

LD4P3 | Linked Data for Production: Closing the Loop

New, Newer, Newest SWIB 2022

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http://bit.ly/swibld4p3

Overview

- Background and overview
- New: DASH! Production integration
- Newer: BANG! Data analysis and prototype
- Newest: BAMWOW investigation
- Implementation, data, and usability overview
- Lessons learned and future work







Background and Motivation

Background

- Linked Data for Production: Closing the Loop (LD4P3).
 - "LD4P3 aims to "close the loop" to create a working model of a complete cycle for library metadata creation, sharing, and reuse."
 - Funded by Andrew W. Mellon Foundation
- Discovery
 - Using linked data to support and enhance discovery
 - Continue experiments
 - Work on integration into production



Motivation

- Expand to more open-ended discovery
- Meet users closer to where they are with respect to search terms and categories
- Enable use of library and external data to provide context and relevant relationships
- Support discovery pathways through the catalog using external data



Approach

- Multiple phases of work: production, experimental
 - o Each phase has (or will) incorporate user research
- Phases
 - Discovery Across Subject Headings! (DASH!)
 - Context for authors and subjects
 - Bibliographic Access Newly Gui'd! (BANG!)
 - Works and what they may mean for discovery
 - Browsing Across Music With Obtainable Wikidata! (BAMWOW!)
 - Musical works and Wikidata



Implementation Approach

- Extend existing design options and navigational pathways
- Client-side display (for these phases)
- Employ shared identifiers and URIs as the bridge between library catalog data and other sources

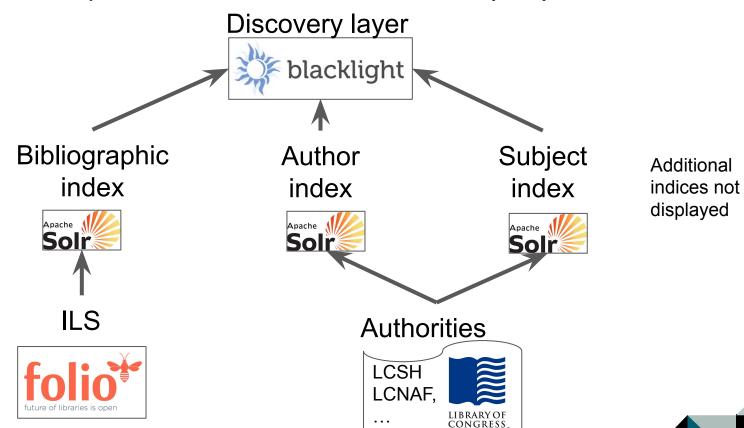


Usability and User Feedback Approach

- Decide on objective of user test
- Recruit target audience
- One-on-one interviews: in person or over zoom
- Task list, think aloud
- Debrief and identify key takeaways or patterns
- Iterate and test again



(Partial) overview of discovery system









Discovery Across Subject Headings! (DASH!) New! Now in *production*





DASH! Motivation

- How can contextual information be used to decorate author and subject entities in the catalog?
- How can we use this information to provide more discovery pathways into the catalog?
- How can we extend navigational structures in the catalog to add this context?





TO TO A D. TO	Library							
Library Catalog			Sign in Selected Items (0) Search History Search Tips Borrow Direct Interlibr					
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Middlemar	ch							
George Eliot ; edit	ed with notes by David Carroll; with ar	Eliot, George, 181	9-1880.					
Author, etc.:	Eliot, George, 1819-1880, author Info Works by: 170 Title Works about: 395		The state of the s	Availability				
Format:	B Book	Full record	=(0)	Ava	паршту			
Language:	English.			Olin Library Hours/Map				
Edition:	New edition.		PR4662.A2 C37 2019 DText O Checked out, due 05/11/21					
Published:	Oxford, United Kingdom: Oxford U	George Blog Middlemach						
Copyright date:	©2019	Middlemach						
Subject:	City and town life > Fiction.			Rec	quest item			
	Married people > Fiction.		B					
	Young women > Fiction.		Request scan of article/chapter					
	England > Fiction.							
	Bildungsromans.							

