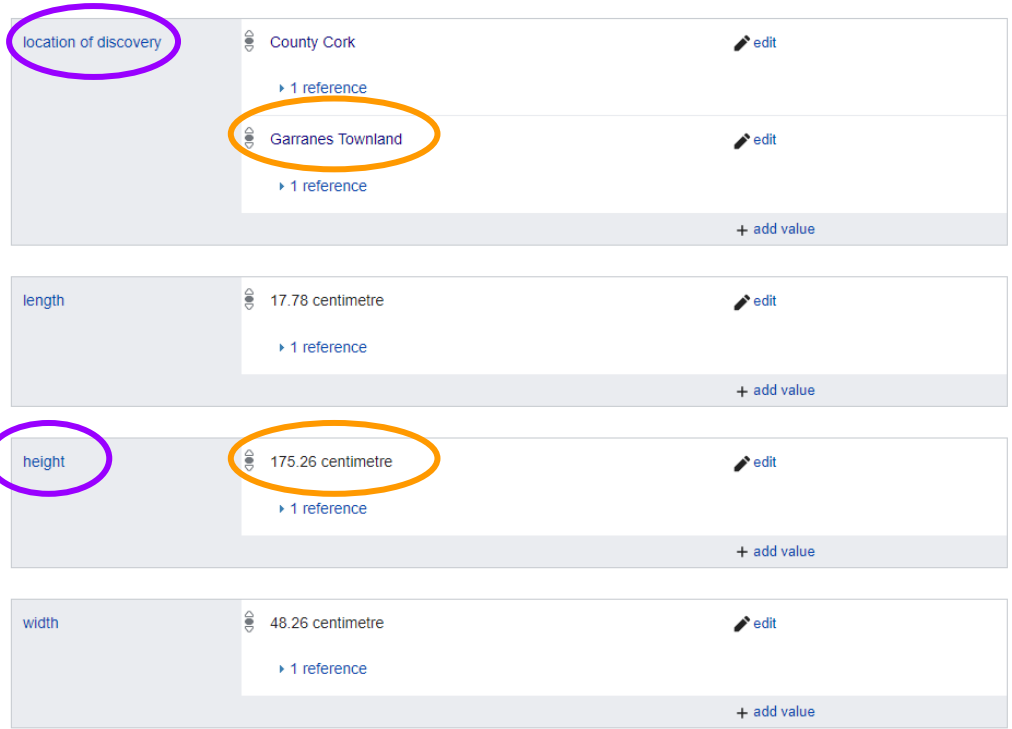
CIIC 81 @ Stone Corridor University College Cork, No. 4

https://www.wikidata.org/wiki/Q69385424



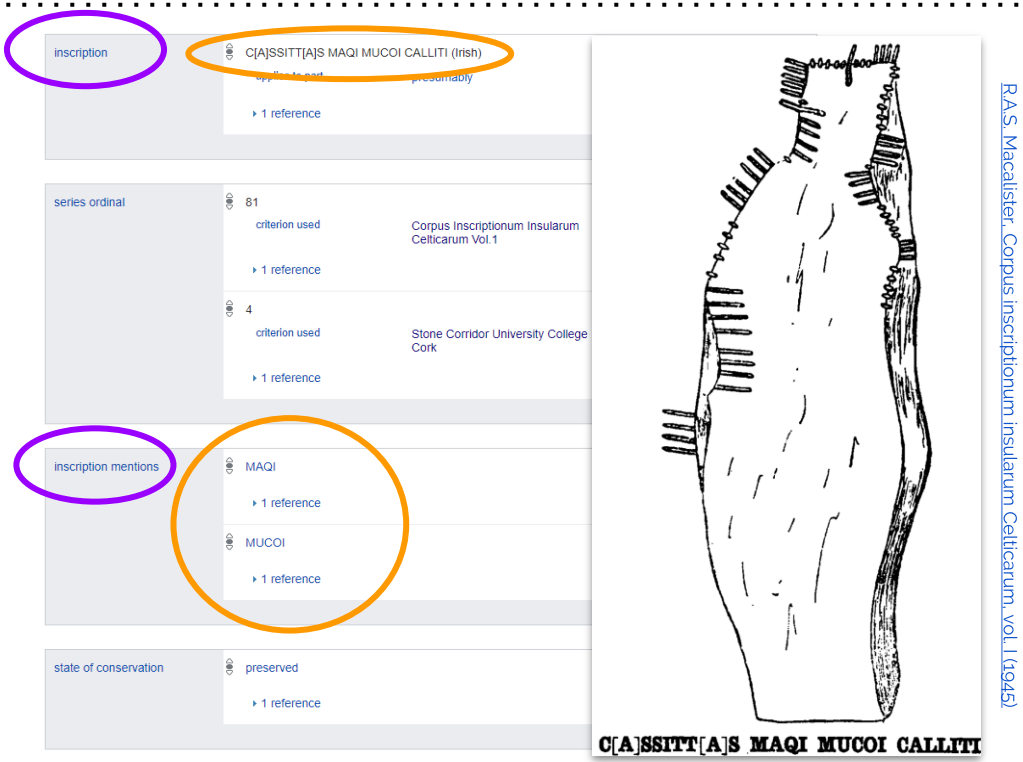
CIIC 81 @ Stone Corridor University College Cork, No. 4

