

# Bringing the Canadian Archive of Women in STEM to Wikidata

How wikidata can be used in an archival context

Workshop Presented at the 2020 Association of Canadian Archivists (ACA) Conference



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# Presenters



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# Before the workshop

- Your wiki account:  
<https://www.wikidata.org/w/index.php?title=Special:CreateAccount>
- Join our program:  
[https://outreachdashboard.wmflabs.org/courses/ACA/Bringing\\_the\\_Canadian\\_Archive\\_of\\_Women\\_in\\_STEM\\_to\\_Wikidata/home](https://outreachdashboard.wmflabs.org/courses/ACA/Bringing_the_Canadian_Archive_of_Women_in_STEM_to_Wikidata/home)

# Schedule

<b>12:00 - 12:05 (EDT)</b>	Introduction
<b>12:05 - 12:15 (EDT)</b>	Overview of the workshop and introduction (participants)
<b>12:15 - 12:30 (EDT)</b>	Overview of Wikidata
<b>12:30 - 12:40 (EDT)</b>	Why Wikidata for Archives
<b>12:40 - 12:50 (EDT)</b>	Overview of Canadian Archive of Women in STEM
<b>12:50 - 13:20 (EDT)</b>	How to Contribute <ul style="list-style-type: none"><li>• Exercise 1: Authority record (women)</li><li>• Exercise 2: Archival fonds entry</li></ul>
<b>13:20 - 13:35 (EDT)</b>	Wikidata Tools
<b>13:35 - 13:55 (EDT)</b>	Hands-on exercises
<b>13:55 - 14:00 (EDT)</b>	Wrap-up

# About the Workshop

- Introduction to Wikidata for archivists
- How to create Wikidata items for authority records and archival collections
- Use-case from the Canadian Archive of Women in STEM
- Tools for creating and using Wikidata
- Hands-on exercises

# Overview of Wikidata

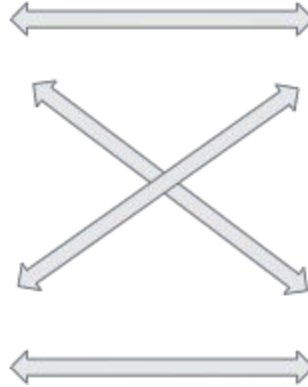
# What is Wikidata?

- Multilingual knowledge base
- Central repository for all Wikimedia projects
- Launched in 2012
- Stores structured linked data
  - Contains over 87 million items
- Read and edited by both humans and machines
- CC0 license
- Data is created, edited and maintained by users
- Uses defined properties





# Wikimedia Projects Interlinking



occupation	<div><span>⌵</span> singer ...</div> <div><span>▶</span> 1 reference</div>
	<div><span>⌵</span> pianist ...</div> <div><span>▼</span> 0 references</div>
field of work	<div><span>⌵</span> musical composition</div> <div><span>▼</span> 0 references</div>

## Sarah McLachlan

From Wikipedia, the free encyclopedia

**Sarah Ann McLachlan**  OC OBC (born January 28, 1968) is a Canadian singer-songwriter known for her emotional *ballads* and *mezzo-soprano* vocal range. As of 2015 she had sold over 40 million albums worldwide.<sup>[2][3]</sup> McLachlan's best-selling album to date is *Surfacing*, for which she won two *Grammy Awards* (out of four nominations) and four *Juno Awards*. In addition to her personal artistic efforts, she founded the *Lilith Fair* tour, which showcased female musicians on an unprecedented scale. The Lilith Fair concert tours took place from 1997 to 1999, and resumed in the summer of 2010.

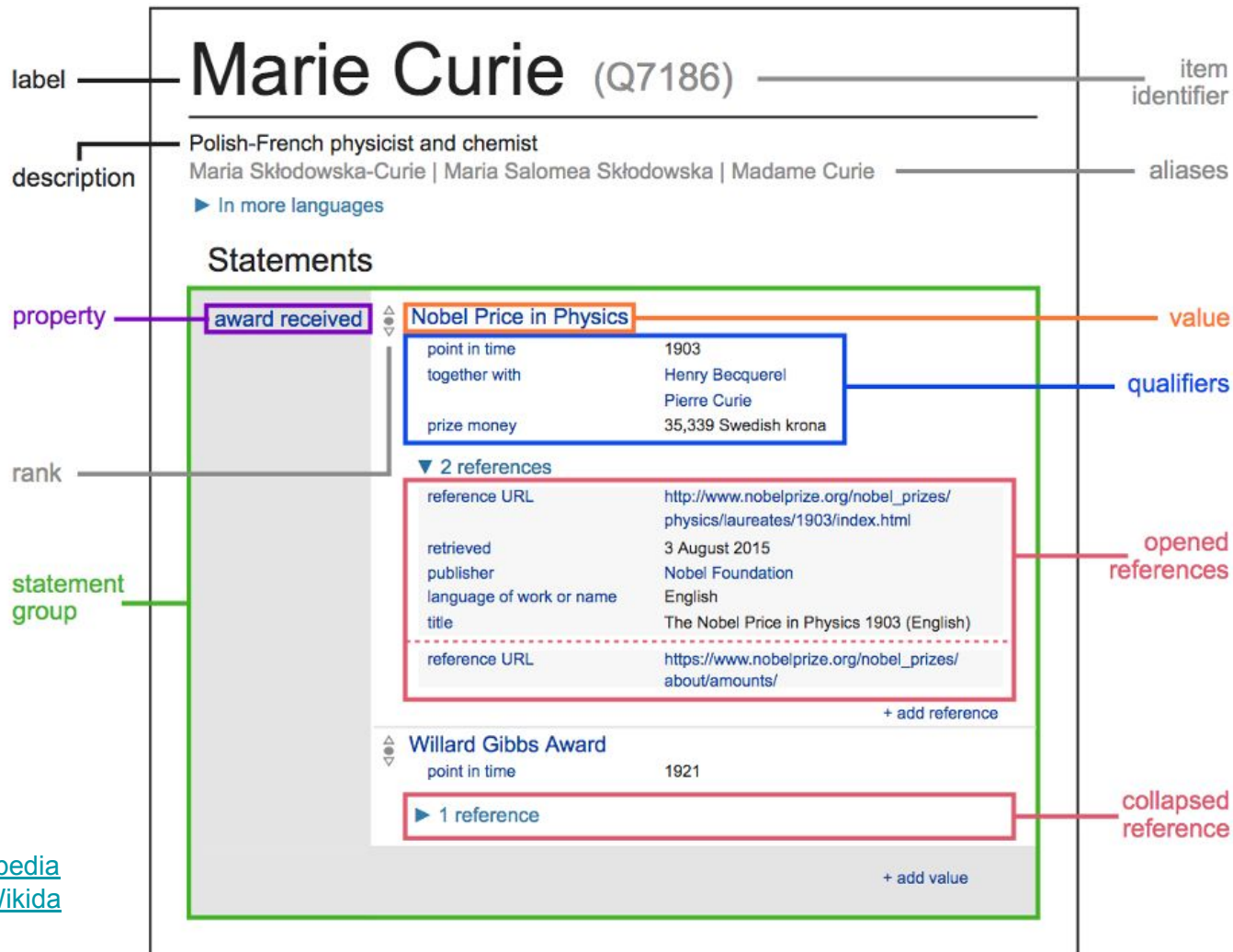
## Song lyrics [[edit](#)]

