Investigating BIBFRAME

New Bibliographic Framework Initiative
OLA Superconference 01-28-2016
Alison Hitchens, Aida Rudnik, Christopher Carr

Agenda

- Introduction to Linked Data & BIBFRAME
- LibHub Initiative at the Hamilton Public Library
- BIBFRAME/Linked Data in Academic Libraries
- Q&A

Catalogue cards - Bibliographic

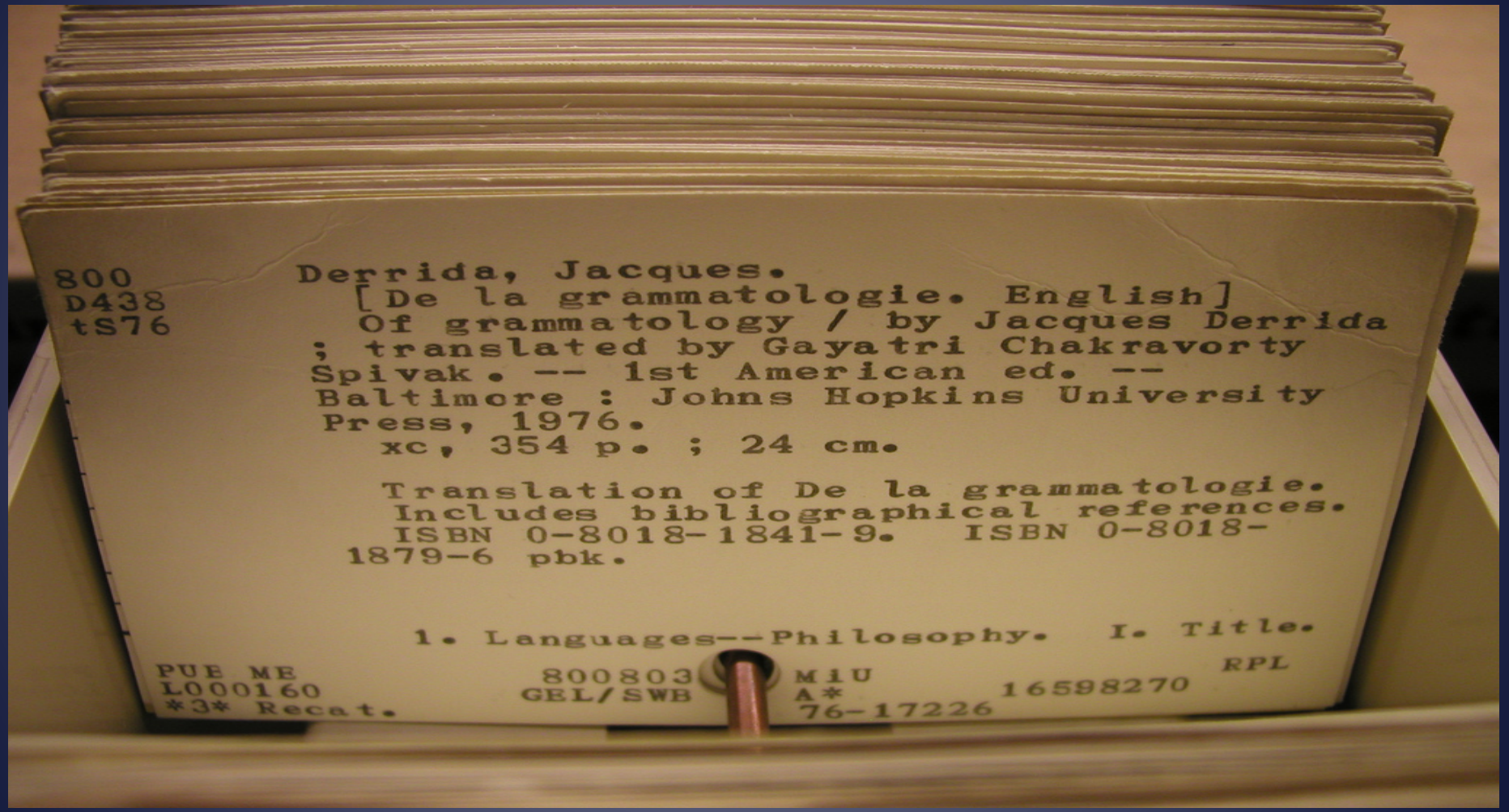


Photo credit: David Fulmer. CC BY 2.0
https://www.flickr.com/photos/annarbor/4349879701/