https://www.wikidata.org/wiki/Q69385424



CIIC 81 @ Stone Corridor University College Cork, No. 4

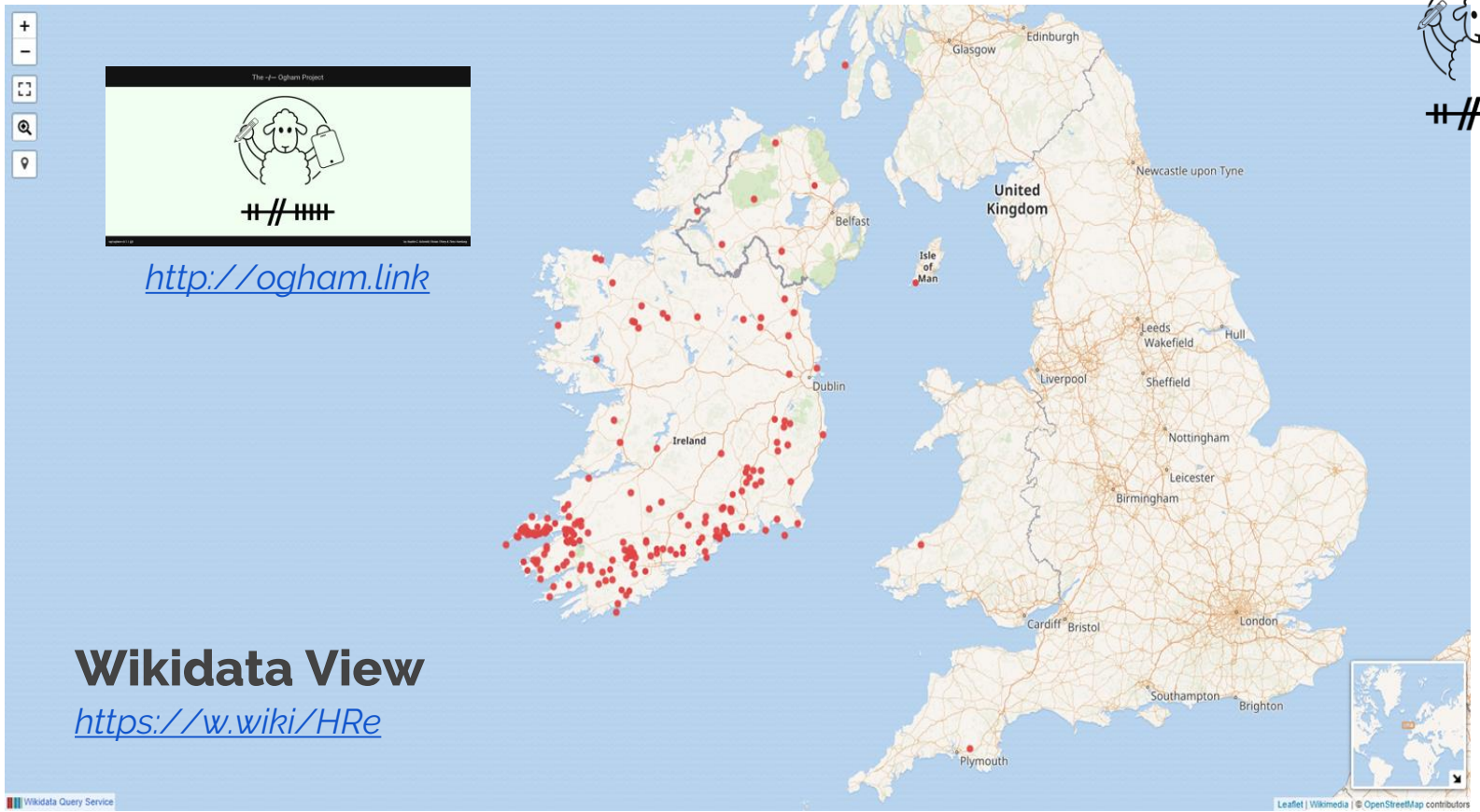
https://www.wikidata.org/wiki/Q69385424



R.A.S. Macalister, Corpus inscriptionum insularum Celticarum, vol. I (1945)