*All songs written by Sarah McLachlan, unless otherwise noted.*

### ***Touch (1988)*** [[edit](#)]

- Crouching down inside a deep ravine,  
Those angry cries pass quickly by, he can't be seen.

# Wikidata Data Model



File source:

[https://upload.wikimedia.org/wikipedia/commons/0/00/Datamodel\\_in\\_Wikidata\\_Marie\\_Curie\\_en.svg](https://upload.wikimedia.org/wikipedia/commons/0/00/Datamodel_in_Wikidata_Marie_Curie_en.svg)







# Why contribute to Wikidata?

- Because it aligns with the libraries' mission to serve their communities
- By contributing to the knowledge base we could:
  - Improve the coverage of underrepresented communities
  - Increase the visibility of archival collections
  - Help establish connections among collections
  - Facilitate the improvement of catalog records
  - Impact the search results of Google knowledge graphs













# Wikidata in VIAF (Virtual International Authority File)


**Search**

Select Field: Corporate Names    Select Index: All VIAF    Search Terms: National Library of Canada    **Search**

National Library of Canada.   
Bibliothèque nationale du Canada   
National Library of Canada Ottawa   
Bibliothèque nationale Canada   
National Library of Canada (Ottawa) Ottawa   
Canadá., National Library   
VIAF ID: 169025450 (Corporate)  
Permalink: <http://viaf.org/viaf/169025450>

**Preferred Forms**

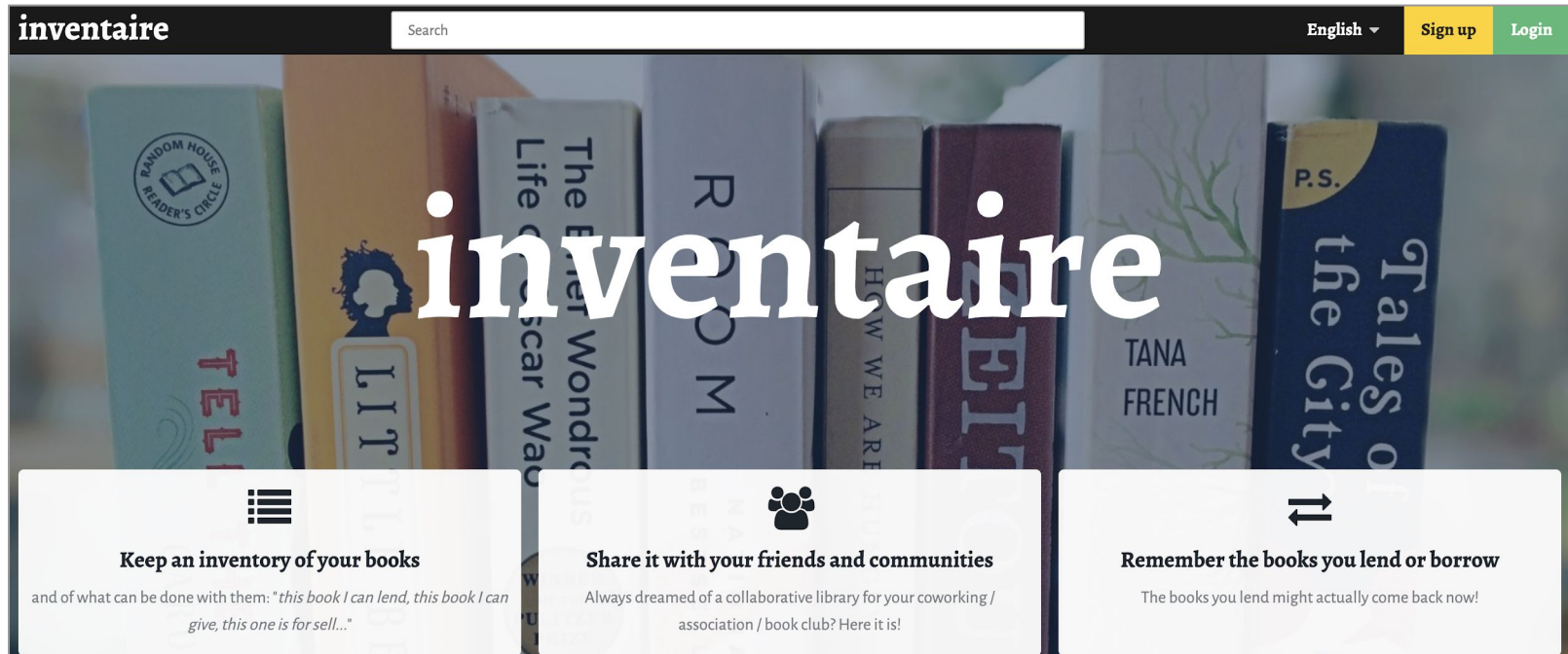
-  210 || [1a Bibliothèque nationale 1c Canada](#)
-  110 2 \_ [1a Bibliothèque nationale du Canada](#)
-  110 2 \_ [1a Bibliothèque nationale du Canada](#)
-  151 \_ \_ [1a Bibliothèque nationale du Canada](#)
-  210 0 1 [1a Canadá 1b National Library](#)
-  110 2 \_ [1a National Library of Canada](#)
-  110 2 \_ [1a National Library of Canada](#)
-  210 0 2 [1a National Library of Canada](#)
-  110 2 \_ [1a National Library of Canada](#)
-  110 2 \_ [1a National Library of Canada](#)
-  110 2 \_ [1a National Library of Canada](#)
-  110 2 \_ [1a National Library of Canada](#)



Wikidata  
WKP-Q24229358

# Using Wikidata's Data

Inventaire (<https://inventaire.io/welcome>)





**inventaire**


Search

English ▾ Sign up Login

# inventaire

  
**Keep an inventory of your books**  
and of what can be done with them: *"this book I can lend, this book I can give, this one is for sell..."*

  
**Share it with your friends and communities**  
Always dreamed of a collaborative library for your coworking / association / book club? Here it is!