Catalogue cards - Authority

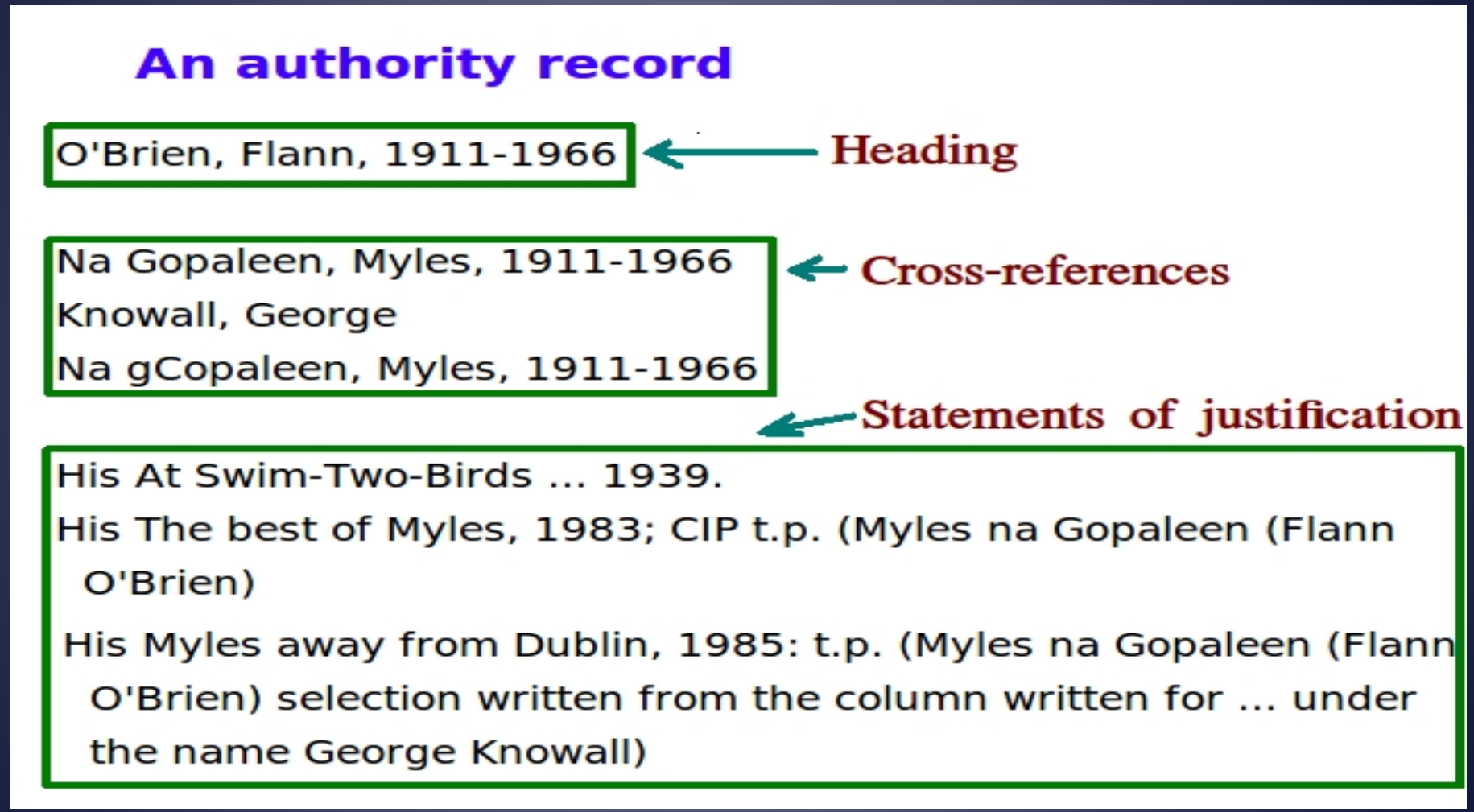


Image credit: Tomwsulcer. CC0

MARC – Cataloguer View

=LDR 00766cam a2200241 a 4500
=001 2588334
=008 760618s1976\\\\mdu\\\\\\b\\\\0001\\eng\l
=010 \\$a 76017226
=020 \\$a0801818419
=040 \\$aDLC$beng$cCaOONL
=090 \\$aP105$b.D5313 1976$5CaOWtL
=100 1\$aDerrida, Jacques.
=240 10$aDe la grammatologie.$lEnglish
=245 10$aOf grammatology /$cby Jacques Derrida ; translated by Gayatri Chakravorty Spivak.
=250 \\$a1st American ed.
=260 \\$aBaltimore :$bJohns Hopkins University Press,$c1976.
=300 \\$axc, 354 p. ;$c24 cm.
=504 \\$aIncludes bibliographical references.
=650 \0$aLanguage and languages$xPhilosophy.

MARC – Machine View

00766cam a2200241 a 4500001000800000005001700008007000300025008004100028010001600069020001500085035001300100040002100113090003000134100002200164240004000186245008600226250002100311260005600333300002500389500002900414504004100443650004000484-2588334-20060928112954.0-ta-760618s1976 mdu b 0001 eng l- a 76017226- a0801818419- - 9LM030272- aDLCbengcCaOONL- aP105b.D5313 1976-5CaOWtL-1 aDerrida, Jacques.-10aDe la grammatologie.-lEnglish. 1976-10aOf grammatology /cby Jacques Derrida ; translated by Gayatri Chakravorty Spivak.- a1st American ed.- aBaltimore :bJohns Hopkins University Press,c1976.- - axc, 354 p. ;c24 cm.- aFirst published in 1974.- aIncludes bibliographical references.- 0aLanguage and languages-xPhilosophy.-

Why replace MARC?

- MARC is just machine readable
- MARC is not machine actionable on the web
- Integrate and engage library data with the wider information community

"the BIBFRAME model is the library community's formal entry point for becoming part of a much larger web of data" - *Bibliographic Framework as a Web of Data: Linked Data Model and Supporting Services*, 2012: p. 4.

Modified from : Amber Billey "Bibframe basics" 12/8/2015

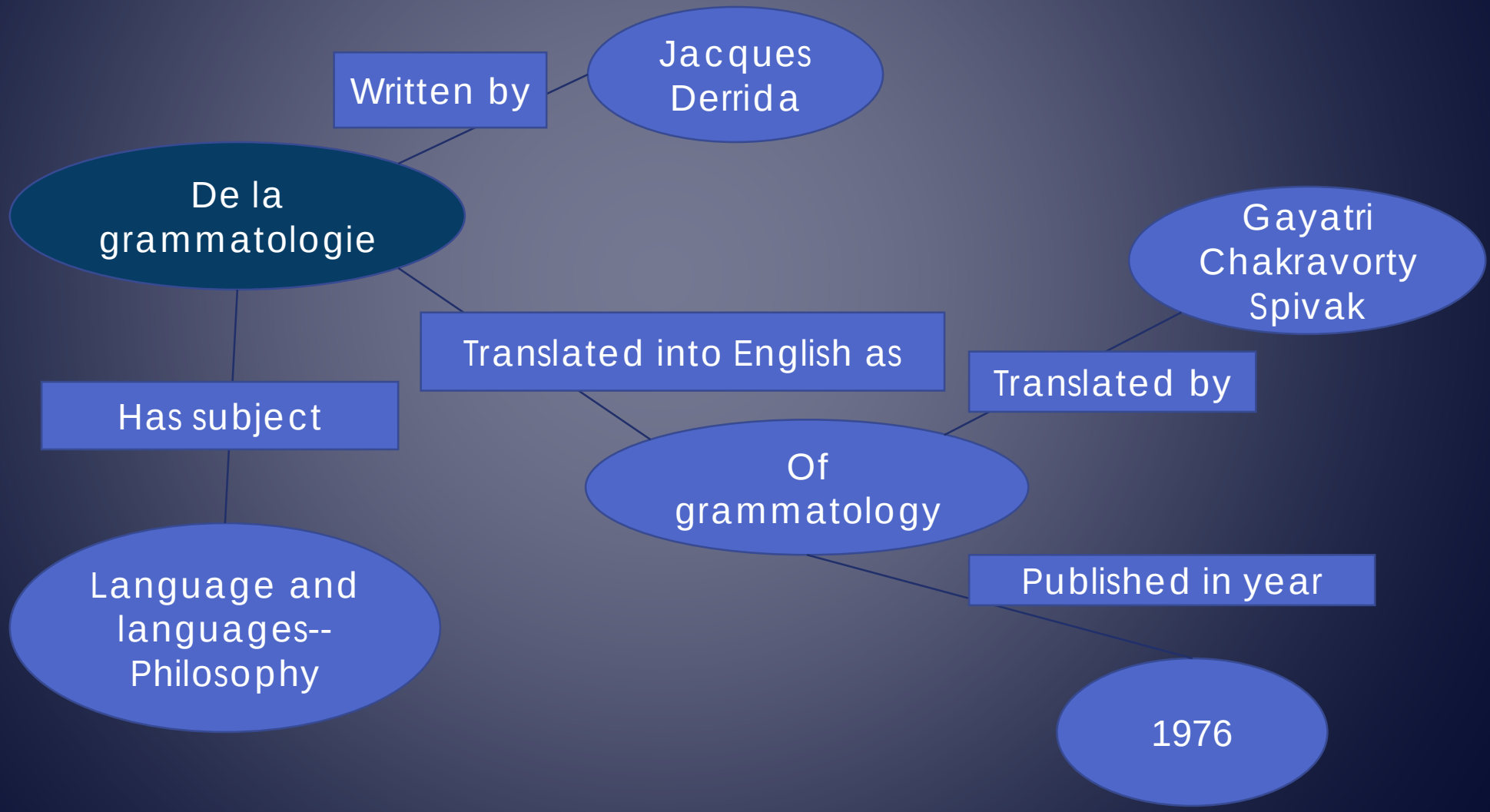
Linked Data Concepts: Use structured data