■ MENU



Middlemarch

"George Eliot; edited with notes by David Carroll; with an introduction by David Russell."

Author info »

Format:

Author, etc.:

Book

English. Language:

Edition: New edition.

Published: Oxford, United Kingdom: Oxford University

Eliot, George, 1819-1880, author

Press, 2019.

Copyright ©2019

date:

<u>City and town life > Fiction.</u> Subject:

Married people > Fiction.

Young women > Fiction.

England > Fiction. Bildungsromans.

Didactic fiction.

Domestic fiction.

Romance fiction.

Description: xlii, 810 pages; 20 cm.

ISBN: 0198815514



Eliot, George, 1819-1880.

Works by: 171 Title(s)

Works about: 432 Title(s)

English novelist, essayist and translator

(1819-1880)Image: Wikidata

Occupation: Novelist

Birth Place: Warwickshire (England)

View full info »

2019 □ <u>Text</u>

rned 03/08/22

article/chapter



Image: Wikidata

Mary Ann Evans (22 November 1819 – 22 December 1880; alternatively Mary Anne or Marian), known by her pen name George Eliot, was an English novelist, poet, journalist, translator and one of the leading writers of the Victorian era. She wrote seven novels: Adam Bede (1859), The Mill on the Floss (1860), Silas Marner (1861), Romola (1862-63), Felix Holt, the Radical (1866), Middlemarch (1871–72) and Daniel Deronda (1876). Like Charles Dickens and Thomas Hardy, she emerged from provincial England; most of her works are set there. She is known for their realism, psychological insight, sense of place and detailed depiction of the countryside. (From DBPedia .)

Occupation: Novelist

Place of Birth: Warwickshire (England)

Place of Death: Chelsea (London, England)

Citizenship: United Kingdom of Great Britain and Ireland*

Educated at: Bedford College*

* From Wikidata 🖸

Library Holdings

Total Works By: 171 Titles

Total Works About: 432 Titles

Books (565)

Journals/Periodicals (5)

Manuscripts/Archives (1)

Microforms (5)

Musical Scores (3)

Non-musical Recordings (2)

Theses (25)

■ Videos (1)

Reference Information

Heading Type:

Personal Name

Alternate Form(s):

Cross, Marian Evans, 1819-1880

אליוט, גַ׳ורג׳

Browse related items by call number:

PR4650 - PR4698



Russo-Japanese War, 1904-1905



Image: Wikidata

The Russo-Japanese War (Russian: Ру́сско-япо́нская война́, romanized: Rússko-yapónskaya voyná; Japanese: 日露戦争, romanized: Nichiro sensō, lit. 'Japanese-Russian War') was fought between the Empire of Japan and the Russian Empire during 1904 and 1905 over rival imperial ambitions in Manchuria and Korea. The major theatres of military operations were the Liaodong Peninsula and Mukden in Southern Manchuria, and the seas around Korea, Japan, and the Yellow Sea. (From DBPedia 🛂)

Reference Information

Broader Term: Eastern question (Far East) Works about: 1021

Heading Type: Topical Term

Alternate Form(s): Japan > History > War with Russia, 1904-1905

Japanese-Russian War, 1904-1905

Russia > History > War with Japan, 1904-1905

Library Holdings

Total Works About: 508 Titles

Books (490)

Journals/Periodicals (11)

Manuscripts/Archives (4)

Maps (1)

Microforms (53)

Theses (4)

■ Videos (2)

Browse related items by call number:

DS516 - DS517.9, JZ1395.R87

Now in the Cornell Library Catalog

- Author knowledge panel
- Author details
- Subject browse
- Subject details



Bibliographic Access Newly Gui'd! (BANG!) Newer! Experimental Phase





BANG Motivation

- How can/do work relationships enable end users
 - To get more context for a library resource?
 - Find related library resources?
 - (Cornell Catalog already supports "Other forms of this work using OCLC WorkID clusters from 2015)
- Which work relationships can we find in existing BIBFRAME datasets? Are they...
 - Consistent?
 - Meaningful?