  
**Remember the books you lend or borrow**  
The books you lend might actually come back now!

Why Wikidata for Archives?

# The use of Wikidata in Wikipedia

Helen Levine: [Wikidata](#) and [Wikipedia \(FR\)](#)

Her information in Wikidata is connected to the Infobox in Wikipedia via `{{Infobox Biographie2}}`

**Helen Levine** (Q90840960)

Canadian feminist and activist ✎ edit  
Helen Zivian

↳ Revoir: Most relevant properties which are absent

↳ In more languages

Language	Label	Description	Also known as
English	Helen Levine	Canadian feminist and activist	Helen Zivian
French	Helen Levine	No description defined	
Korean	No label defined	No description defined	

**Statements**

instance of	human <span>✎ edit</span>
	↳ 0 references <span>+ add reference</span>
	<span>+ add value</span>

**sex or gender** ✎ edit

female
--------



**Helen Levine**

Une illustration sous licence libre serait la bienvenue

**Biographie**

**Naissance** 15 octobre 1923 ✎  
Ottawa ✎

**Décès** 24 octobre 2018 ✎ (à 95 ans)

**Nationalité** Canadienne ✎

**Activité** Féministe ✎

**Autres informations**

**Distinction** Prix du Gouverneur général ✎

**Archives conservées par** Bibliothèque de l'Université d'Ottawa (en) ✎

modifier - modifier le code - modifier Wikidata i

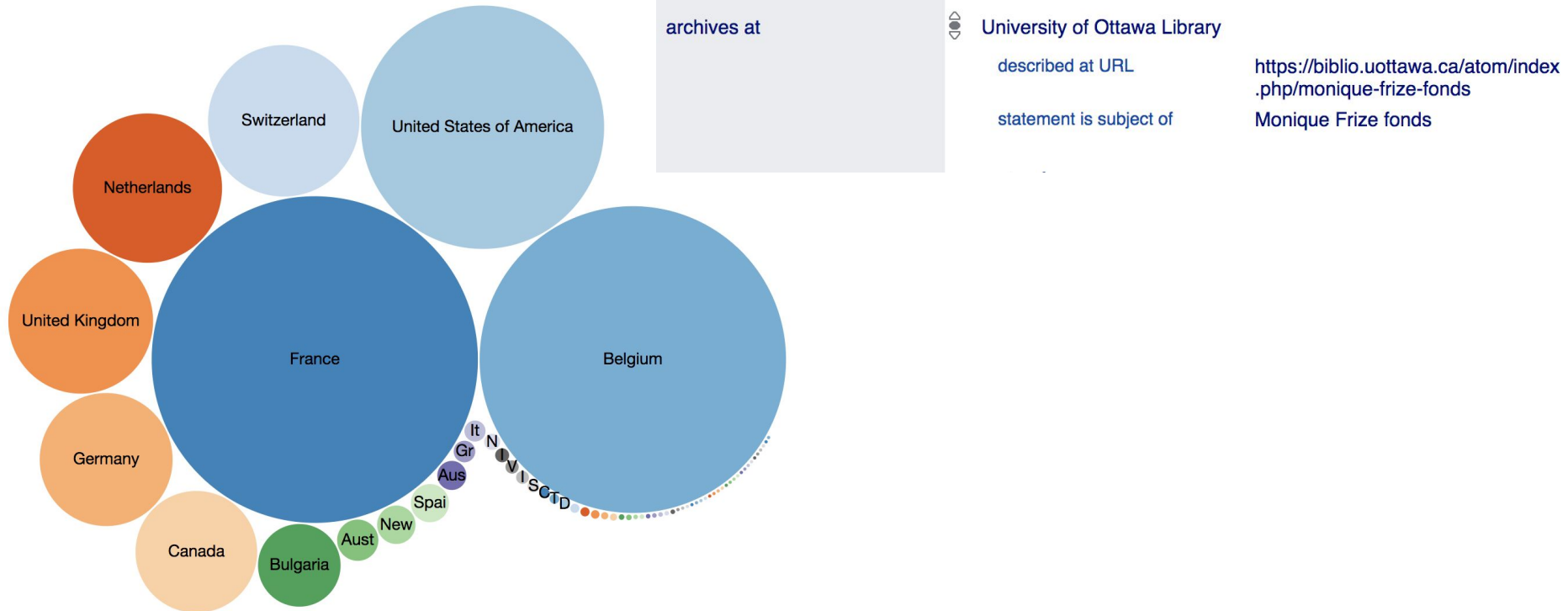
# Wikidata:WikiProject Archival Description

*“The aim of the present project is to create the world’s most comprehensive high quality database of archival fonds and heritage collections, to represent archival structures within Wikidata where this is deemed useful and to ensure the interlinking between archival finding aids and Wikidata.”*

[https://www.wikidata.org/wiki/Wikidata:WikiProject\\_Archival\\_Description](https://www.wikidata.org/wiki/Wikidata:WikiProject_Archival_Description)