CIIC 81 @ Stone Corridor University College Cork, No. 4

https://www.wikidata.org/wiki/Q69385424



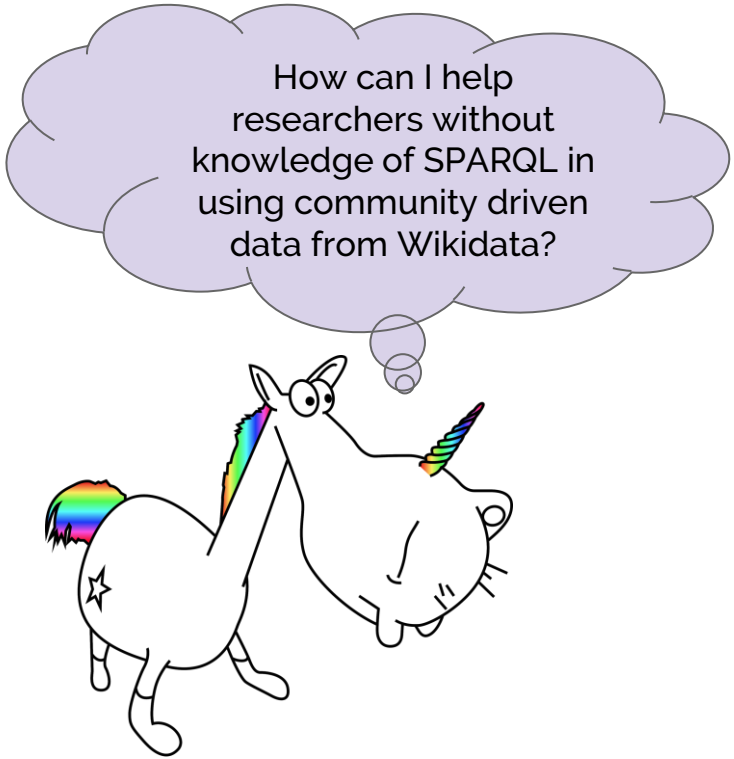
http://ogham.link

Wikidata View

https://w.wiki/HRe

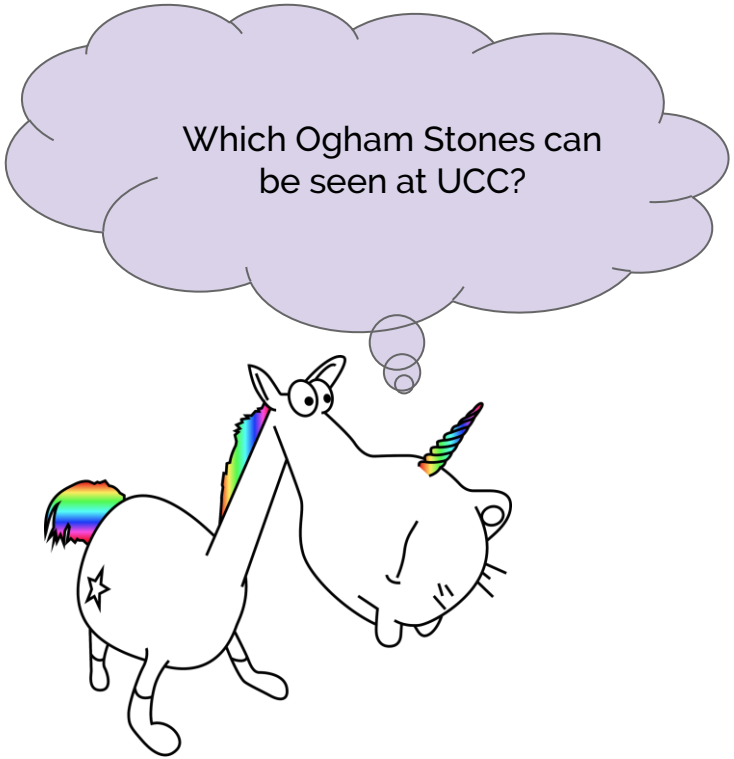
Most of the tools require knowledge of SPARQL. Queries can become very complex.