- Type of resource: work
- Content type: text
- Creator: Jacques Derrida
- Translator: Gayatri Chakravorty Spivak
- Subject (LCSH): Language and languages—Philosophy
- Published (year): 1976

Linked Data Concepts: Data as simple statements

- De la grammatolgie was written by Jacques Derrida
- De la grammatologie was translated into English as Of grammatology
- De la grammatologie was translated by Gayatri Chakravorty Spivak
- Of grammatology was published in Baltimore
- Of grammatology was published by John Hopkins University Press
- Of grammatology was published in 1976
- Of grammatology is about Language and languages--Philosophy

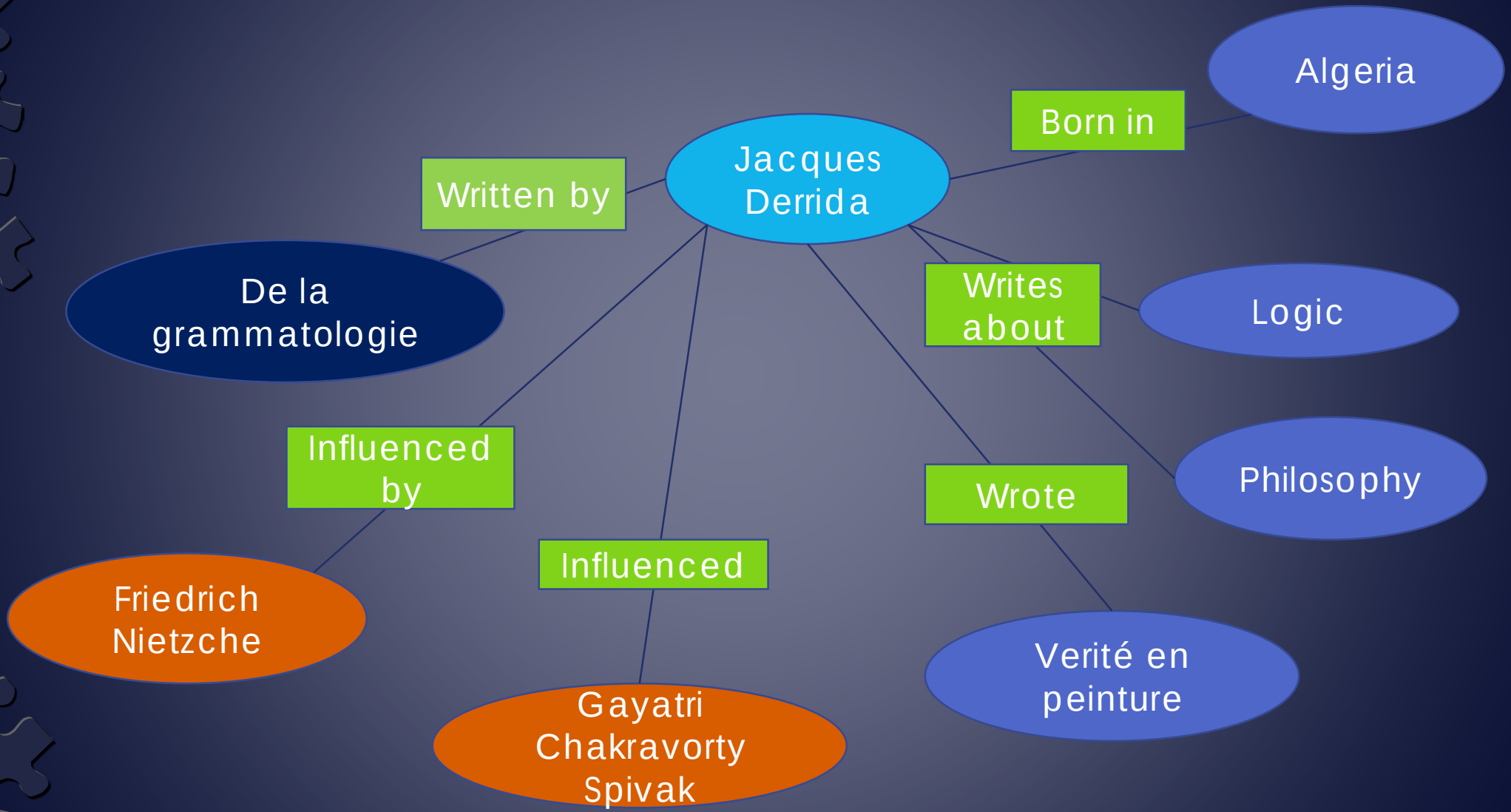
Linked Data concepts: No records – join statements together



