

# Investigating BIBFRAME

New Bibliographic Framework Initiative

OLA Superconference 01-28-2016

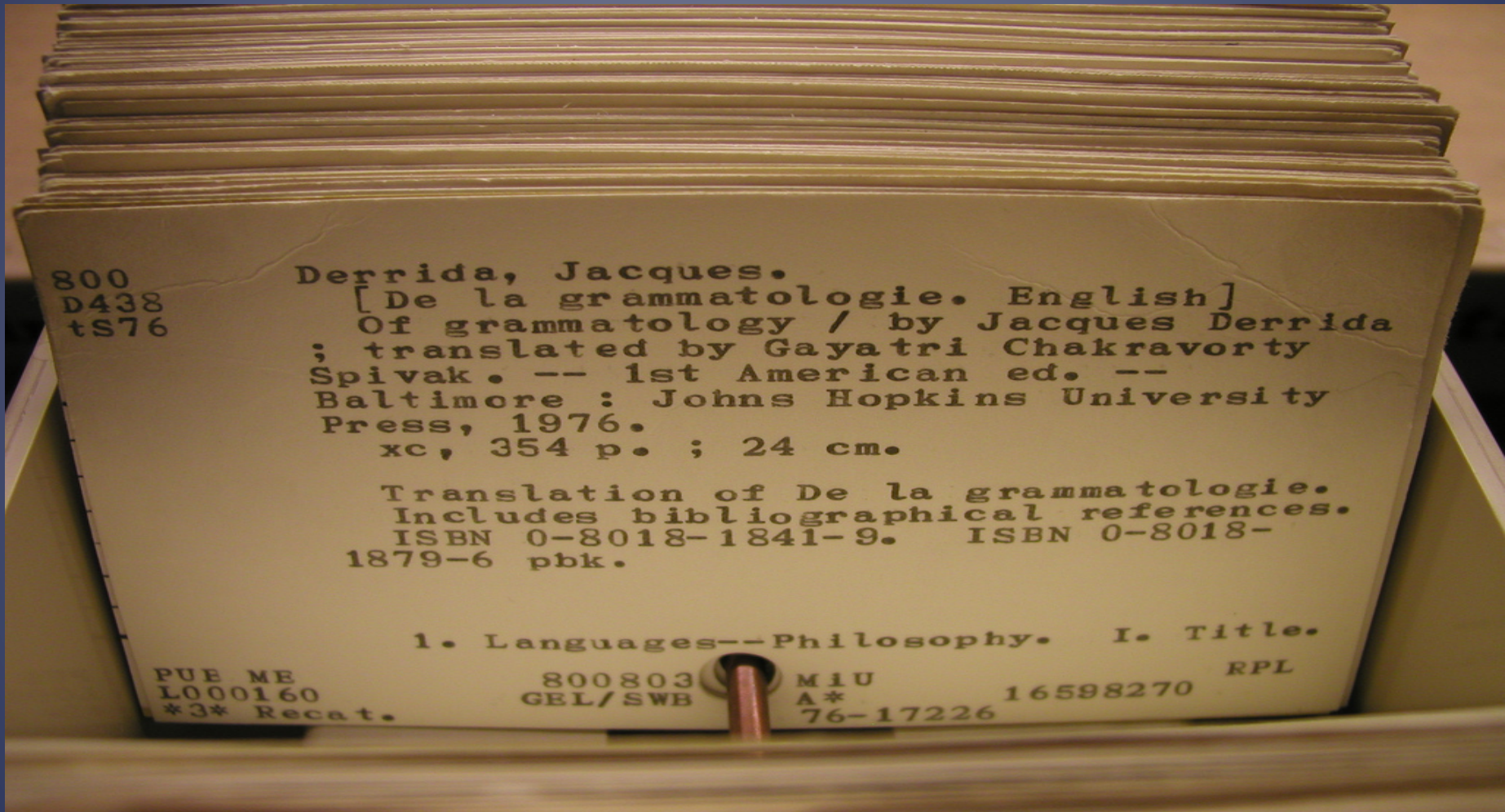
Alison Hitchens, Aida Rudnik, Christopher Carr



# Agenda

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

# Catalogue cards - Bibliographic



# Catalogue cards - Authority

## An authority record

O'Brien, Flann, 1911-1966

← **Heading**

Na Gopaleen, Myles, 1911-1966

Knowall, George

Na gCopaleen, Myles, 1911-1966

← **Cross-references**

← **Statements of justification**

His At Swim-Two-Birds ... 1939.