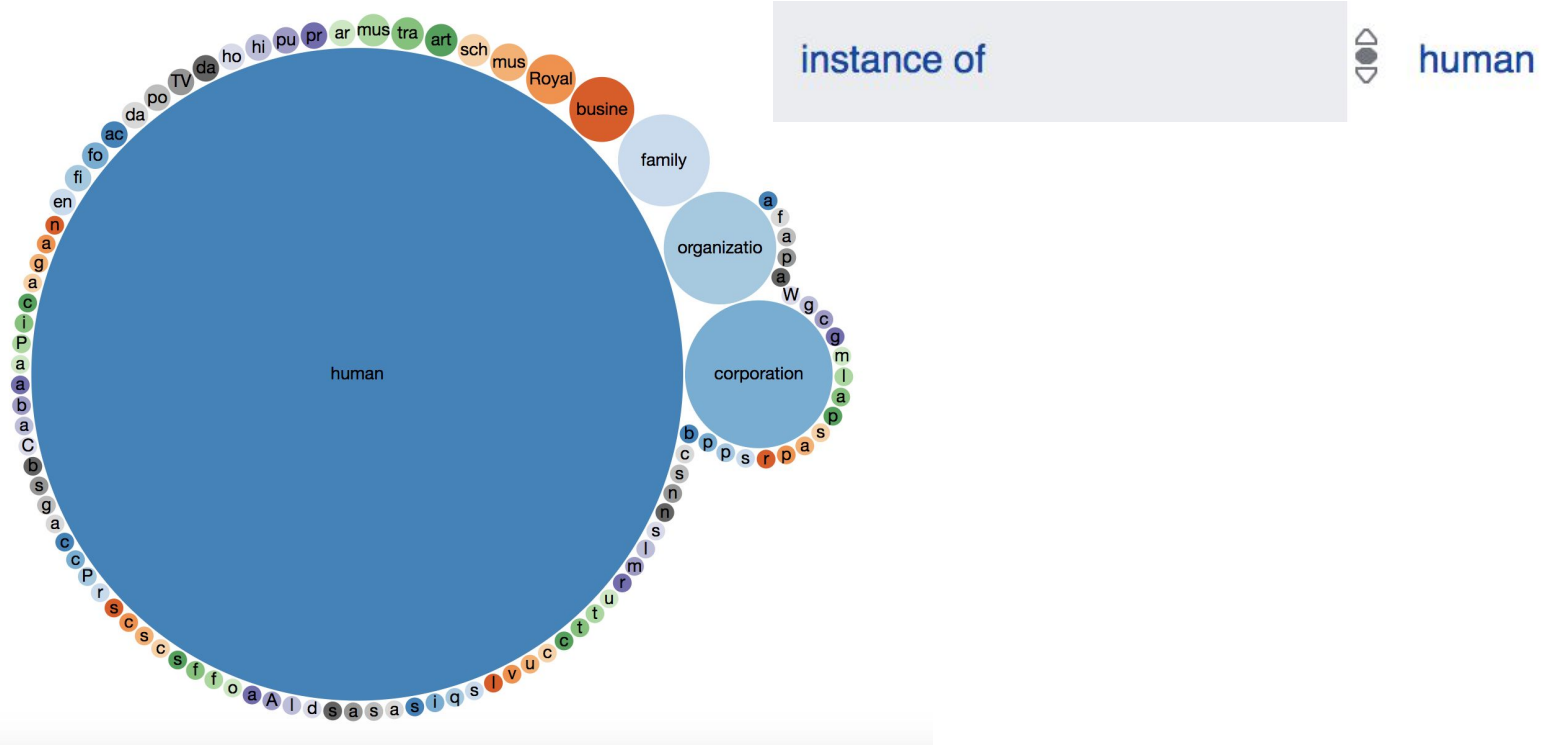


# SPARQL: Archives at (P485) by Country

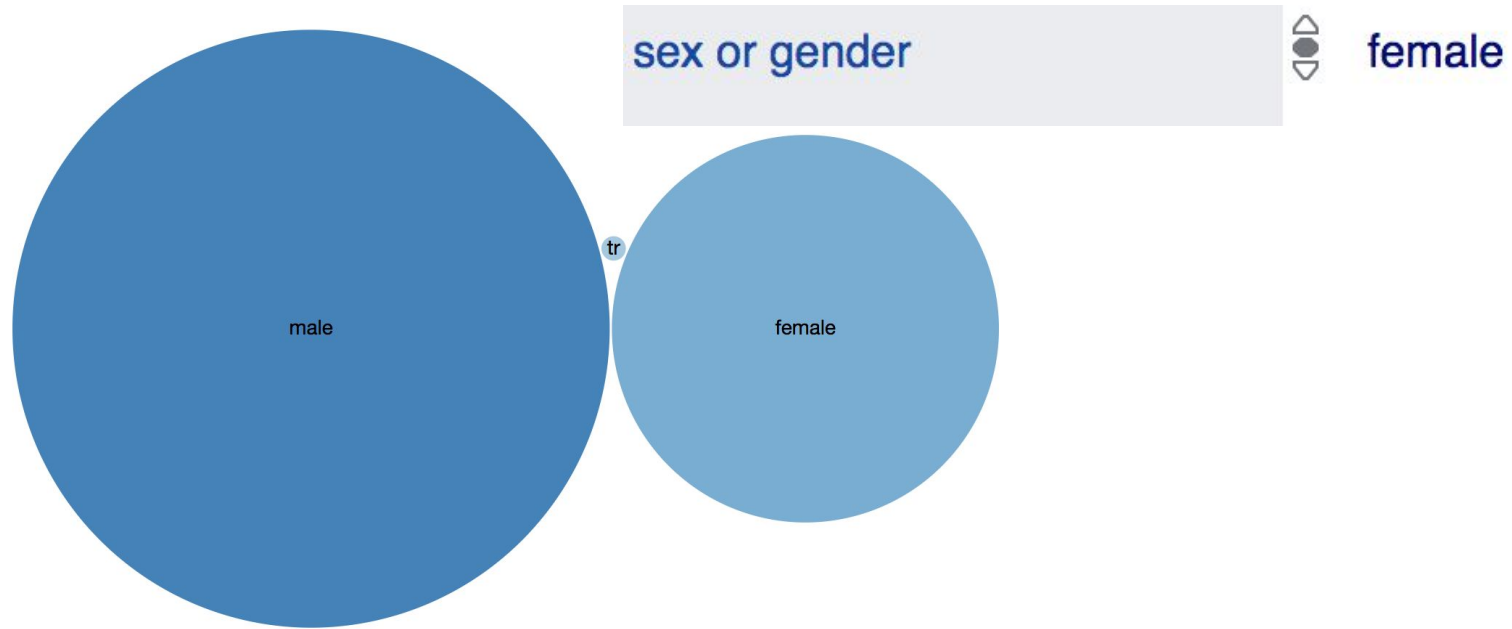




# SPARQL: Instance of (P31) among them



# SPARQL: Sex or gender (P21) among them



# Integration with AtoM

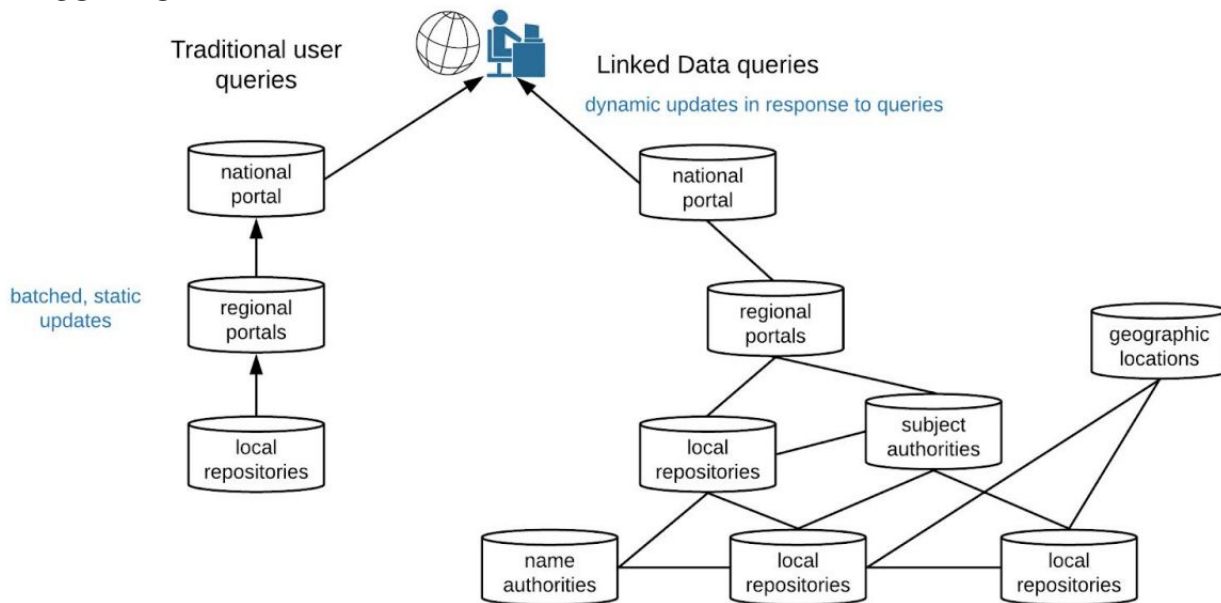
McGill University Archives: [H. Locke Robertson Fonds](#)

## Notes area

Language and script note	Mainly English, with some French.
Restrictions on access	The diary beginning January 1971 (post-McGill years) will be closed for 20 years until December 31, 2005.
Finding aids	<a href="http://archives.mcgill.ca/findingaid/mg2001.pdf">http://archives.mcgill.ca/findingaid/mg2001.pdf</a>
Generated finding aid	<a href="#">h-rocke-robertson-fonds.pdf</a>
Alternative identifier(s)	Accession no.: 0000-0165; 0000-0181; 0000-0243; 0000-0363; 0000-0518; 0000-0704; 2006-0026; 2007-0132; 2010-0029 Wikidata Q identifier: <a href="https://www.wikidata.org/wiki/Q62035670">https://www.wikidata.org/wiki/Q62035670</a>

# Beyond the Archival Portal

## AtoM 3



## EHRI Portal

- European Holocaust Research Infrastructure (EHRI) leveraged Wikidata to expand and enhance its authority records for Holocaust-era camps and ghettos.

Reference: [Wikidata & Archivists](#) at AAO Institutional Issues Forum by Katrina Cohen-Palacios and Coeey, N. (2019). Leveraging Wikidata to Enhance Authority Records in the EHRI Portal. *Journal of Library Metadata*. <https://doi.org/10.1080/19386389.2019.1589700>