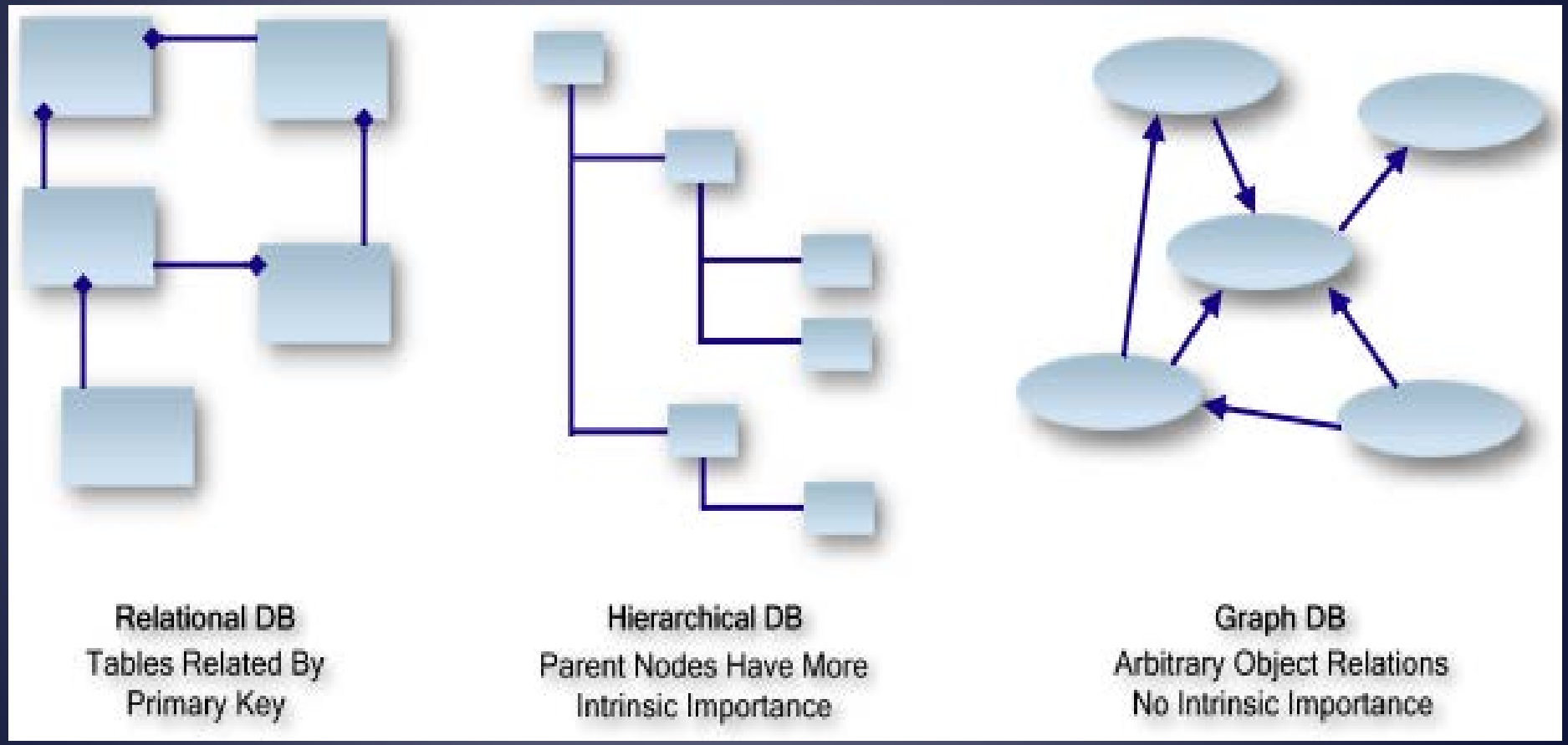
Join with authority statements



Join with external data

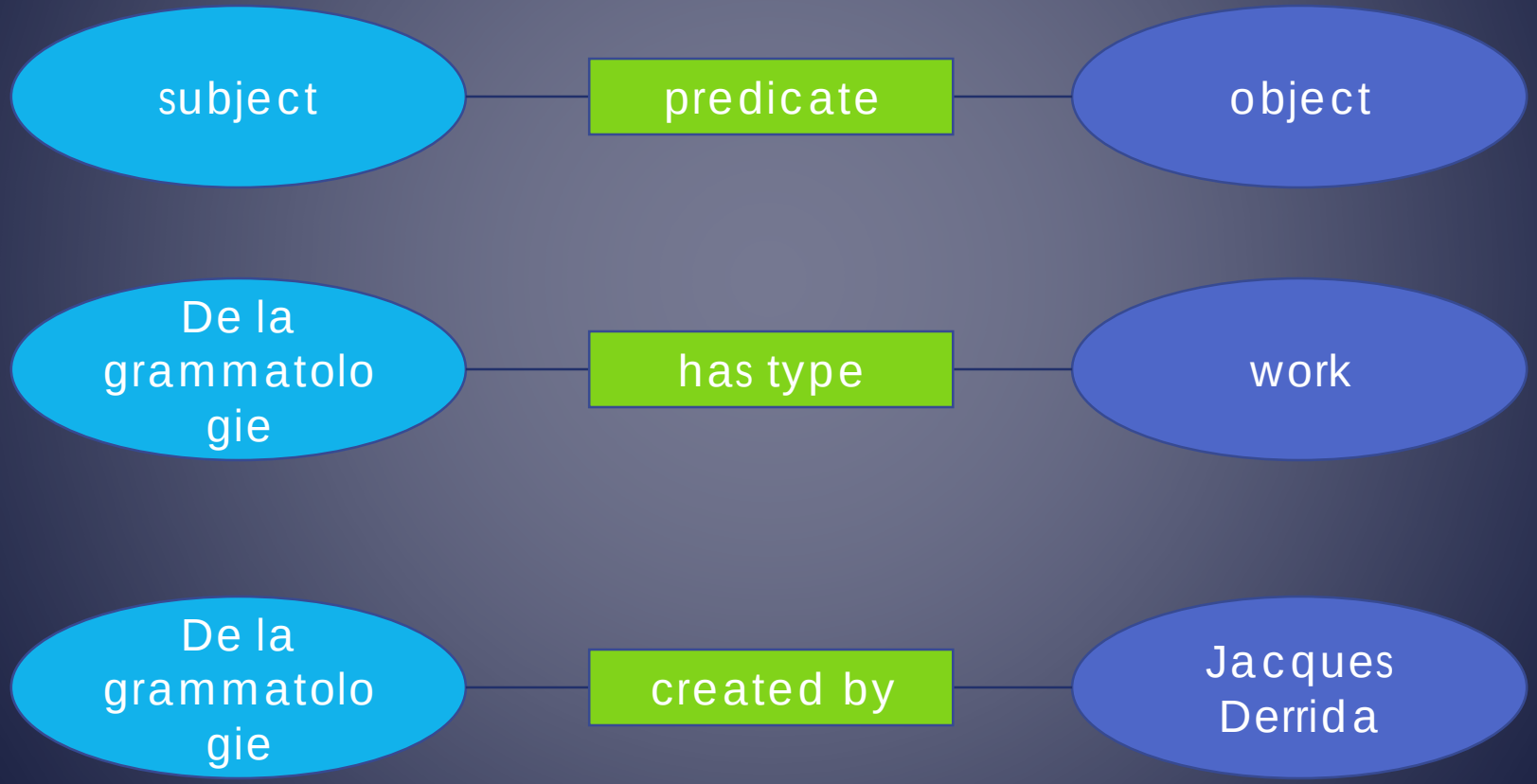


Linked data concepts: Data in graphs



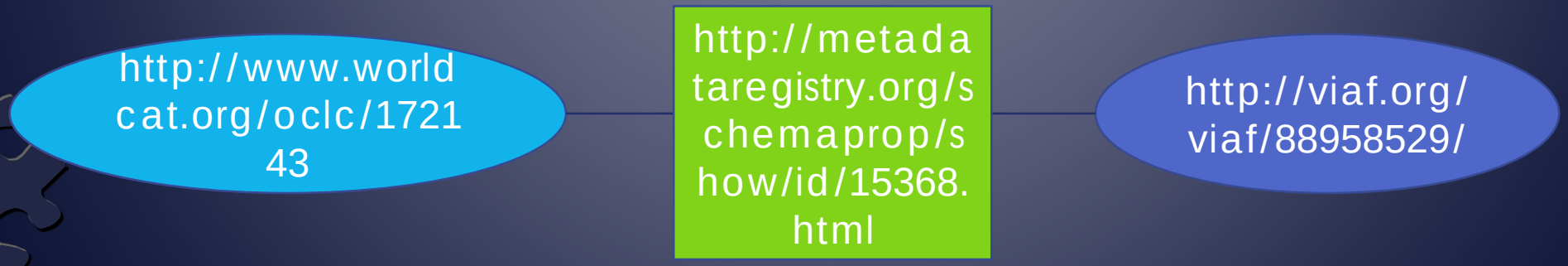
Modified slide from: Amber Billey “BIBFRAME Basics”
Image source: http://www.linkeddatatools.com/introducing-rdf/