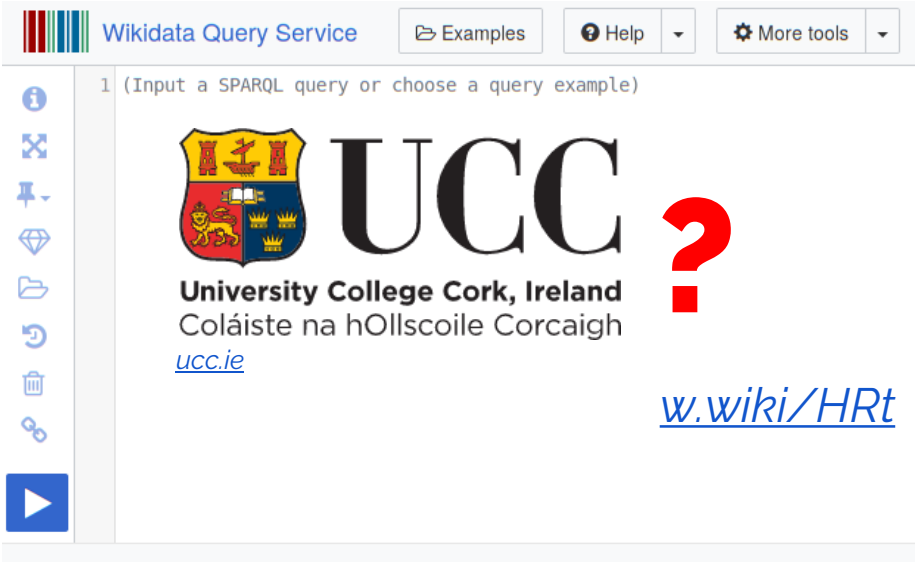
```
SELECT ?date ?work ?workLabel ?topics (GROUP_CONCAT(DISTINCT
separator=" // ") AS ?places) (GROUP_CONCAT(?authorLabel; sepa
authorstrings) (GROUP_CONCAT(?editorLabel; separator= " - ") /
WITH {
  SELECT DISTINCT ?work WHERE {
    ?work wdt:P921 / (wdt:P361+ | wdt:P1269+ | (wdt:P31* / wdt
  }
} AS %works
WITH {
  SELECT (MIN(?dates) as ?datetime) ?work (GROUP_CONCAT(?topi
    INCLUDE %works
    ?work wdt:P921 ?topic .
          FILTER NOT EXISTS {
             ?topic wdt:P31 wd:Q839954} .
          FILTER NOT EXISTS {
            ?topic wdt:P31 wd:Q220659}
    OPTIONAL { ?work wdt:P577 ?dates . }

    ?topic rdfs:label ?topic_label .  FILTER (lang(?topic_labe
  }
  GROUP BY ?work
} AS %result
WHERE {
  INCLUDE %result

  OPTIONAL { ?work wdt:P50 ?author .
             ?author rdfs:label ?authorLabel . FILTER (lang(?a
           }
  # no extra label assignment here, because we already have a
  OPTIONAL { ?work wdt:P2093 ?authorstring . }
  OPTIONAL { ?work wdt:P98 ?editor .
             ?editor rdfs:label ?editorLabel . FILTER (lang(?e
           }
  OPTIONAL { ?work wdt:P123 ?publisher . }

  #collect related places (are in topic list; are instance of
  OPTIONAL {?work wdt:P921 ?place
```



#LittleMinion
#SPARQLUnicorn

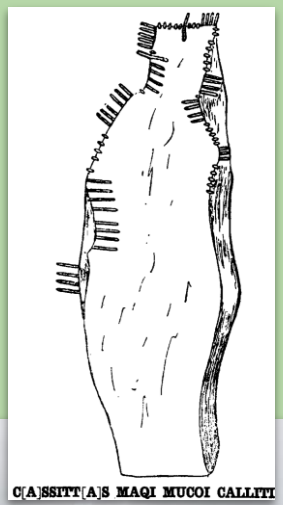
develop a 'SPARQL unicorn' as little minion to help researchers



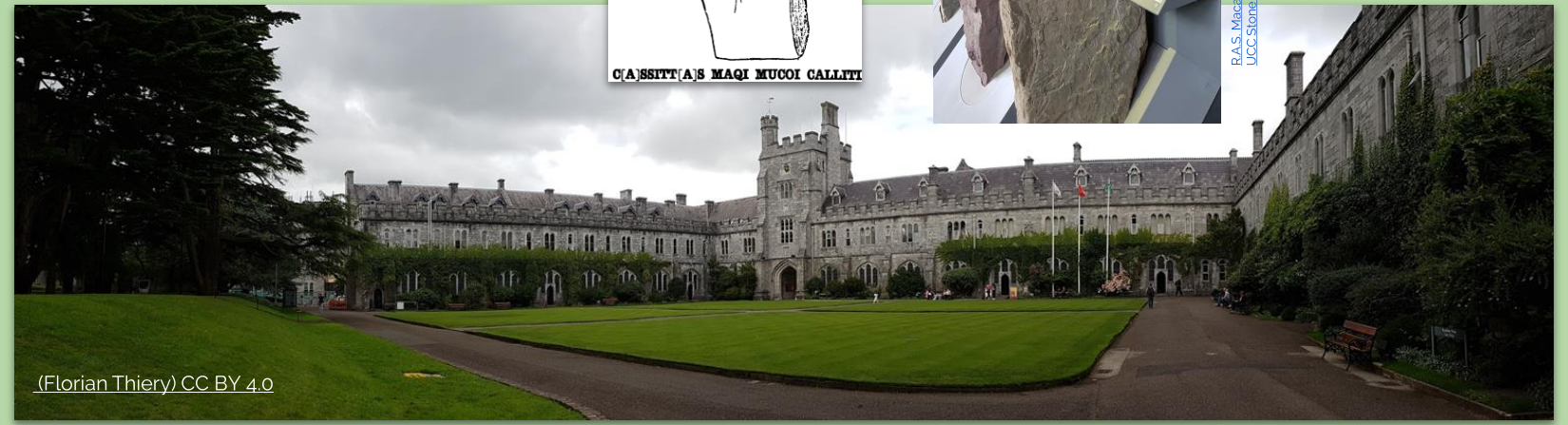


query.wikidata.org

https://w.wiki/HRt



R.A.S. Macalister, Corpus inscriptionum insularum Celticarum, vol. I (1945) UCC Stone Corridor, Stone 4, CIIC 81 (Florian Thiery) CC BY 4.0