# The Canadian Archive of Women in STEM



# Project overview

- Launched in June 2018
- Joint project between uOttawa Archives and Special Collections, Library and Archives Canada and the Canadian Institute of Women Engineers and Scientists (CIWES)
- Objective is to bring more attention to and knowledge of the contributions of women in STEM in Canada
- A [searchable index](#) to help researchers discover all the archival fonds and collections related to women in STEM held in Canadian institutions
- Encourage women in STEM to think about donating their records to archives
- How to make the initiative and the women even more known and discoverable?



# Wikidata for the Canadian Archive of Women in STEM

- Better data exchange with other applications.
- Improvement of findability and searchability of the archival fonds about Canadian women in STEM through linked data, rather than having an isolated stand-alone portal.
- Better workflow to add new archival fonds and more sustainable to keep.
- Possibility to develop an application based on Wikidata, Wikimedia Commons, IIF like [Science Stories](#).
- According to [Denelezh](#) on June 3, 2020, only 21% of Canadian represented in Wikidata are female.

# SPARQL - Canadian Archive of Women in STEM

Experimental website:

<https://yooylee.github.io/experiment-wikidata-canadian-archive-women-in-stem/>

Q1 - Canadian GLAMs institutions containing Archive of Women in STEM

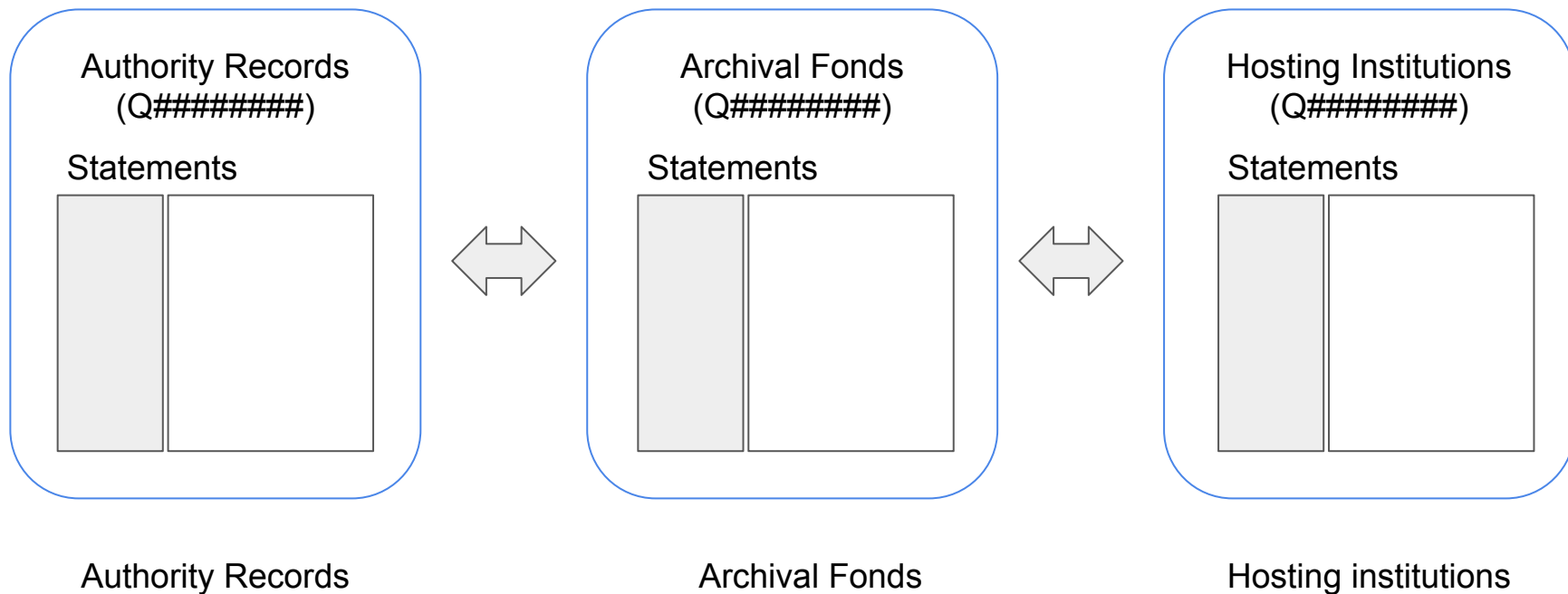
Q2 - What is their occupation?