Resource Description Framework (RDF) for statements



More Linked Data Concepts

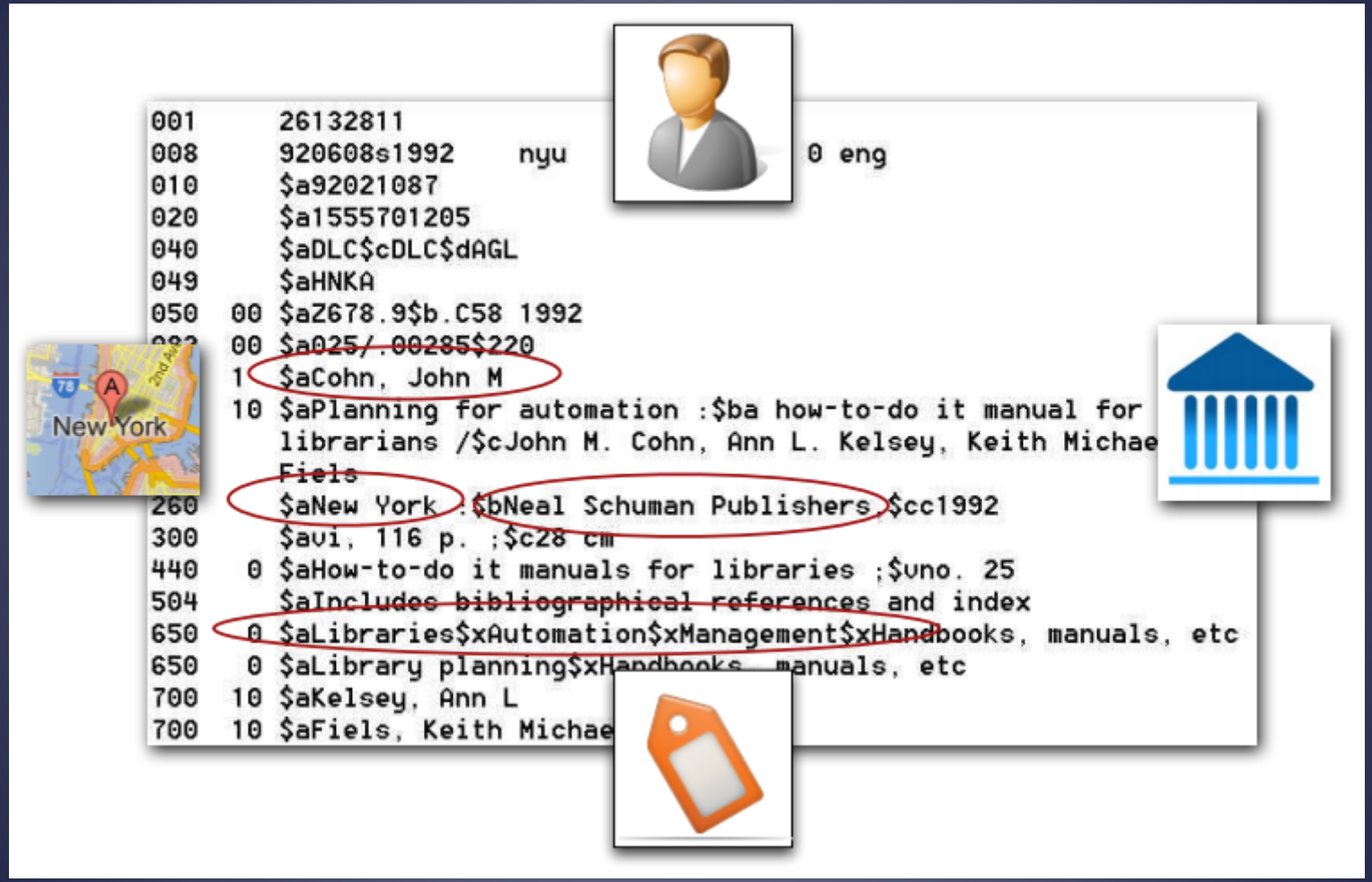
- Identify everything with an HTTP uniform resource identifier (URI), that is, a URL
- Provide useful information about things using web standards
- Include links to other URIs for expanded discovery