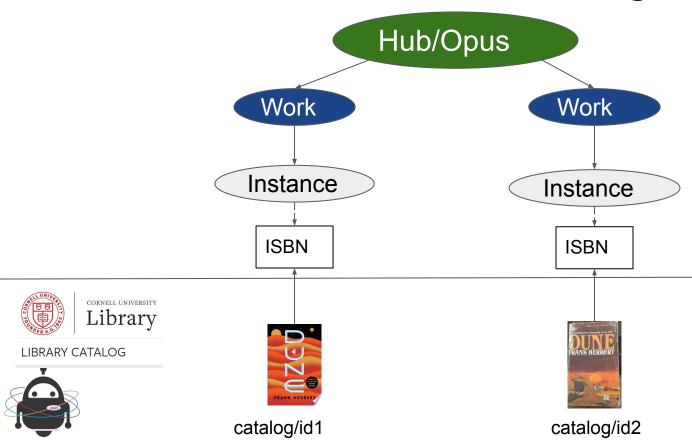


Work Relationships and Aggregations

- Sources
 - Library of Congress (LOC) Hubs
 - ShareVDE Program for Cooperative Cataloging (PCC)
 data
- Focused on top level aggregations as a start
- Retrieve clusters of related Cornell catalog resources



Clusters of Related Catalog Records



BIBFRAME data analysis

- The Hub & Opus have potential to provide useful clustering of related catalog items
- Can provide specific relationships (e.g. translations, or all forms of same higher level opus or hub)
- Need further analysis to determine overlap with existing OCLC work id set.
 - Individual examples where other sources provide more clusters than OCLC work ids
 - Individual examples where other sources provide fewer clusters than OCLC work ids



Dune

Author, etc.: Herbert, Frank. Author info »

English. Language:

Dune (Imaginary place) > Fiction. Subject:

Sequel: Dune messiah. Notes:

■ Book Format: Edition: [1st ed.]

Description: xxvi, 412 p. illus. 24 cm.

Philadelphia, Chilton Books [1965] Published:

Other copies

1.Dune 1982, c1965

Herbert, Frank. Book New York : Berkley Books, 1982, c1965. English. Berkley trade pbk. ed.

✓Olin Library PS3558.E645 D9 1982

2.Dune 2005, c1965

Herbert, Frank. Book New York : Ace Books, 2005, c1965. English. 40th anniversary ed.

Olin Library PS3558.E63 D8 2005

3.Dune 2005 @1965

Herbert, Frank.

Book New York: Ace, 2005. English. Ace trade paperback edition.

OVeterinary Library (Schurman Hall) PS3558.E63 D8

4.Dune [1990, 1965] @1965

Herbert, Frank.

Book New York : Ace Books, [1990,

1965] English. Special twenty-fifth anniversary edition.



FRANK HERBER

Sequels

1.Dune messiah [1969]

Herbert, Frank.

Book New York, Putnam [1969] English.

Olin Library PS3558.E645 D91

2.Children of Dune c1976

Herbert, Frank.

Book New York : Berkley Pub. Corp. : distributed by Putnam, c1976. English.

✓Library Annex PS3558.E645 C5

Olin Library PS3558.E645 C5

3.God Emperor of Dune c1981

Herbert, Frank.

Book New York : Putnam, c1981. English.

✓Olin Library PS3558.E645 G4

✓Library Annex PS3558.E645 G5

4. Heretics of Dune c1984

Herbert, Frank.

Book New York: Putnam, c1984. English.

✓Olin Library PS3558.E645 H5

5.Chapter house, Dune c1985

Herbert, Frank.

Book New York : Putnam, c1985. English.