Q3 - Timeline of the archival fonds

Q4 - Timeline based on their birthday

How to **Contribute?**

# Three ways to contribute to Wikidata from Archives



# Authority Record

Archival description area

Name of creator

**Frize, Monique**  
(1942-)

Biographical history:

Monique Frize, née Aubry (1942 - ), is a Canadian researcher and engineer in the biomedical field. She was the first women to study engineering at the University of Ottawa and graduated with a Bachelor of Applied Science (Electrical Engineering) in 1966. She received an Athlone Fellowship and completed a Master's in Philosophy in Electrical Engineering (Engineering in Medicine) at the Imperial College of Science and Technology in London (United Kingdom), a Master's of Business Administration at the University of Moncton (New Brunswick), and a doctorate from Erasmus Universiteit in Rotterdam (The Netherlands).

Monique Frize worked as a clinical engineer for 18 years. She started her career at the Hôpital Notre-Dame in Montreal. In 1979, she was appointed Director of the Regional Clinical Engineering Service in Moncton (New Brunswick) and became the first Chair of the Division of Clinical Engineering for the International Federation of Medical and Biological Engineering (IFMBE) in 1985. In 1989, she was appointed the first holder of the national Northern Telecom/NSERC Chair for women in engineering at the University of New Brunswick, and professor in the Electrical department. In 1990, she was named chair of the Canadian Committee for Women in Engineering (CCWE). In 1997, she joined Carleton University, as a Professor in the Department of Systems and Computer Engineering, and the University of Ottawa, as a Professor in the School of Information Technology and Engineering. She also held the Ontario NSERC/Nortel Chair for women in science and engineering. She is a founding member of International Network of Women Engineers and Scientists (INWES) and was its president between 2002 and 2008. In 2007, she founded INWES Education and Research Institute (ERI) and has been its president since then.

instance of (P31)	human (Q5)
sex or gender (P21)	female (Q6581072)
country of citizenship (P27)	Canada (Q16)
given name (P735)	Monique (Q1524975)
family name (P734)	Frize (Q61729478)
date of birth (P570)	...
place of birth (P19)	Montreal (Q340)
occupation (P106)	biomedical engineer (Q19902880)

# Authority Record

Archival description area

Name of creator

[Frize, Monique](#)

(1942-)

Biographical history:

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[date of death \(P570\)](#)

...

[place of death \(P20\)](#)

...

[employer \(P108\)](#)

[University of Ottawa \(Q627969\)](#)

[award received \(P166\)](#)

[Officer of the Order of Canada \(Q15278116\)](#)

[educated at \(P69\)](#)

[Imperial College London \(Q189022\)](#)

[archives at \(P485\)](#)

[University of Ottawa Library \(Q57942111\)](#)  
[described at URL](#)

# Data Structure for Authority Record (Human)

instance of (P31)

occupation (P106)

sex or gender (P21)

date of death (P570)

sex or gender (P21)

place of death (P20)

given name (P735)

educated at (P69)

family name (P734)

archives at (P485)

date of birth (P570)

place of birth (P19)

**Example:**

[Michelle Obama \(Q13133\)](#)

[Anne Innis Dagg  
\(Q16093657\)](#)

[Ada Funnell \(Q81555769\)](#)

# Exercise 1: Authority Record

Exercise Link: <https://bit.ly/wikidata-exercises>

Wikidata: <https://www.wikidata.org/>



# Archival Fonds

Title and statement of responsibility area	
Title proper	Monique Frize fonds
General material designation	• Multiple media
Level of description	Fonds
Repository	Archives et collections spéciales/Archives and Special Collections
Reference code	CA ON0034 10-123
Dates of creation area	
Date(s)	• [195-]-2018 (Creation)
Creator	Frize, Monique
Physical description area	
Physical description	17.782 m of textual records 81 photographs 44 VHS 36 slides 30 objects 19 posters 19 audiocassettes 17 CD-ROMs 13 CDs 11 videocassettes 9 frames 6 DVDs 2 scrapbooks 1 betacam 1 camera master

## Mapping metadata fields to Wikidata properties

title (P1476)	Monique Frize fonds (English)
level of description (P6224)	fonds (Q3052382)
collection creator (P6242)	Monique Frize
start of covered period (P7103)	2016
end of covered period (P7104)	2016
collection or exhibition size (P1436)	58 photographs ...

# Archival Fonds

## Statements for the Archival Fonds

Wikidata properties not from metadata

<a href="#">instance of</a> (P31)	<a href="#">archival collection</a> (Q9388534)
<a href="#">part of</a> (P361)	<a href="#">Canadian archive of Women in STEM</a> (Q63647303)
<a href="#">main subject</a> (P921)	<a href="#">women in STEM fields</a> (Q6693003)
<a href="#">described at URL</a> (P973)	Fonds URL (qualifier: language of work or name (P407) - <a href="#">English</a> (Q1860))
<a href="#">maintained by</a> (P126)	<a href="#">University of Ottawa Library</a> (Q57942111)

# Data Structure for Archival Fonds

title (P1476)

level of description (P6224)

collection creator (P6242)

end of covered period (P7104)

end of covered period (P7104)

collection or exhibition size  
(P1436)

instance of (P31)

part of (P361)

main subject (P921)

described at URL (P973)

maintained by (P126)

## Example:

[Anne Innis Dagg fonds  
\(Q60777226\)](#)

[Elizabeth Smith Shortt fonds  
\(Q95689409\)](#)

# Exercise 2: Archival Fonds

Exercise Link: <https://bit.ly/wikidata-exercises>

Wikidata: <https://www.wikidata.org/>

# Hosting Institution

## Unit or Department Level ([Q72118876](#))

### Special Collections & Archives ([Q72118876](#))

Academic archives at the University of Waterloo Library in Waterloo, Ontario

edit

SCA | University of Waterloo Library. Special Collections & Archives.