His The best of Myles, 1983; CIP t.p. (Myles na Gopaleen (Flann O'Brien))

His Myles away from Dublin, 1985: t.p. (Myles na Gopaleen (Flann O'Brien) selection written from the column written for ... under the name George Knowall)

# MARC – Cataloguer View

=LDR 00766cam a2200241 a 4500  
=001 2588334  
=008 760618s1976\\\mdu\\\b\\\0001\\eng\  
=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  
45000010008000000005001700008007000300025008004100028  
0100016000690200015000850350013001000400021001130900  
0300013410000220016424000400018624500860022625000210  
0312260005600333300002500389500002900414504004100443  
650004000484-2588334-20060928112954.0-ta-760618s1976  
mdu b 0001 eng l -a 76017226- -a0801818419- -  
9LM030272- -aDLC-beng-cCaOONL- -aP105-b.D5313 1976-  
5CaOWtL-1 -aDerrida, Jacques.-10-aDe la grammatologie.-  
lEnglish. 1976-10-aOf 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.- 0-aLanguage 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

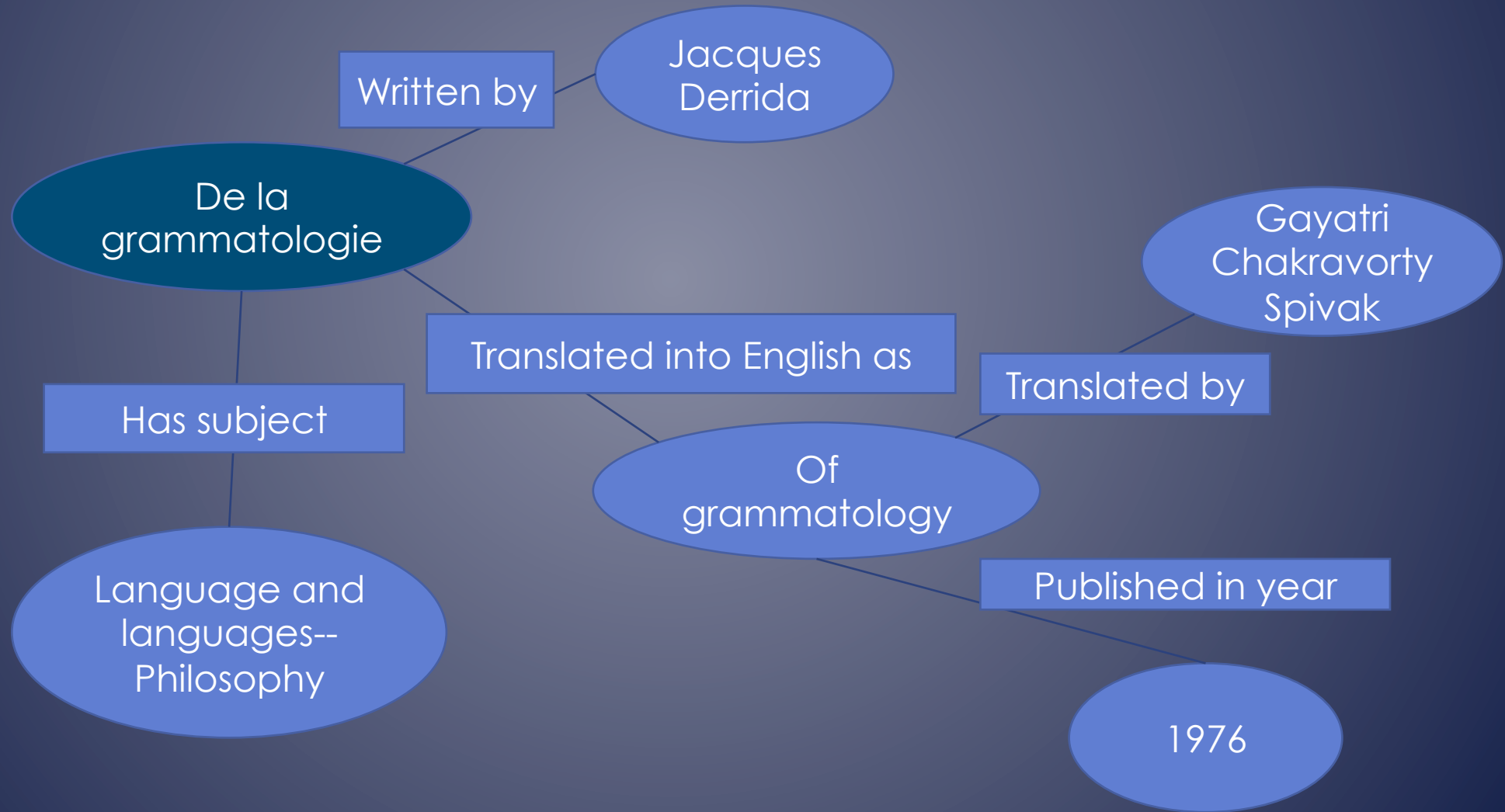




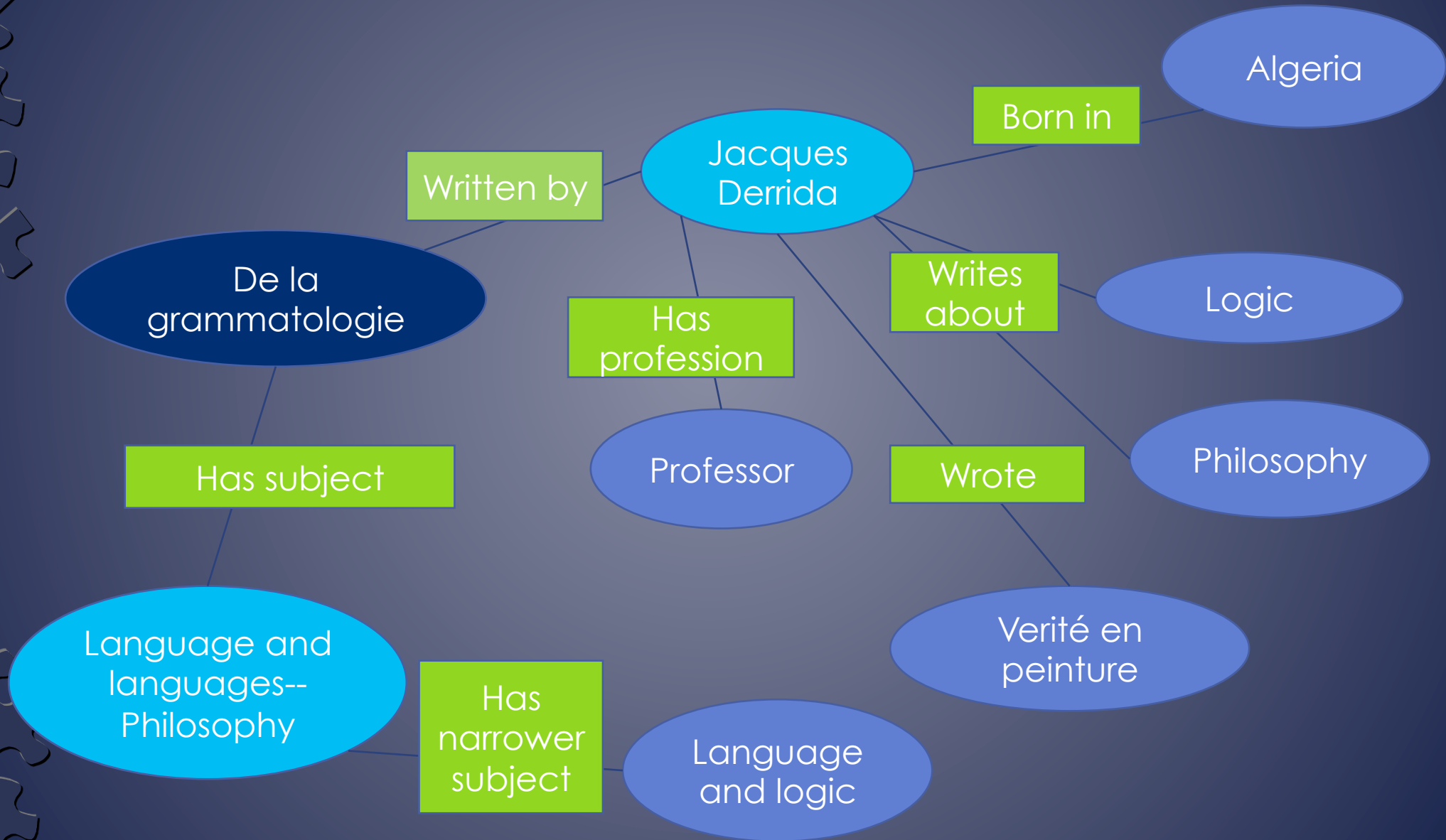
# Linked Data Concepts: Data as simple statements