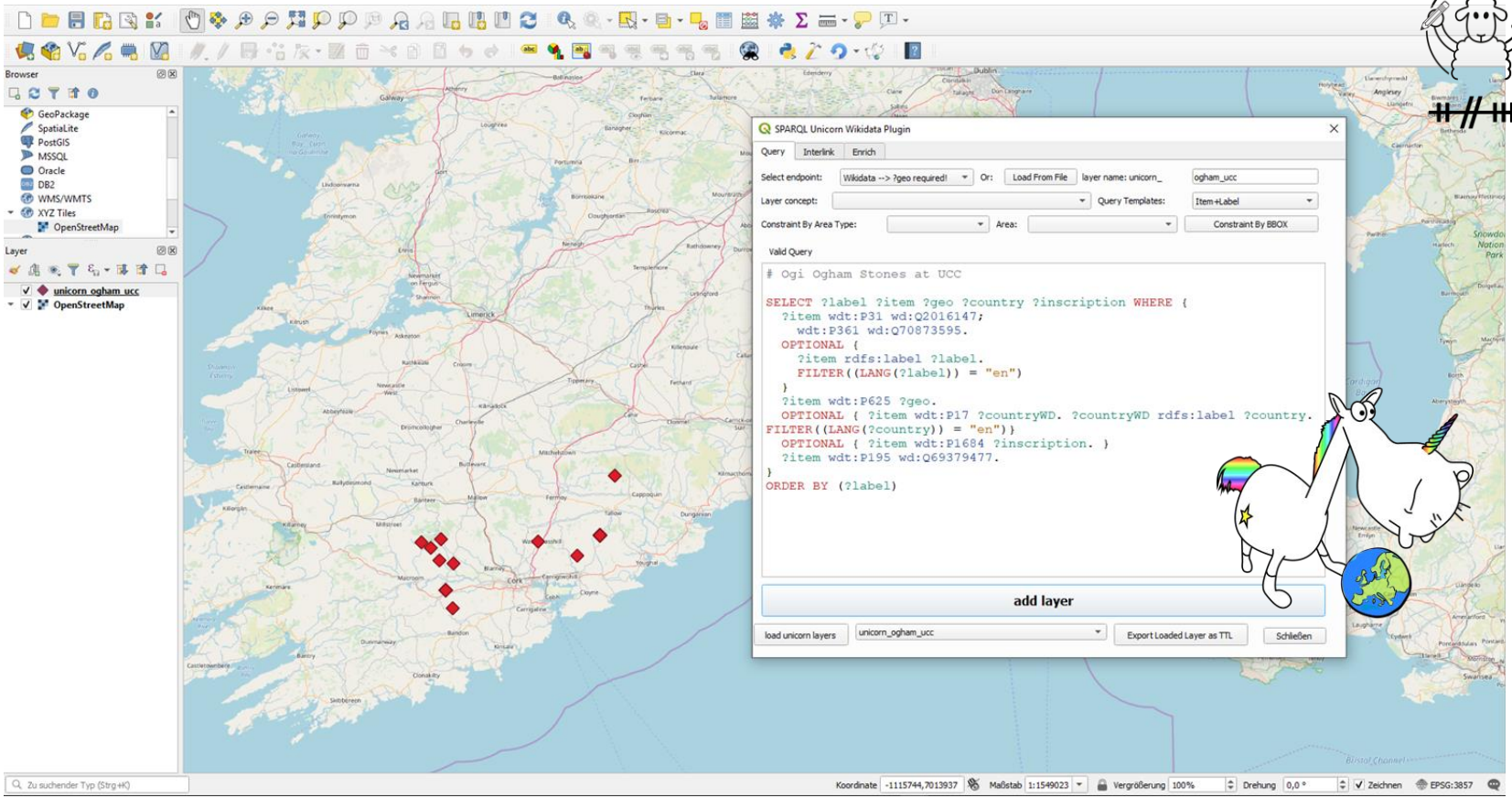


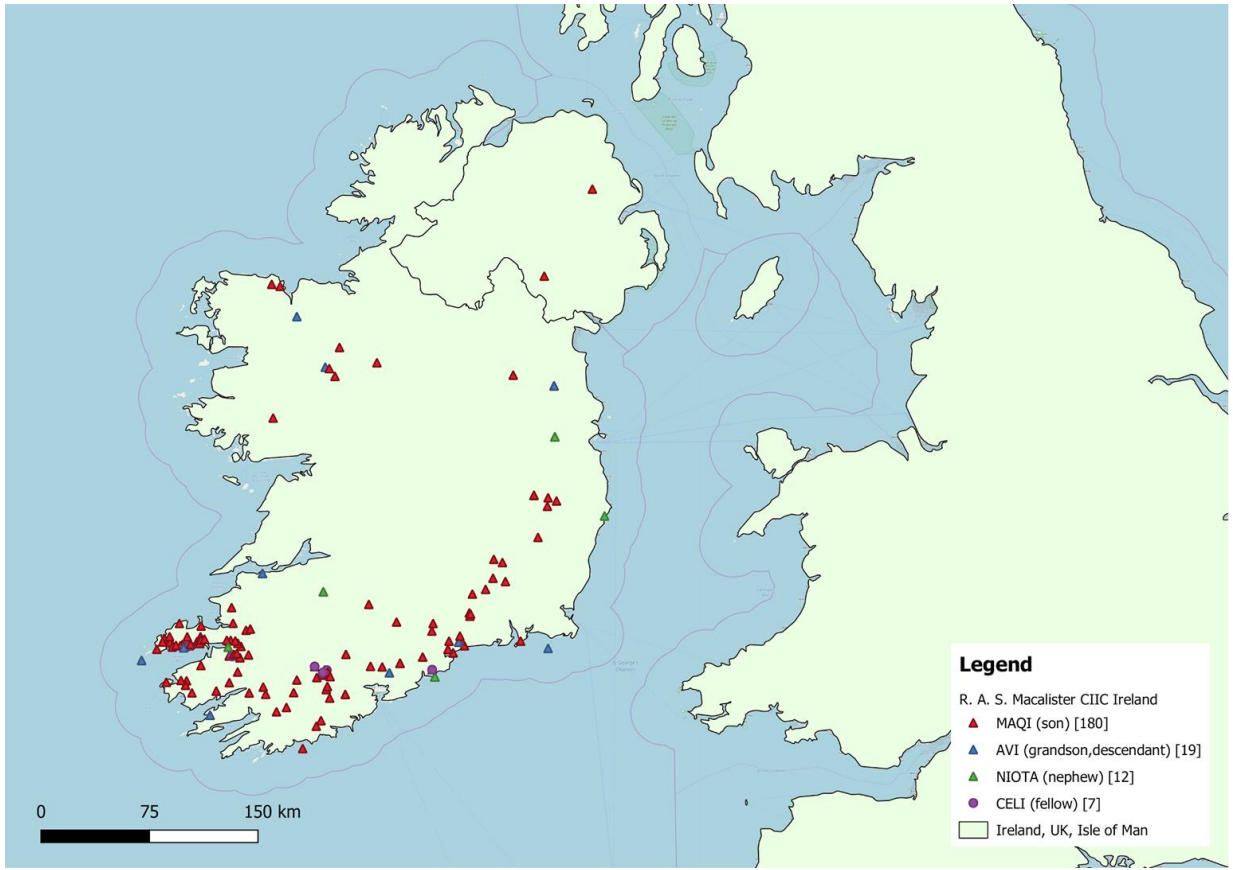
I could use...

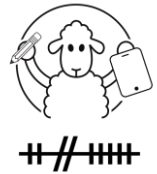
https://plugins.qgis.org/plugins/sparqlunicorn/

...the SPARQLing Unicorn QGIS Plugin...!

Query Wikidata in user-friendly plugins?