► Reconc: Most relevant properties which are absent

▼ In more languages

Language	Label	Description	Also known as
English	Special Collections & Archives	Academic archives at the University of Waterloo Library in Waterloo, Ontario	SCA University of Waterloo Library. S...
French	No label defined	No description defined	
Korean	No label defined	No description defined	

### Statements

instance of	archive	edit
	~ 0 references	+ add reference
	academic archive	edit
	~ 0 references	+ add reference

## Library ([Q57942111](#))

### University of Ottawa Library ([Q57942111](#))

the academic library system of the University of Ottawa

edit

uOttawa Library

► Reconc: Most relevant properties which are absent

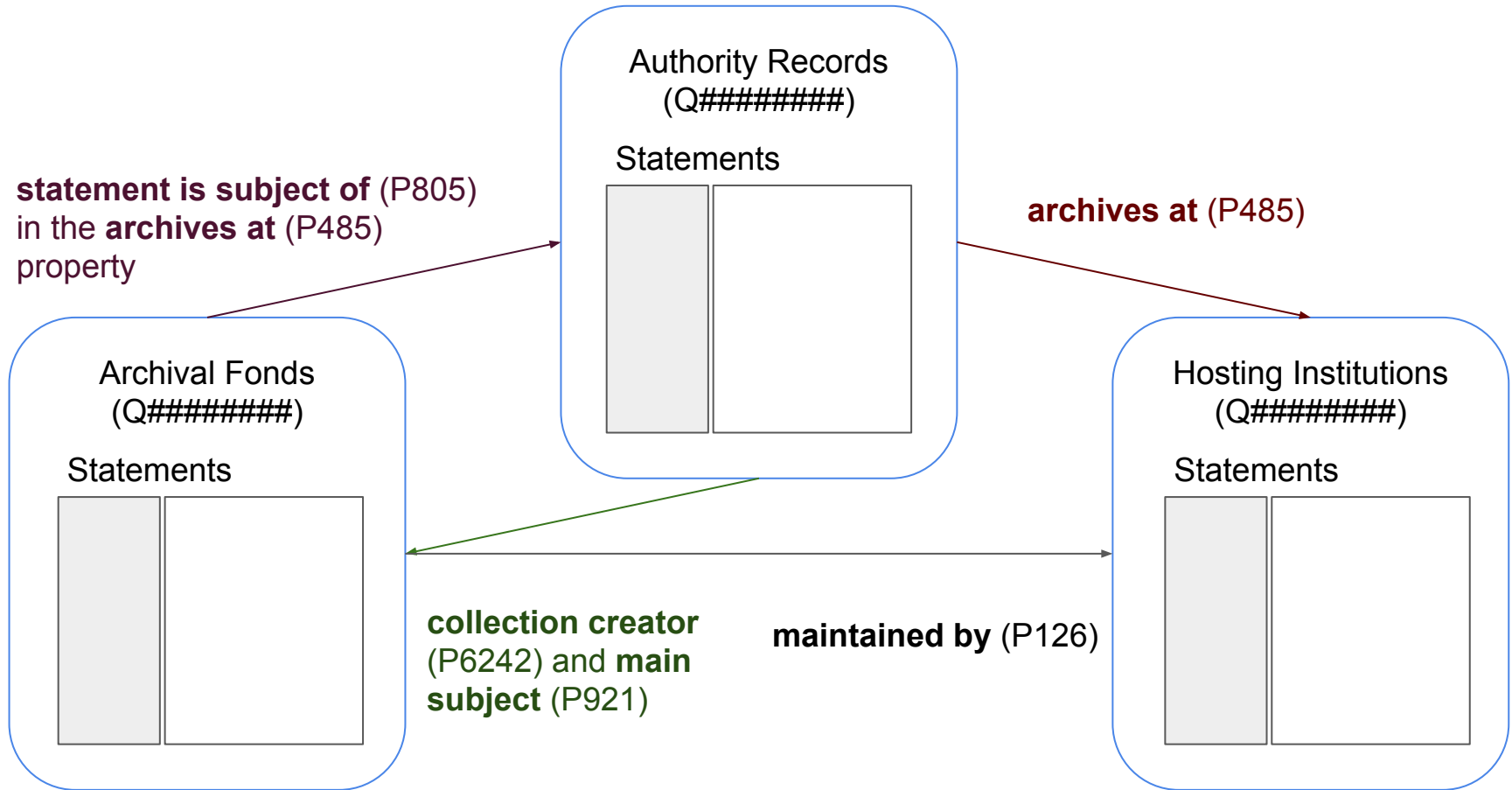
▼ In more languages

Language	Label	Description	Also known as
English	University of Ottawa Library	the academic library system of the University of Ottawa	uOttawa Library
French	Bibliothèque de l'Université d'Ottawa	No description defined	
Korean	No label defined	No description defined	

### Statements

instance of	academic library	edit
	~ 0 references	+ add reference
	library system	edit
	~ 0 references	

# How to link these three entries?



Tools

# Tools for Displaying/Visualizing Data

Histropedia

(<http://histropedia.com/>)

The screenshot shows the Histropedia website homepage. At the top left is the logo 'histropedia'. Navigation links for 'ABOUT', 'TOUR', and 'BLOG' are in the top right. A central banner features the text 'DISCOVER A NEW WAY TO VISUALISE HISTORY' and a red button that says 'Start Exploring Timelines'. Below this, it states 'Search for over 300,000 timelines and 1.5 million events'. A 'WIKIDATA' logo is in the bottom right of the banner. At the bottom, there is a section for 'FEATURED TIMELINES' with a 'Famous Artists' category and a row of colorful thumbnail cards for various artists.