- › De la grammatologie 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

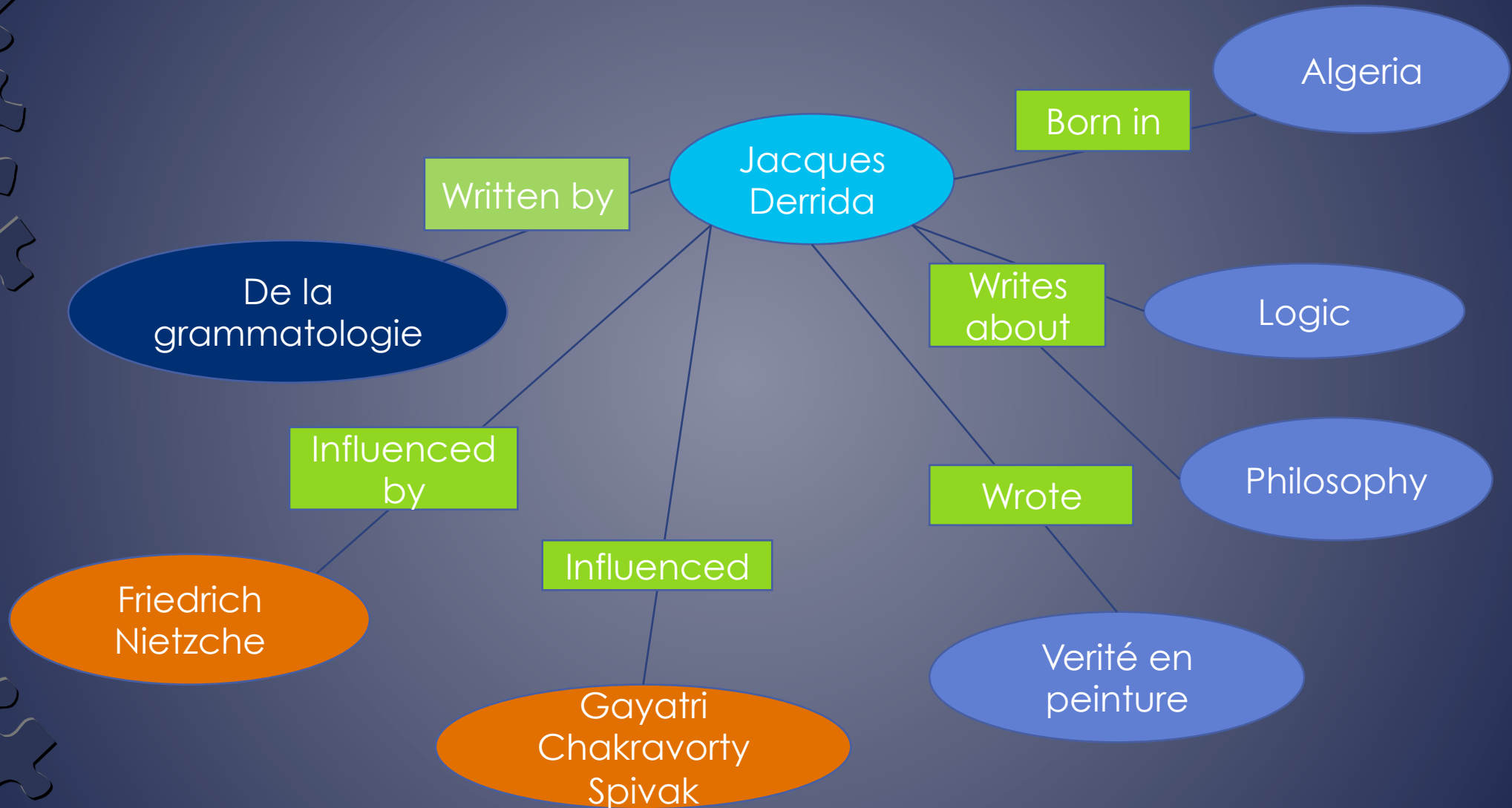
# Linked Data concepts: No records – join statements together