✓Olin Library PS3558.E645 C4

Explore adaptations, translations, and more



Availability

Library Annex Hours PS3515.E61 D9 0 Text

✓ Available

Olin Library Hours

PS3558.E645 D9 DText

✓ Available

Request item

Request scan of article/chapter



Dune



Dune is a 1965 epic science fiction novel by American author Frank Herbert, originally published as two separate serials in Analog magazine. It tied with Roger Zelazny's This Immortal for the Hugo Award in 1966 and it won the inaugural Nebula Award for Best Novel. It is the first installment of the Dune saga. In 2003, it was described as the world's bestselling science fiction novel. Since 2009, the names of planets from the Dune novels have been adopted for the real-life nomenclature of plains and other features on Saturn's moon Titan. (From DBPedia C.)

Author(s): Herbert, Frank.

Language: English.

Subject: <u>Dune (Imaginary place) > Fiction.</u>

RELATED ITEMS & Copies of "Dune" Prequels/Sequels Translations Adaptations Items about "Dune" Items by Herbert, Frank.

Copies of "Dune"

1.Dune 1982, c1965

Herbert, Frank.

■Book New York : Berkley Books, 1982, c1965. English. Berkley trade pbk. ed.

✔Olin Library PS3558.E645 D9 1982

2.Dune [1965]

Book Philadelphia, Chilton Books [1965] English. [1st ed.]

✓ Library Annex PS3515.E61 D9

✔Olin Library PS3558.E645 D9

3.Dune 2005, c1965

Herbert, Frank.

■Book New York : Ace Books, 2005, c1965. English. 40th anniversary ed.

Olin Library PS3558.E63 D8 2005

4.Dune 2005 @1965

Herbert, Frank.

■Book New York: Ace, 2005. English. Ace trade paperback edition.

OVeterinary Library (Schurman Hall) PS3558.E63 D8 2005

5.Dune [1990, 1965] @1965

Herbert, Frank.

Book New York: Ace Books, [1990, 1965] English. Special twenty-fifth anniversary



Sequels

1.Dune messiah [1969]

Translations

1.Dun 2546 [2003]

Dune. Thai Dune. Thai Herbert, Frank.

Herbert, Frank.

■Book Krung Thép: Samnakphim Khun Phô, 2546 [2003] Thai. Phim khrang ræk.

✓Kroch Library Asia PS3558.E645 D919 2003

Adaptations

1. Dune 2022

Dune (Motion picture: 2021)|Dune (Motion picture: 2021)

■Video [Burbank, CA]: Warner Bros. Entertainment, [2022] English, French or Spanish dialogue; French or Spanish subtitles.

Ouris Library Dean Room Videodisc 9910

Items about "Dune"

1.The art and soul of Dune 2020

Lapointe, Tanya, author

■Book San Rafael: Insight Editions, 2020. English.

OOlin Library Oversize PN1997.2.D864 L27 2020 +

Items by Herbert, Frank.

1.The collected stories of Frank Herbert 2014

Herbert, Frank.

■Book New York: Tor, 2014. English. 1st ed.

✓Olin Library PS3558.E63 A6 2014





Browsing Across Music With Obtainable Wikidata! (BAMWOW!)

Newest!

Experimental Phase



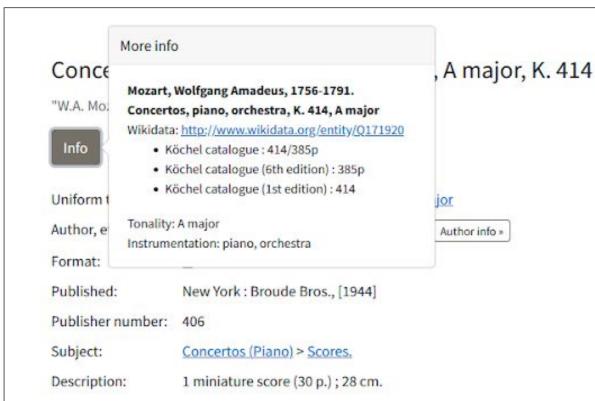


BAMWOW! Motivation

- Can we incorporate contextual information around musical works into the library catalog?
 - Partner with MLA to leverage already defined data creation projects to see if that data can be used to enhance catalog
 - Gain experience with both music-specific statements in Wikidata and more broadly properties that might apply to all/other types of works



BAMWOW!!