Reasonator

(<https://reasonator.toolforge.org/?>)

The screenshot shows the Reasonator website interface for the entity 'IUPUI University Library' (Q5975426). The page is divided into several sections:

- Location properties:** A dropdown menu showing 'Library' as an instance of 'Academic library'.
- Maps:** A map of the United States with red location pins for Chicago, Illinois; Louisville, Kentucky; and Indianapolis, Indiana. A legend indicates 'OpenStreetMap contributors' for these locations.
- External sites:** A dropdown menu showing 'official website'.
- External sources:** A dropdown menu listing various identifiers: DOI prefix (10.18000), Librarians.org (3818), Library of Congress (no2002023865), authority (IUPUI-University-Library), and VIAF (7913146269826605230000).
- External identifiers:** A dropdown menu.
- Wikimedia projects:** A dropdown menu showing 'Current language: Wikipedia en, IUPUI University Library'.
- Concept cloud:** A small visualization at the bottom right.
- Location table:** A table with columns 'Name' and 'Description' listing various geographical entities and their descriptions.

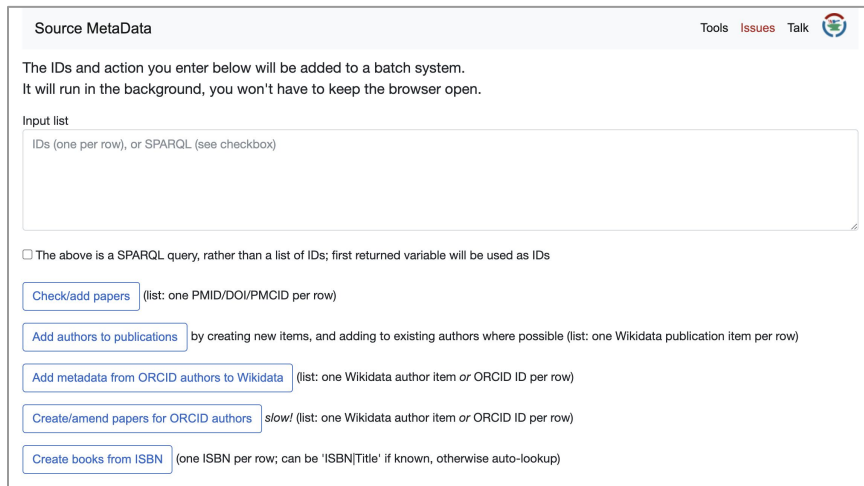
Name	Description
Earth	third planet from the Sun in the Solar System
North America	continent on the Earth's northwestern quadrant
United States of America	federal republic in North America
Indiana	state of the United States of America
Marion County	county located in the U.S., state of Indiana
Indianapolis	county seat in Marion County, Indiana, USA and Indiana federated state capital city
IUPUI University Library	University Library of Indiana University–Purdue University Indianapolis



# Tools for Contributing Data

## Source MetaData

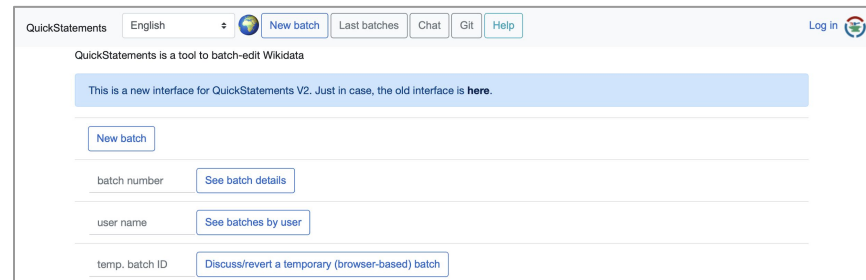
(<https://tools.wmflabs.org/sourcemd/>)



The screenshot shows the Source MetaData tool interface. At the top, it says "Source MetaData" and has links for "Tools", "Issues", "Talk", and a logo. Below this, a message states: "The IDs and action you enter below will be added to a batch system. It will run in the background, you won't have to keep the browser open." There is a text input field labeled "Input list" with a placeholder "IDs (one per row), or SPARQL (see checkbox)". Below the input field, there is a checkbox labeled "The above is a SPARQL query, rather than a list of IDs; first returned variable will be used as IDs". Underneath, there are five buttons, each with a description: "Check/add papers (list: one PMID/DOI/PMCID per row)", "Add authors to publications by creating new items, and adding to existing authors where possible (list: one Wikidata publication item per row)", "Add metadata from ORCID authors to Wikidata (list: one Wikidata author item or ORCID ID per row)", "Create/amend papers for ORCID authors slow! (list: one Wikidata author item or ORCID ID per row)", and "Create books from ISBN (one ISBN per row; can be 'ISBN|Title' if known, otherwise auto-lookup)".

## QuickStatements

(<https://quickstatements.toolforge.org/#/>)



The screenshot shows the QuickStatements tool interface. At the top, it says "QuickStatements" and has a language dropdown set to "English", and buttons for "New batch", "Last batches", "Chat", "Git", "Help", and "Log in" with a logo. Below this, a message states: "QuickStatements is a tool to batch-edit Wikidata". There is a blue banner that says: "This is a new interface for QuickStatements V2. Just in case, the old interface is [here](#)." Below the banner, there are four rows of input fields with buttons: "New batch" button; "batch number" field with "See batch details" button; "user name" field with "See batches by user" button; and "temp. batch ID" field with "Discuss/revert a temporary (browser-based) batch" button.

# Exercise 3:

# QuickStatements

Exercise Link: <https://bit.ly/wikidata-exercises>

Wikidata: <https://www.wikidata.org/>

QuickStatements: <https://quickstatements.toolforge.org/#/>

# Exercise 4:

# References

Exercise Link: <https://bit.ly/wikidata-exercises>

Wikidata: <https://www.wikidata.org/>

Wrap-Up

# We've created today...

## Before the workshop:

- 46 women
- 54 archival fonds

DATA from Dashboard

# After the workshop...

## Women:

```
SELECT ?woman ?womanLabel
WHERE {
  ?archive wdt:P361 wd:Q63647303 ;
    wdt:P921 ?woman .
  ?woman wdt:P21 wd:Q6581072 .
  SERVICE wikibase:label {
    bd:serviceParam wikibase:language
    "[AUTO_LANGUAGE],en" }
}
```

## Archival fonds:

```
SELECT ?archive ?archiveLabel
WHERE {
  ?archive wdt:P361 wd:Q63647303 .
  SERVICE wikibase:label {
    bd:serviceParam wikibase:language
    "[AUTO_LANGUAGE],en" }
}
```

Thank You!  
(Q19279214)