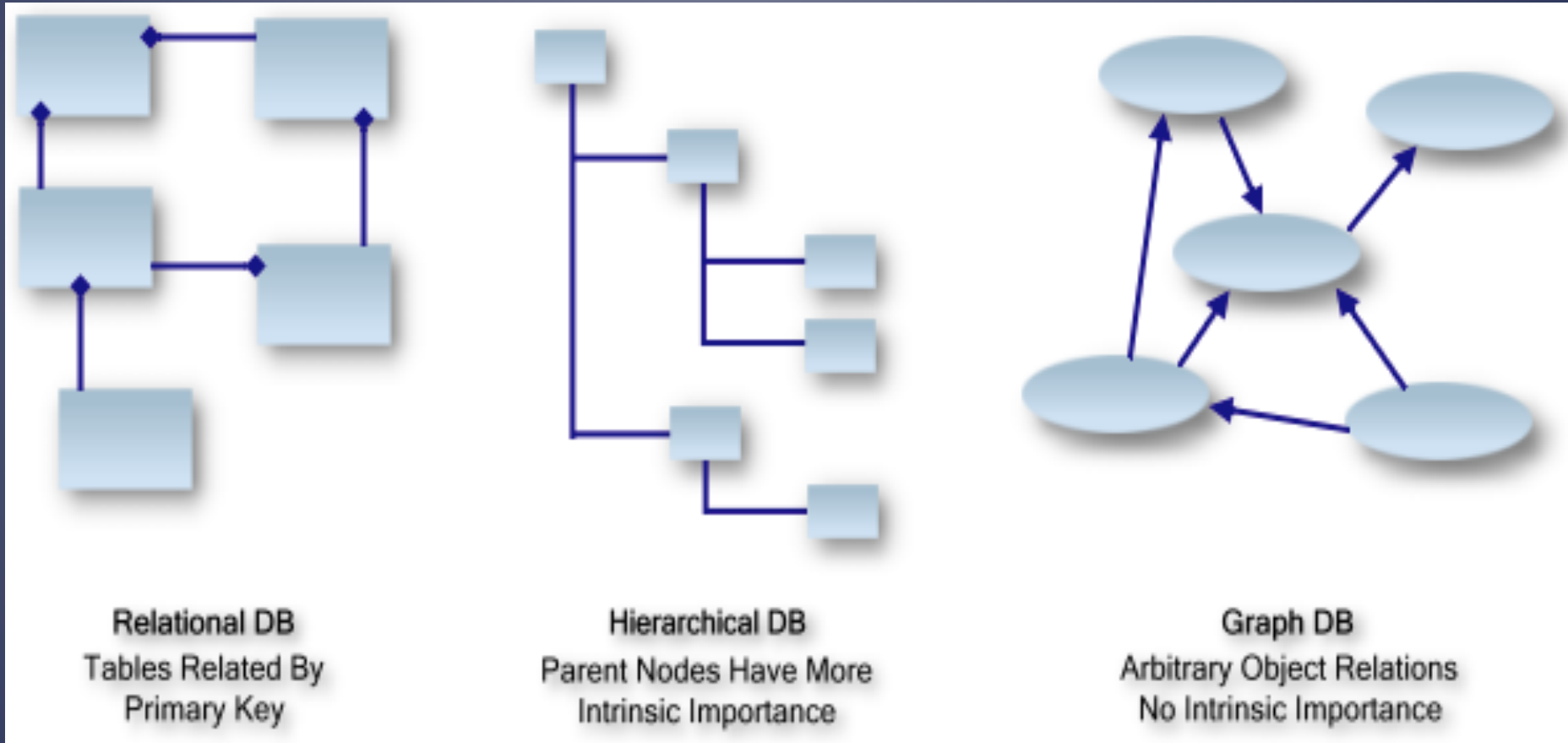
# Join with authority statements



# Join with external data



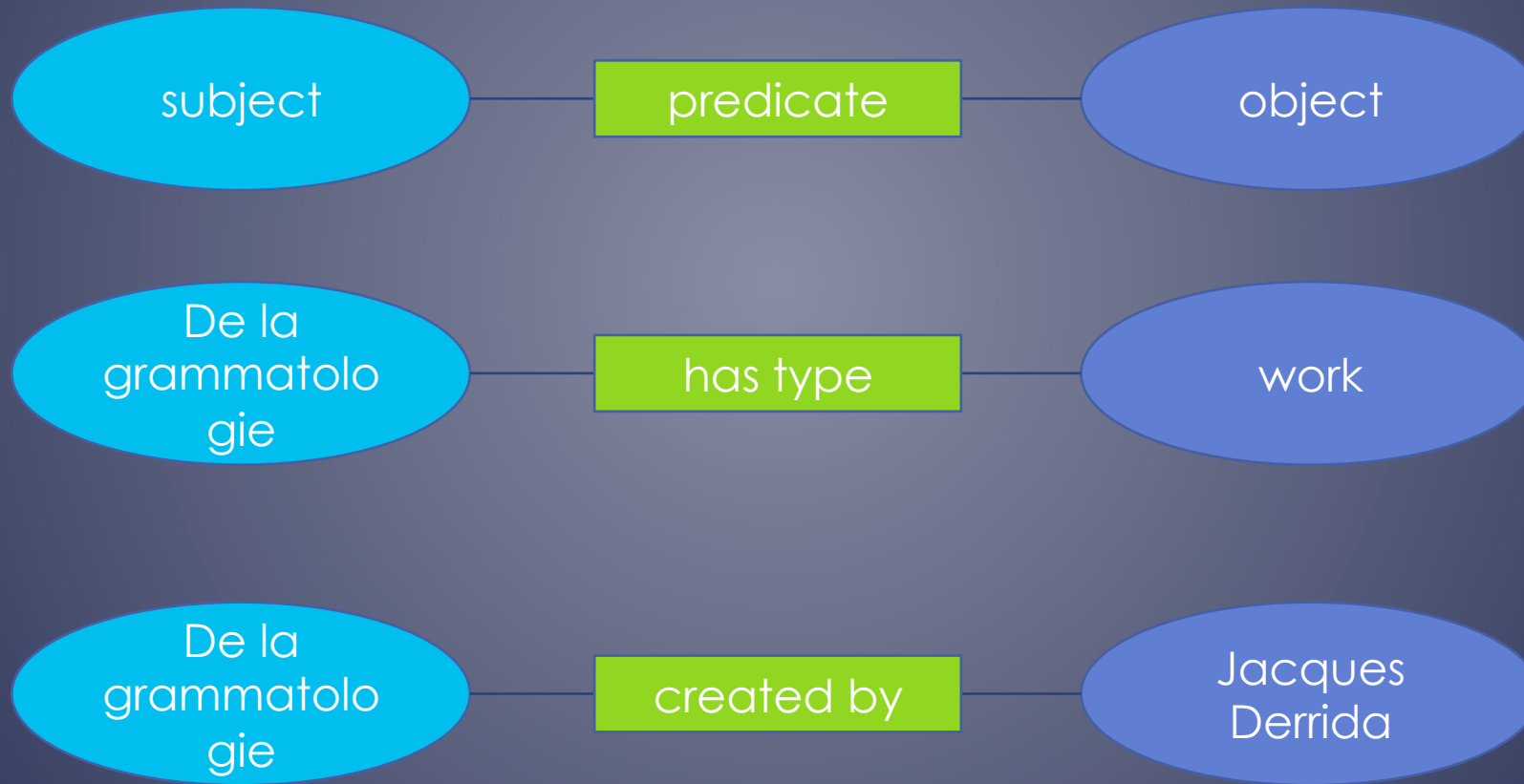
# Linked data concepts: Data in graphs



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

[http://  
www.worldcat.org  
/oclc/172143](http://www.worldcat.org/oclc/172143)

[http://  
metadataregis  
try.org/  
schemaprop/  
show/id/  
15368.html](http://metadataregistry.org/schemaprop/show/id/15368.html)

[http://viaf.org/  
viaf/88958529/](http://viaf.org/viaf/88958529/)