Implementation, Data, and Usability Overview





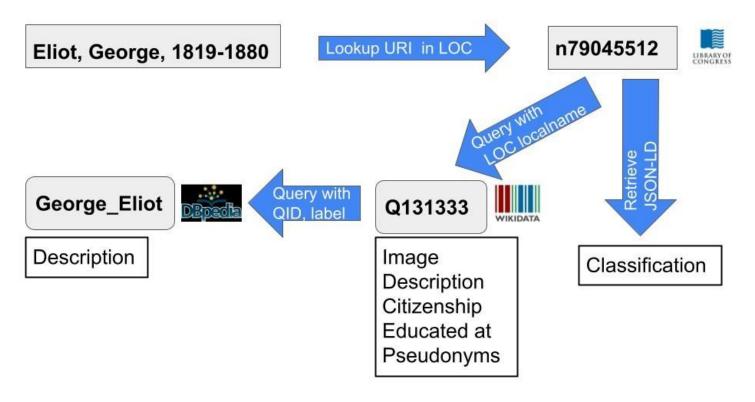
User testing and user representative feedback

- Possibilities for improving the catalog discovery experience
- DASH! testing (on earlier prototype) helped re-design of info button for more clarity
- DASH! user representative feedback identified which data sources and features to keep
- BANG! testing compared production to prototype
 - Found prototype fared better with several work to work relationships
 - Further work to see which relationships of most benefit to users

Interface implementation details

- Client-side requests
 - Lookup URIs for string headings (DASH!, BAMWOW!)
 - Use URI in MARC to retrieve related entities (BANG!)
- "Disallowing" or hiding certain information (DASH!)
- Pre-existing separate author and subject indices
 - Note: No dedicated Work index our Blacklight implementation; operates at the publication/manifestation level
- Extend or link from existing catalog pages (e.g. existing browse and item views)

DASH! client side requests





DASH! Disallowing Information

```
? "Saunders, George,
1958-"
: ~
```

```
? "Eliot, George, 1819-1880" :
```

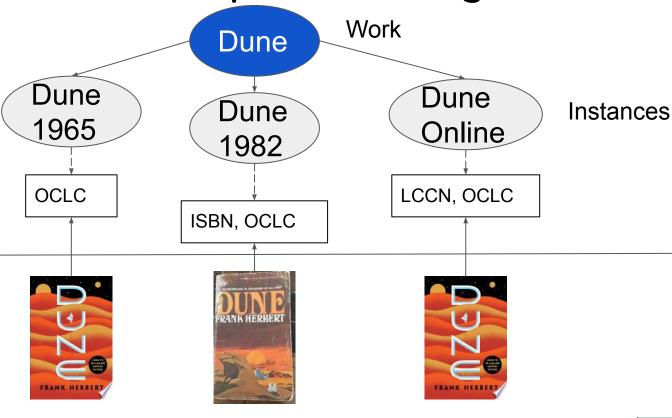
- "image"
- "description"
- "citizenship"
- "education"
- "pseudonyms"



BANG! Sinopia to Catalog

catalog/58460





catalog/15139747



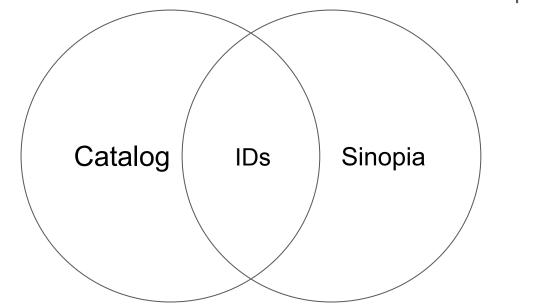
catalog/57525

BANG!: Connecting Sinopia with Our Catalog

Sinopia Work URIs in 758 of BIB

ISBNs, LCCNs, and/or OCLC numbers in Sinopia

Instances





Lessons Learned and Future Work



Data reliance and integration

- Going beyond "nice-to-have decorations"
- Recognize/account for strengths/weaknesses in datasets
- Do we support searching on what (up until now) has been considered "external" data?
- Provenance and controlling data usage



Bibliographic data models and user needs

- What's the most ideal way to present to the user Work level information consistently... how far do we separate/flatten the data describing works vs. publications vs. items?
- The catalog has to balance user needs, rather than faithfully reflect any/all (sometimes complicated) data model/s.