Linked data in libraries

- Consume linked data
  - To provide context in our catalogues
  - To extend our information and make connections
  - To help with authority work
- Publish our data as linked data
  - Bibliographic data, controlled vocabularies, holdings
  - What do we want to make statements about? (subjects)
  - What do we want to say about them? (predicates)

Things in our MARC records



Source: Eric Miller. "Moving from MARC: How BIBFRAME moves the Linked Data in Libraries conversation to large-scale action." SWIB 2014. slide 19

BIBFRAME Model

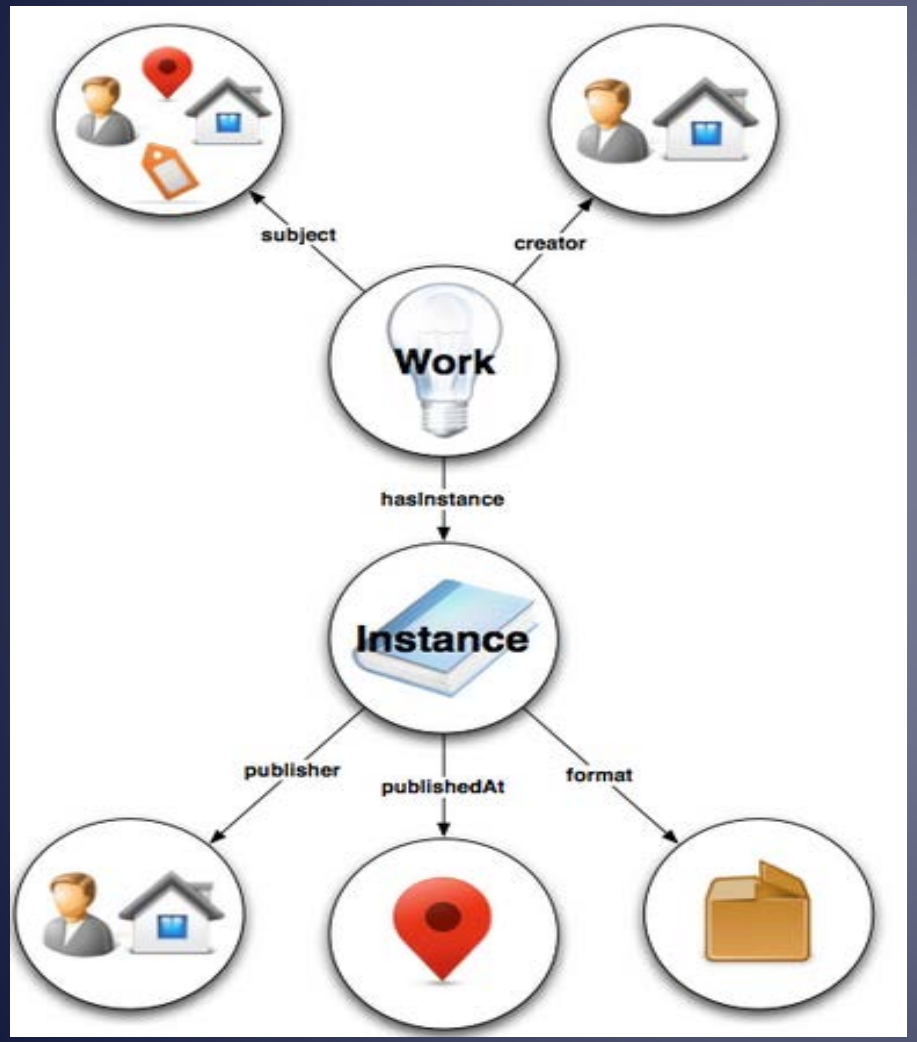


Image source: Library of Congress. Overview of the BIBFRAME Model

bf:BIBFRAME main classes

- Creative Work
- Instance
- Authority
- Annotation

53 Classes

289 Properties

Don't panic! This is for machines!

```
@prefix bf: <http://bibframe.org/vocab/> .
@prefix madsrdf: <http://www.loc.gov/mads/rdf/v1#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

<http://id.loc.gov//resources/bibs/6621574> a bf:Text,
        bf:Work ;
    bf:authorizedAccessPoint "Derrida, Jacques. De la Grammatologie." ;
    bf:classificationLcc <http://id.loc.gov/authorities/classification/P105> ;
    bf:creator [ a bf:Person ;
            bf:authorizedAccessPoint "Derrida, Jacques." ;
            bf:hasAuthority [ a madsrdf:Authority ;
                    madsrdf:authoritativeLabel "Derrida, Jacques." ] ;
            bf:label "Derrida, Jacques." ] ;
bf:hasInstance [ a bf:Instance,
                bf:Monograph ;
            bf:dimensions "22 cm." ;
            bf:extent "448 p." ;
```

Example BIBFRAME transformation – closer look

@prefix bf: <http://bibframe.org/vocab/> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

<http://id.loc.gov//resources/bibs/6621574> a bf:Text,
bf:Work ;

De la grammatologie has type Text
- Taken from the MARC LDR for language material

De la grammatologie has type Bibframe Work

Example BIFRAME transformation – closer look

@prefix bf: <http://bibframe.org/vocab/> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

<http://id.loc.gov//resources/bibs/6621574>
bf:creator [a bf:Person ;
bf:authorizedAccessPoint "Derrida, Jacques." ;

De la grammatologie has creator (type: person) whose authorized access point is “Derrida, Jacque”

- Taken from the MARC 100 tag
- 100 1\ $a Derrida, Jacque

Example BIBFRAME transformation – closer look

<http://id.loc.gov//resources/bibs/6621574>

bf:hasInstance [a bf:Instance,

bf:Monograph ;

bf:dimensions "22 cm." ;

bf:extent "448 p." ;

De la grammatologie has instance of type Monograph

- From the MARC LDR

De la grammatologie instance has dimensions 22 cm.

- From the MARC 300 $c

De la grammatologie instance has extent 448 p.

- From the MARC 300 $a

BIBFRAME vocabulary examples

bf:Work (class) - Resource reflecting a conceptual essence of the cataloging resource.

bf:creator (property) - Generalized creative responsibility role.

bf:Person (class) - Individual or identity established by an individual

bf:authorizedAccessPoint (property) - Controlled string form of a resource label intended to help uniquely identify it, such as a unique title or a unique name plus title.