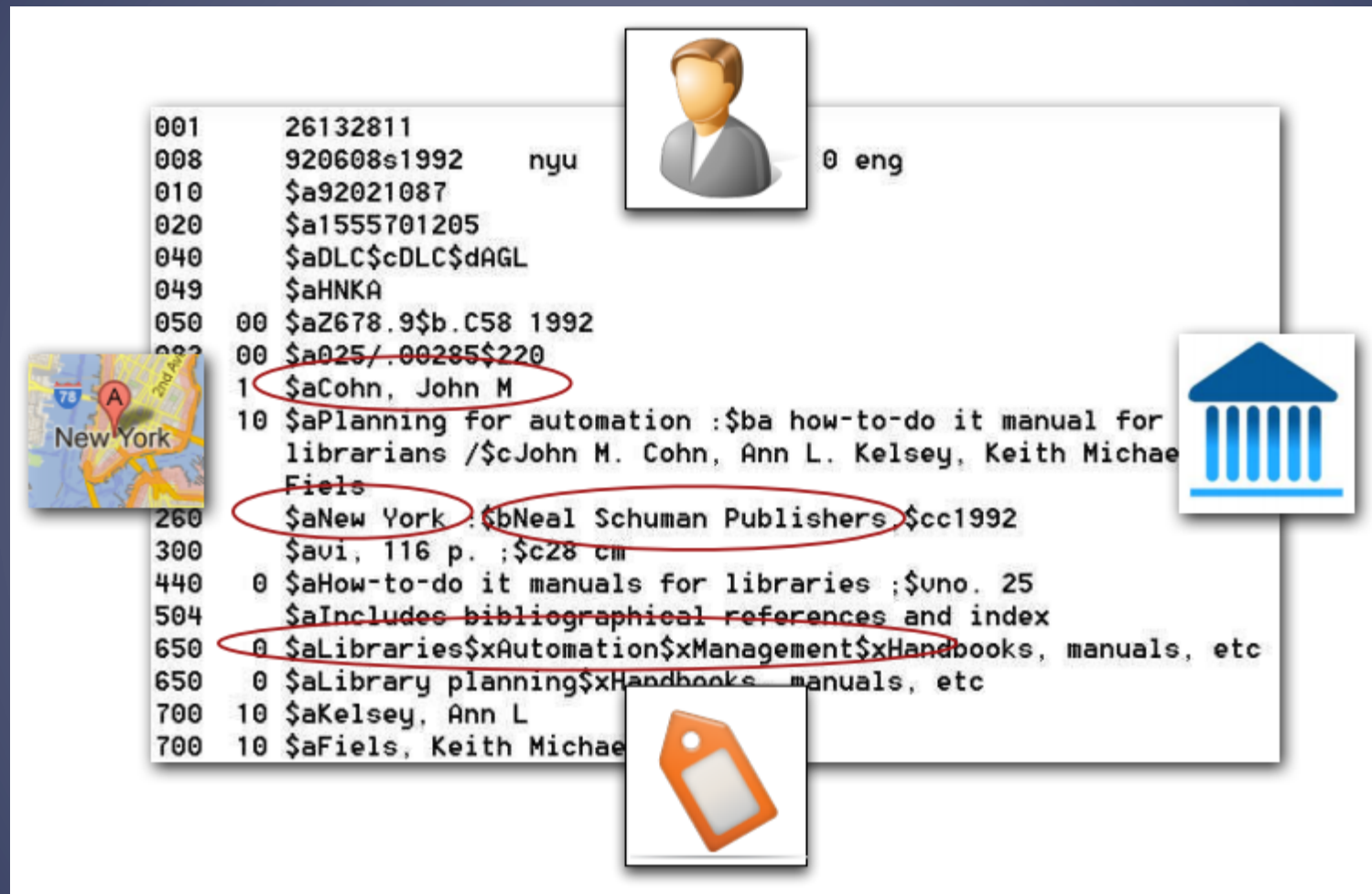


# Linked data in libraries

- › 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)