How might this change cataloging practices

- Identifiers in our data make it easier to connect across datasets.
 - Strings to things AND how they are related
- Data quality, comprehensiveness, consistency for new use cases
- Engagement/strategic partnerships with external data producers.
- We can begin to benefit while still heavily relying on
 MARC

Q&A: This is more of a comment than a question.

Posted by u/GovSchwarzenshnitzel 8 years ago =

26.7k Everyone talks about the hoverboard. This is what I want from

Back to the Future.

i.imgur.com/706mmh... 🖸











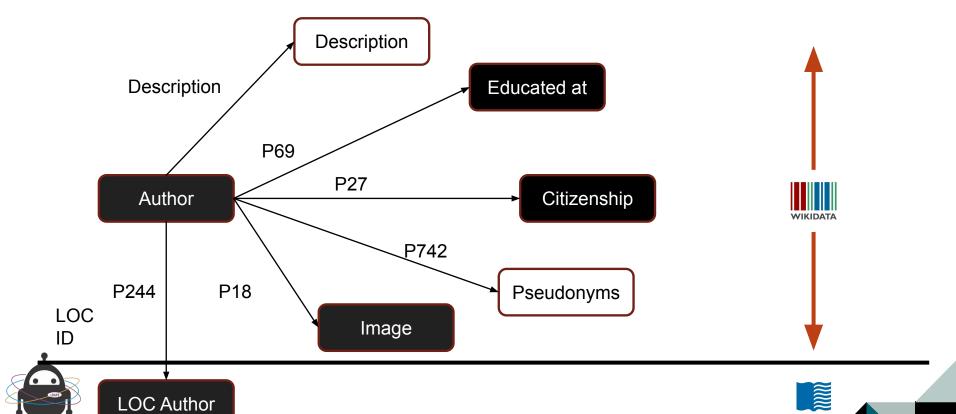
References

- Documentation/wiki
 - LD4P3 Discovery work
- Email
 - <u>astridu@stanford.edu</u>
 - hjk54@cornell.edu
 - o sf433@cornell.edu
- Slides: http://bit.ly/swibld4p3

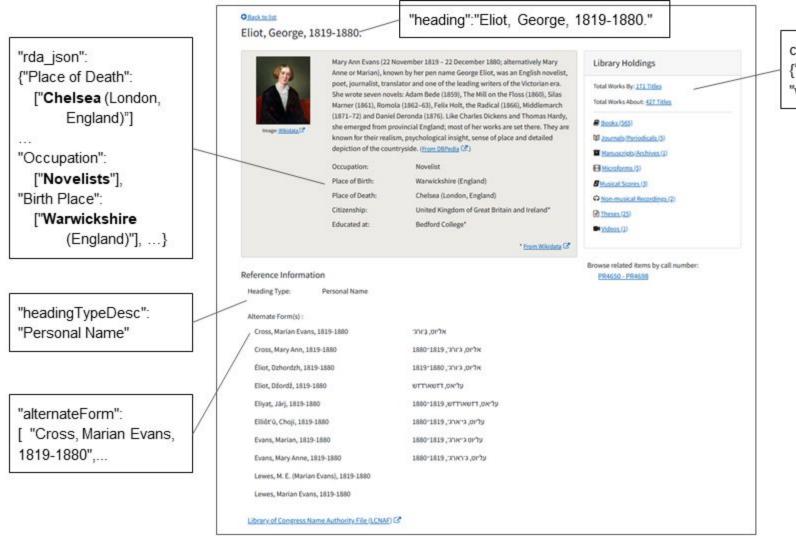


Additional Slides

DASH! Author Info



LIBRARY OF CONGRESS



counts_json: {"worksBy":171, "worksAbout":427}



Eliot, George, 1819-1880.