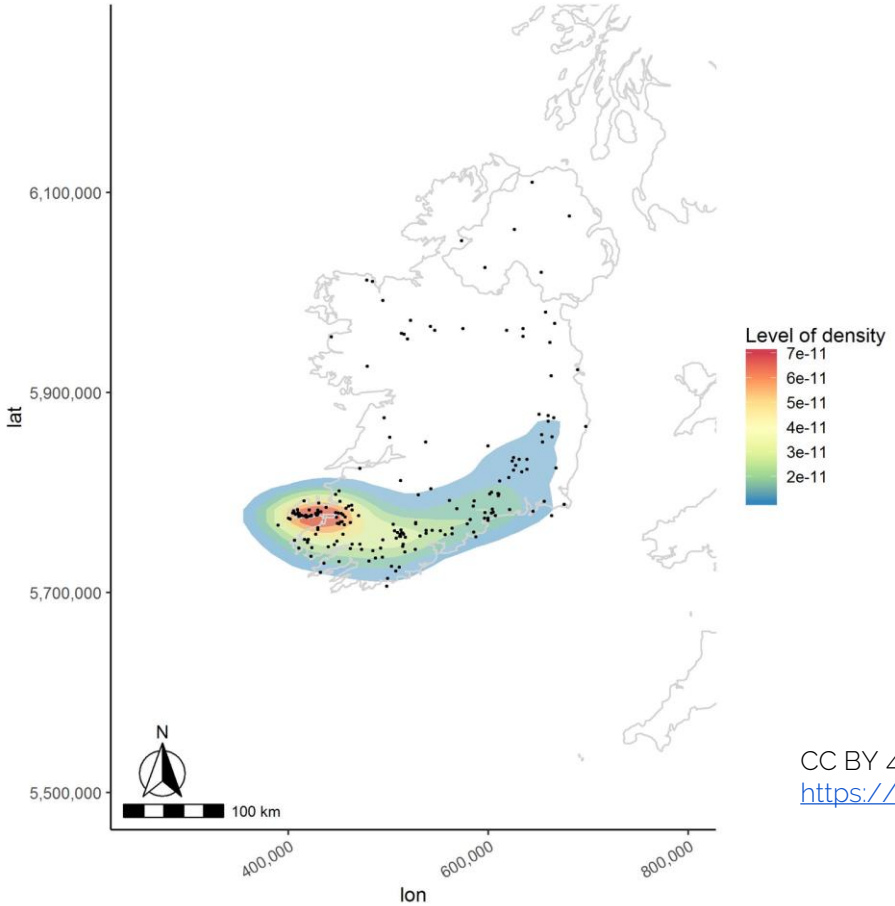

Browser
GeoPackage
SpatiaLite
PostGIS
MSSQL
Oracle
DB2
WMS/WMTS
XYZ Tiles
OpenStreetMap
Layer
unicorn_ogham_ucc
OpenStreetMap
SPARQL Unicorn Wikidata Plugin
Query
Interlink
Enrich
Select endpoint:
Wikidata --> ?geo required!
Or:
Load From File
layer name: unicorn_
ogham_ucc
Layer concept:
Query Templates:
Item+Label
Constraint By Area Type:
Area:
Constraint By BBOX
Valid Query
# Ogi Ogham Stones at UCC
SELECT ?label ?item ?geo ?country ?inscription WHERE {
?item wdt:P31 wd:Q2016147;
wdt:P361 wd:Q70873595.
OPTIONAL {
?item rdfs:label ?label.
FILTER((LANG(?label)) = "en")
}
?item wdt:P625 ?geo.
OPTIONAL { ?item wdt:P17 ?countryWD. ?countryWD rdfs:label ?country.
FILTER((LANG(?country)) = "en")}
OPTIONAL { ?item wdt:P1684 ?inscription. }
?item wdt:P195 wd:Q69379477.
}
ORDER BY (?label)
add layer
load unicorn layers
unicorn_ogham_ucc
Export Loaded Layer as TTL
Schließen
Koordinate
-1115744,7013937
Maßstab
1:1549023
Vergrößerung
100%
Drehung
0,0 °
Zeichnen
EPSG:3857


Legend
R. A. S. Macalister CIIC Ireland
MAQI (son) [180]
AVI (grandson,descendant) [19]
NIOTA (nephew) [12]
CELI (fellow) [7]
Ireland, UK, Isle of Man
0
75
150 km

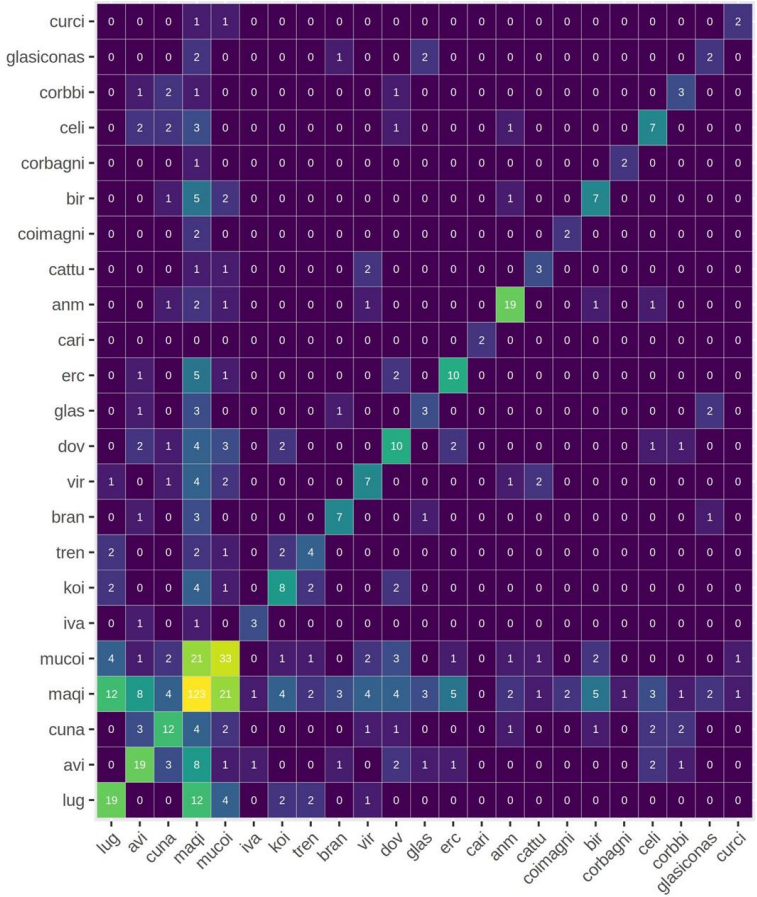


I could use...