BIBFRAME: Variations

BIBFRAME Profiles

Version 2.0

Bibframe Lite (bibfra.me)

Slide from: Thomas Meehan "BIBFRAME as a Library Linked Data Standard." CILIP Linked Data Executive Briefing 2015



LibHub Initiative @ HPL

(over to Chris and Aida)
(these are separate sets of slides)

BIBFRAME/Linked Data in Academic Libraries

Learning

- Linked data concepts
- BIBFRAME model
- Relationship of BIBFRAME to MARC, RDA, FRBR etc.
- Purpose – should we be thinking differently about our library data as we create it
- Example: cataloguers at George Washington University

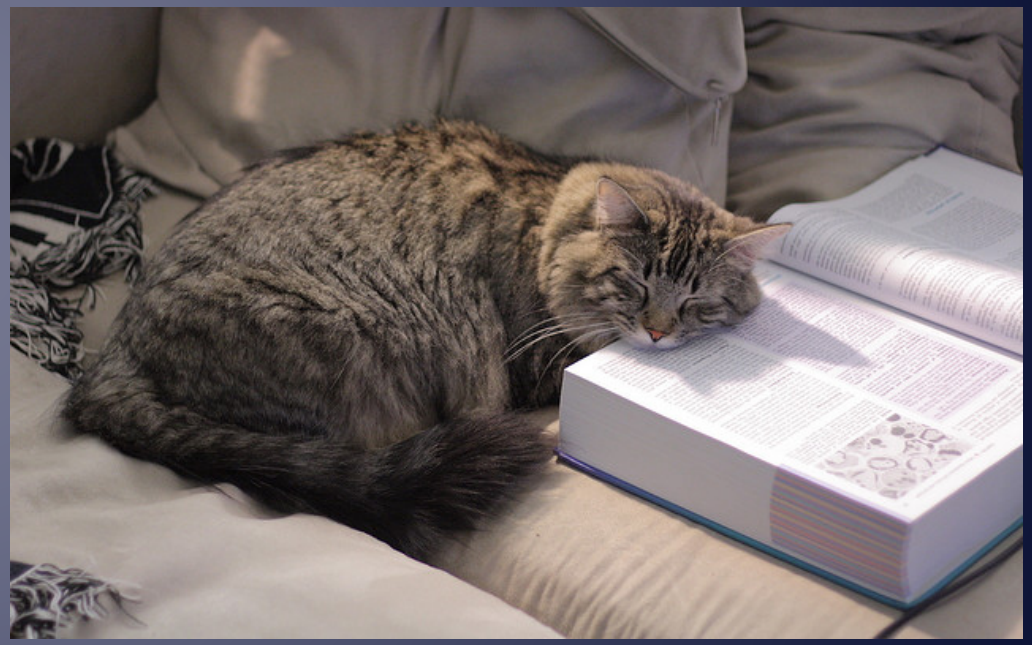


Photo credit: Sage Ross CC BY-SA 2.0

Workflow

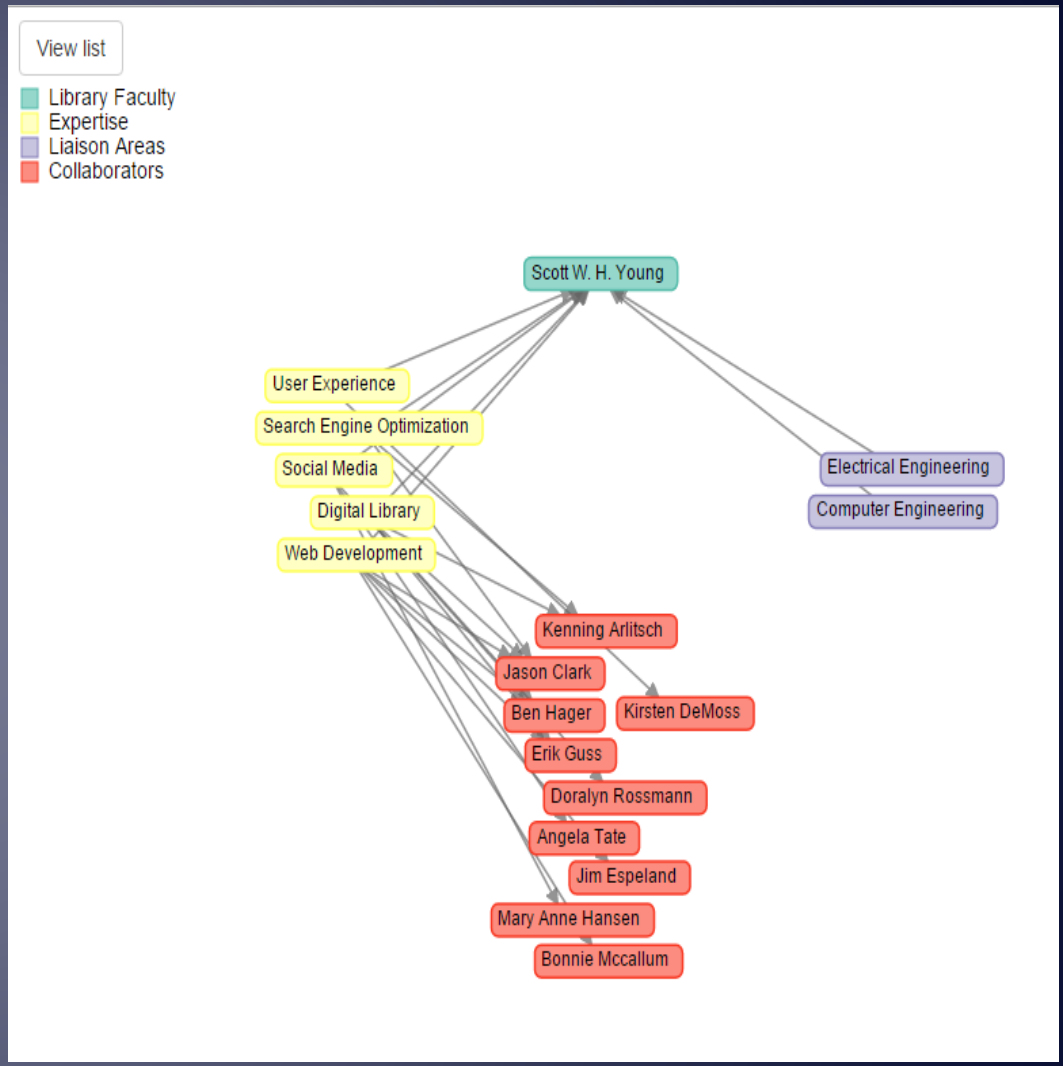
- Beyond MARC transformation
- Impact on technical services work
- Impact on vendor systems
- Example: UC Davis BIBFLOW project