Image Sthides Cf.

Mary Ann Evans (22 November 1819 - 22 December 1880; alternatively Mary Anne or Marian), known by her pen name George Eliot, was an English novelist, poet, journalist, translator and one of the leading writers of the Victorian era. She wrote seven novels: Adam Bede (1859), The Mill on the Floss (1860), Silas Marner (1861), Romola (1862-63), Felix Holt, the Radical (1866), Middlemarch (1871-72) and Daniel Deronda (1876). Like Charles Dickens and Thomas Hardy, she emerged from provincial England; most of her works are set there. They are known for their realism, psychological insight, sense of place and detailed

Occupation: Novelist

Warwickshire (England)

Place of Birth: Place of Death: Citizenship:

Chelsea (London, England) United Kingdom of Great Britain and Ireland*

Educated at:

depiction of the countryside. (From CBPedia (2))

* From Wikidata (2*

Bedford College*

Reference Information

Heading Type:

Personal Name

Alternate Form(s):

Cross, Marian Evans, 1819-1880 אליוט, בזורבי

Cross, Mary Ann, 1819-1880 36'10, C1CC, 9181'0881

Eliot, Dzhordzh, 1819-1880 1819-1880, STOS, 0881-9181

Eliot, Džordž, 1819-1880 על אם, דדטארדדט

Eliyat, Järj, 1819-1880 עליאס, דזשארדזש, 1880-1819 Elliöt'ü, Choii, 1819-1880 עליום, גיארג', 1819-1881

Evans, Marian, 1819-1880 עליוס ג׳ארג׳, 1819-1881

Evans, Mary Anne, 1819-1880 עליום, ג'רארג', 1819-1880

Lewes, M. E. (Marian Evans), 1819-1880 Lewes, Marian Evans, 1819-1880

Library of Congress Name Authority File (LCNAF) (2)

Library Holdings

Total Works By: 171 Titles Total Works About: 427 Titles

@ Books (565)

D Journals/Periodicals (5) Manuscripts/Archives.(1)

Hicroforms (5)

Non-musical Recordings (2)

B Musical Scores (3)

Theses (25)

■ Yideos (1)

Browse related items by call number: PR4650 - PR4698

out by format and combining both works by and works about

Search links broken

Library of Congress classification used to generate call number browse link

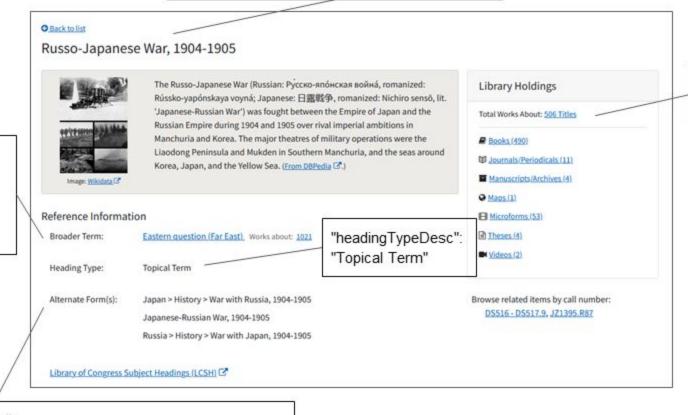
Link to heading in the Library of Congress

Wikidata image

DBPedia description

Wikidata fields

"heading": "Russo-Japanese War, 1904-1905"



"counts_json": {"worksAbout":506}

"alternateForm":

"seeAlso":

{"Broader

Term":

[...]},

["Japan > History > War with Russia, 1904-1905", ...]