...for statistical analysis!



CC BY 4.0, Sophie C. Schmidt, see:
https://github.com/ogi-ogham/oghamaps



CC BY 4.0, Sophie C. Schmidt, see:
https://github.com/ogi-ogham/oghamaps

*"We would like to further establish **Linked Data** in **archeology**, enable **beginners** to use and produce Linked Data, invite other **scientists** for discussion, and embed LOD as an **important topic** through an **SIG** at the **CAA community**."*

Join our CAA SIG at #CAAOxford or contact us!

sig@datadragon.link

datadragon.link

Data Dragon

CAA SIG

"Semantics and LOUD in Archaeology"

CAA
Computer Applications & Quantitative Methods in Archaeology

Thx!

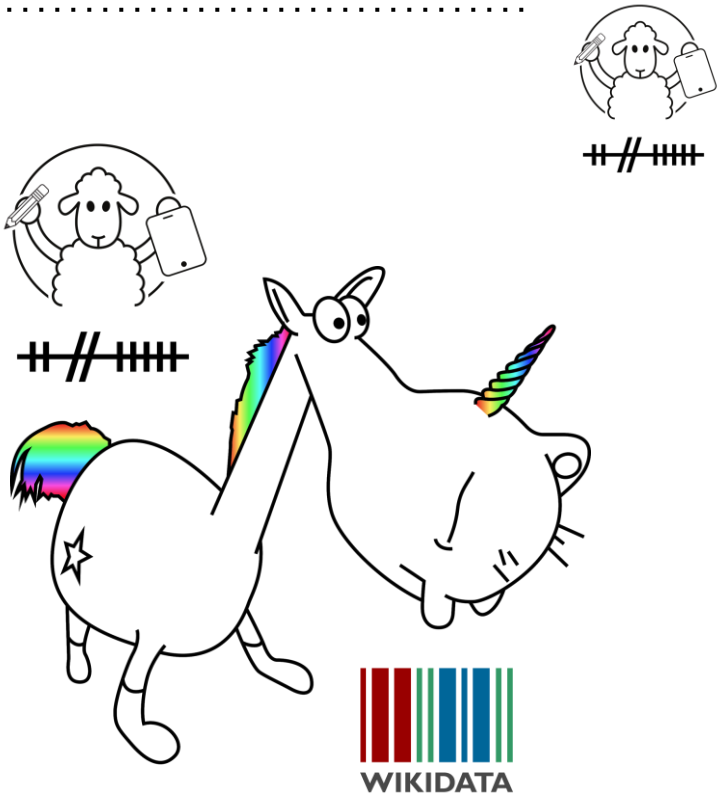
Any questions?

Mail

s.c.schmidt@uni-koeln.de
rse@fthiery.de

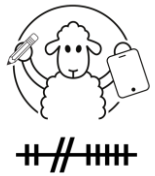
Wikidata

https://www.wikidata.org/wiki/Q66606154
https://www.wikidata.org/wiki/Q71933512



Related Literature

- **Macalister, Robert Alexander Stewart. 1996.** *Corpus Inscriptionum Insularum Celticarum*. Celtic Studies. Kill Lane, Blackrock, Co. Dublin, Ireland ; Portland, OR: Four Courts Press.
- **Adrian Bielefeldt, Julius Gonsior, Markus Krötzsch. 2018.** *Practical Linked Data Access via SPARQL: The Case of Wikidata*. In Tim Berners-Lee, Sarven Capadisli, Stefan Dietze, Aidan Hogan, Krzysztof Janowicz, Jens Lehmann, eds., Proceedings of the WWW2018 Workshop on Linked Data on the Web (LDOW-18), volume 2073 of CEUR Workshop Proceedings, 2018. CEUR-WS.org.
    - https://iccl.inf.tu-dresden.de/w/images/8/85/Wikidata-SPARQL-queries-Bielefeldt-Gonsior-Kroetzsch-LDOW-2018.pdf



Credits

- title image by Wikimedia Foundation, Inc.
- presentation template by SlidesCarnival
- photos not referenced by Pixabay
  or Florian Thiery/Sophie C. Schmidt [CC BY 4.0]

License

Except where otherwise noted, content on this presentation "SPARQLing Stones: New analysis options for analog editions by digitisation in Wikidata" is licensed under a **Creative Commons Attribution 4.0 International license**.