Photo credit: Maha Abed CC BY-ND 2.0

Beyond BIBFRAME

- Marking up our current catalogues with Schema.org
  - Dan Scott @ Laurentian
- Modeling KF Modified classification
  - Sarah Sutherland (CanLII) and Tim Knight (York University)
- Visualizing and linking library staff
  - Jason Clark & Scott Young at Montana State
- Linking our digital collections
  - University of Nevada Las Vegas



Source: Montana State University Library visualization for Scott W. H. Young

Large Linked Data Collaborations

- Linked Data for Libraries (LD4L)
  - Cornell University Library, the Harvard Library Innovation Lab, and the Stanford University Libraries
- Canadian Linked Data Initiative
  - U5 research libraries, Library & Archives Canada, Bibliothèque et Archives nationales du Québec

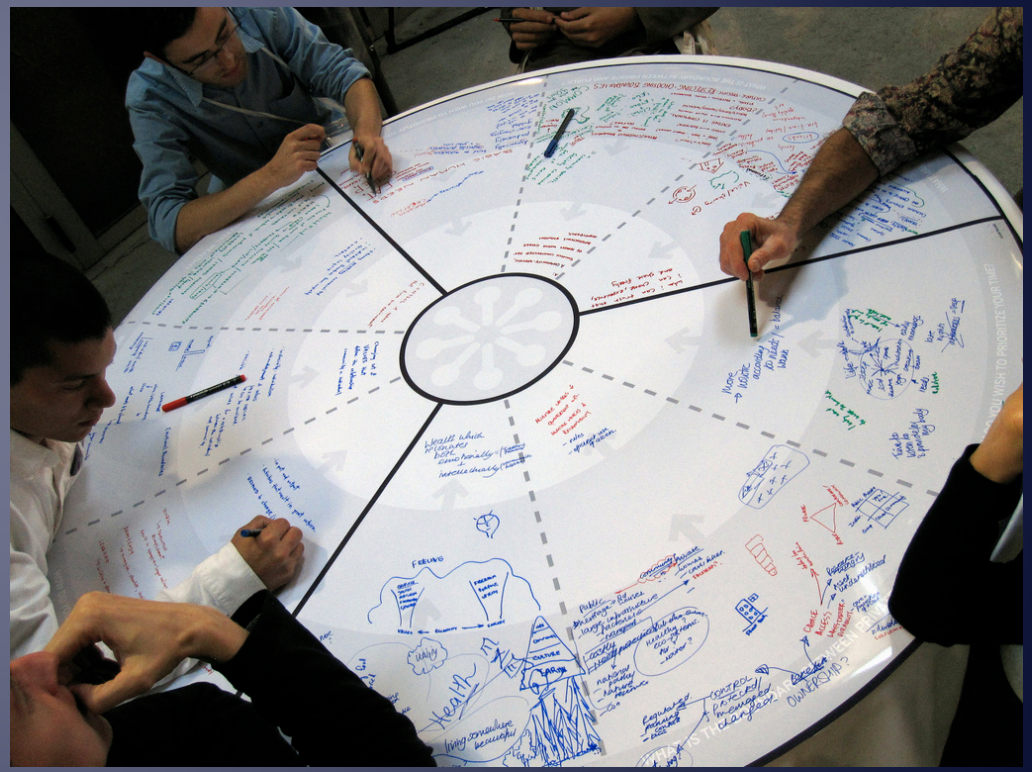


Image credit: Jennifer Leonard CC BY-NC-ND 2.0

Q&A

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  - Head, Digital Initiatives, University of Waterloo Library
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  - Head, Technical Services, Hamilton Public Library
- Christopher Carr ccarr@hpl.ca
  - Cataloguing Librarian, Hamilton Public Library

Selected Resources

- Amber Billey. BIBFRAME Basics. 12/8/2015 NETSL Annual Conference 2015 https://netsl.files.wordpress.com/2015/04/bibframe-basics.pdf
- Bibflow project https://www.lib.ucdavis.edu/bibflow/
- Canadian Linked Data Initiative https://connect.library.utoronto.ca/display/U5LD/Canadian+Linked+Data+Initiative+Home
- Jason Clark and Scott W.H. Young. Linked Data is People: using linked data to reshape the library staff directory. Presented at ACCESS 2014, Calgary, Alberta http://slides.com/swyoung/access-2014-linked-data-is-people/embed?style=light

Selected Resources

- Karen Coyle (2012). “Is linked data the answer?” Coyle’s Information Thurs. Oct. 18, 2012. http://kcoyle.blogspot.ca/2012/10/is-linked-data-answer.html
- Karen Coyle (2010). Understanding the semantic web: bibliographic data and metadata. Chicago: American Library Association (Library Technology reports ; v. 46, no. 1) http://www.metapress.com.proxy.lib.uwaterloo.ca/content/g212v1783607/ (subscription required)
- Hitchens, Alison. *Introducing Linked Data Part 1 (Without all the techie stuff).* Blog post for OLITA, January 9, 2014. http://www.accessola2.com/olita/insideolita/wordpress/?p=60029
- Hitchens, Alison. *Linked Data Pt 2 Resource Description Framework (RDF)*. Blog post for OLITA, May 9, 2014. http://www.accessola2.com/olita/insideolita/wordpress/?p=60281

Selected Resources

- LibHub - http://www.libhub.org/
- Library of Congress. Bibliographic Framework Initiative http://www.loc.gov/bibframe/
- Linked Data: Connect Distributed Data Across the Web http://linkeddata.org/ (includes the LOD Cloud diagram)
- Linked Data for Libraries project https://www.ld4l.org/
- KF Modified Linked Data Project KF Mod https://kfmod.wordpress.com/2015/09/11/kf-modified-linked-data-project/
- Dan Scott. schema.org: machine-readable cataloguing for the open web. Presented at SWIB14, Bonn, Germany, December 2014 http://www.scivee.tv/node/63282 (video)
- UNLV's Linked Data Project (2014) http://www.library.unlv.edu/linked-data