DBPedia description

Wikidata image

O Back to list

Russo-Japanese War, 1904-1905



Image: Wikidata CF

The Russo-Japanese War (Russian: Русско-японская война, romanized: Rússko-yapónskaya voyná; Japanese: 日鑑戦争, romanized: Nichiro senső, lit. 'Japanese-Russian War') was fought between the Empire of Japan and the

Russian Empire during 1904 and 1905 over rival imperial ambitions in Manchuria and Korea. The major theatres of military operations were the Liaodong Peninsula and Mukden in Southern Manchuria, and the seas around

Korea, Japan, and the Yellow Sea. (From DBPedia (3.))

Reference Information

Broader Term: Eastern question (Far East). Works about: 1021

Heading Type: Topical Term

Alternate Form(s): Japan > History > War with Russia, 1904-1905

Japanese-Russian War, 1904-1905

Russia > History > War with Japan, 1904-1905

Library of Congress Subject Headings (LCSH) 2

Library Holdings

Total Works About: 506 Titles

Books (490)

III Journals/Periodicals (11)

Manuscripts/Archives (4)

O Maps (1)

Microforms (53) Theses (4)

W Videos (2)

Browse related items by call number:

DS516 - DS517.9, JZ1395.R87

only has works about) Library of Congress classification used to generate call

number browse link

Search links broken

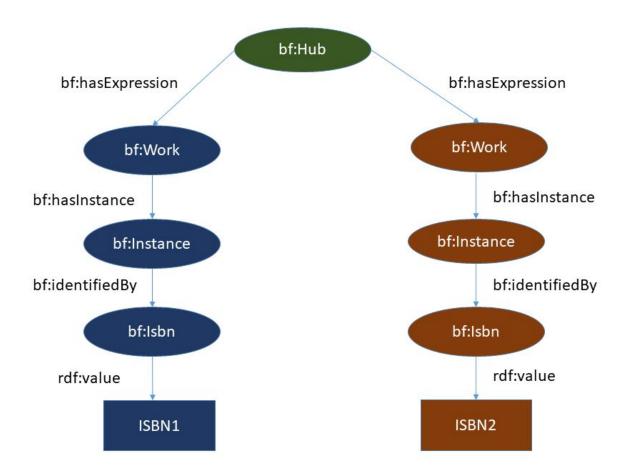
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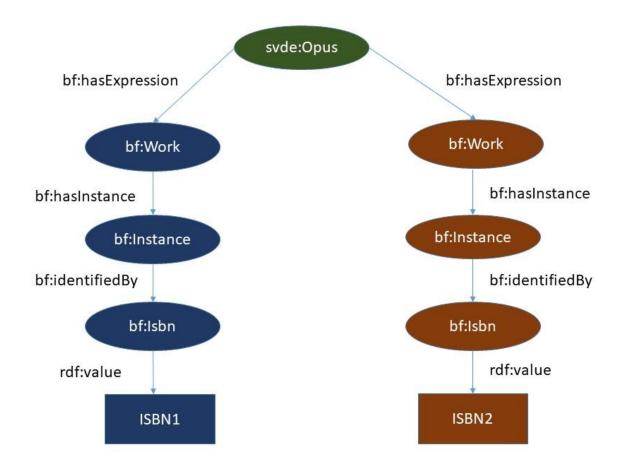
about. (This heading

out by format and

combining both

Link to heading in the Library of Congress





Clusters with >= 2 Catalog Records

ShareVDE Opus	10,000,486 total opera	3,258 ISBN clusters by opus
LOC hub	2,481,410 total hubs	9,430 LCCN clusters by hub (extrapolated)
OCLC Work ID	513,078 total work ids (in catalog)	195,108 clusters by work id



Data source	Description for groups	Number of groups matching at least two Cornell catalog records
ShareVDE PCC	ISBNs aggregated by Opus	3,258
	LCCNs aggregated by Opus	1,226
	ISBNs related by work to work relationships	184
LOC Hubs	ISBNs aggregated by hub	6,452 (extrapolated)
	LCCNs aggregated by hub	9.430 (extrapolated)
	ISBNs related by hub to hub relationships	5,459 (extrapolated)
	LCCNs related by hub to hub relationships	8,189 (extrapolated)
OCLC Work IDs (2015)	Aggregated by OCLC Work ID	195,108