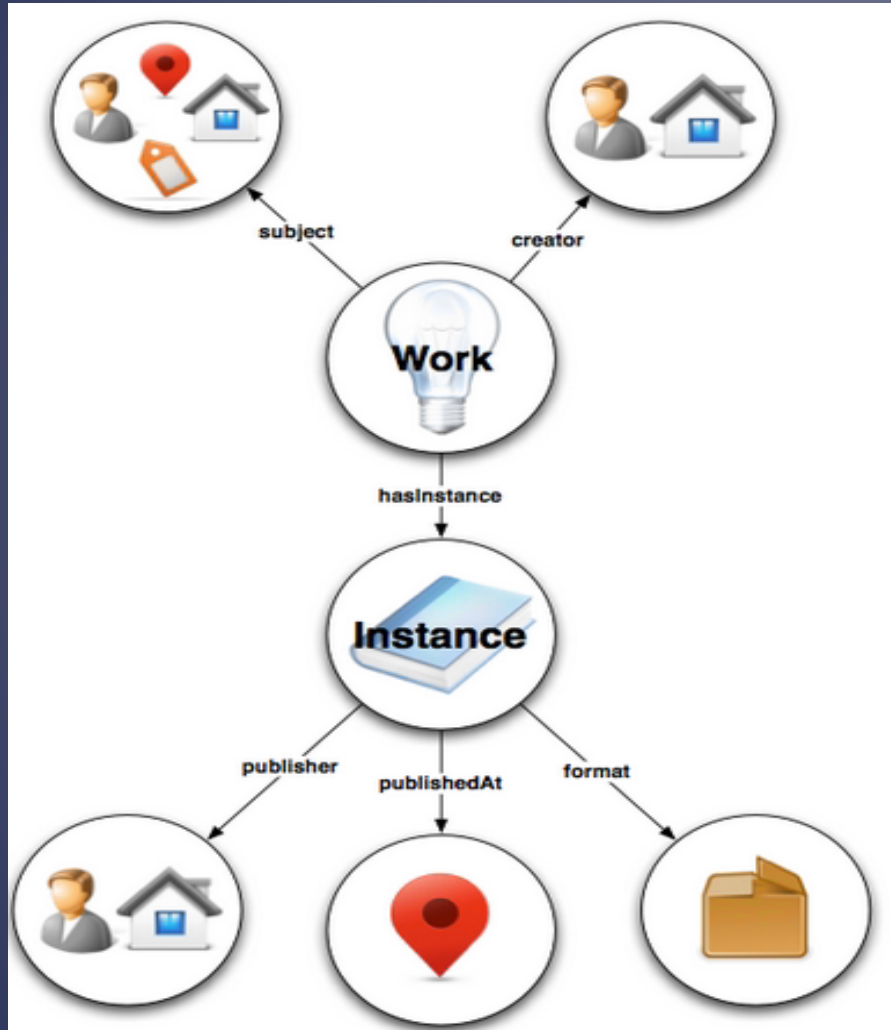
# Things in our MARC records



001 26132811  
008 920608s1992 nyu 0 eng  
010 \$a92021087  
020 \$a1555701205  
040 \$aDLC\$cDLC\$dAGL  
049 \$aHNKA  
050 00 \$aZ678.9\$b.C58 1992  
082 00 \$a025/.00285\$220  
1 \$aCohn, John M  
10 \$aPlanning for automation :\$ba how-to-do it manual for librarians /\$cJohn M. Cohn, Ann L. Kelsey, Keith Michael Fields  
260 \$aNew York :\$bNeal Schuman Publishers,\$cc1992  
300 \$avi, 116 p. ;\$c28 cm  
440 0 \$aHow-to-do it manuals for libraries ;\$uno. 25  
504 \$aIncludes bibliographical references and index  
650 0 \$aLibraries\$xAutomation\$xManagement\$xHandbooks, manuals, etc  
650 0 \$aLibrary planning\$xHandbooks, manuals, etc  
700 10 \$aKelsey, Ann L  
700 10 \$aFields, Keith Michael

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



## bf:BIBFRAME main classes

- › Creative Work
- › Instance
- › Authority
- › Annotation

53 Classes

289 Properties

Image source: Library of Congress. [Overview of the BIBFRAME Model](#)

# 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](http://bibfra.me))

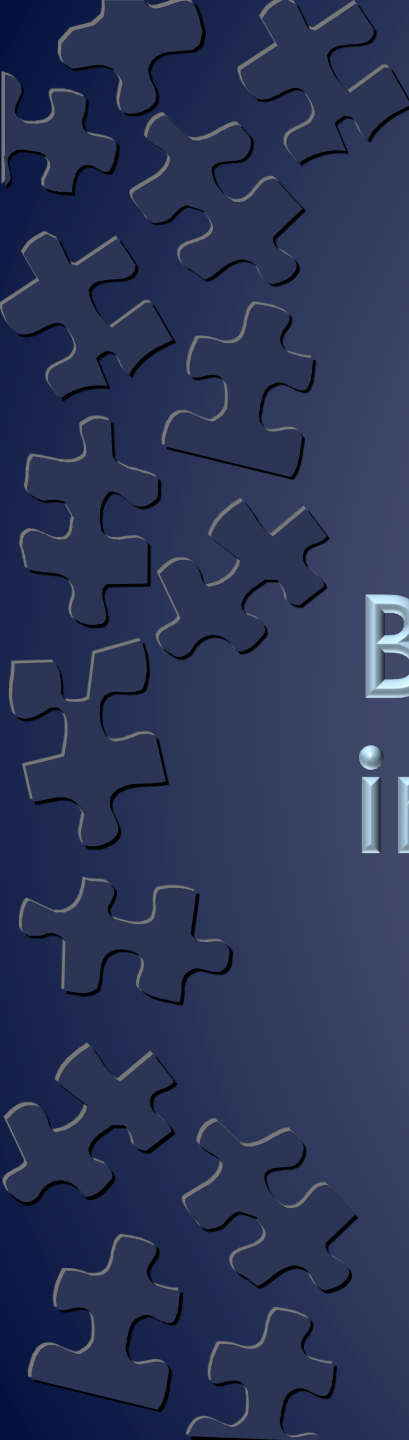
Slide from: Thomas Meehan "[BIBFRAME as a Library Linked Data Standard.](#)" CILIP Linked Data Executive Briefing 2015





# 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](#)

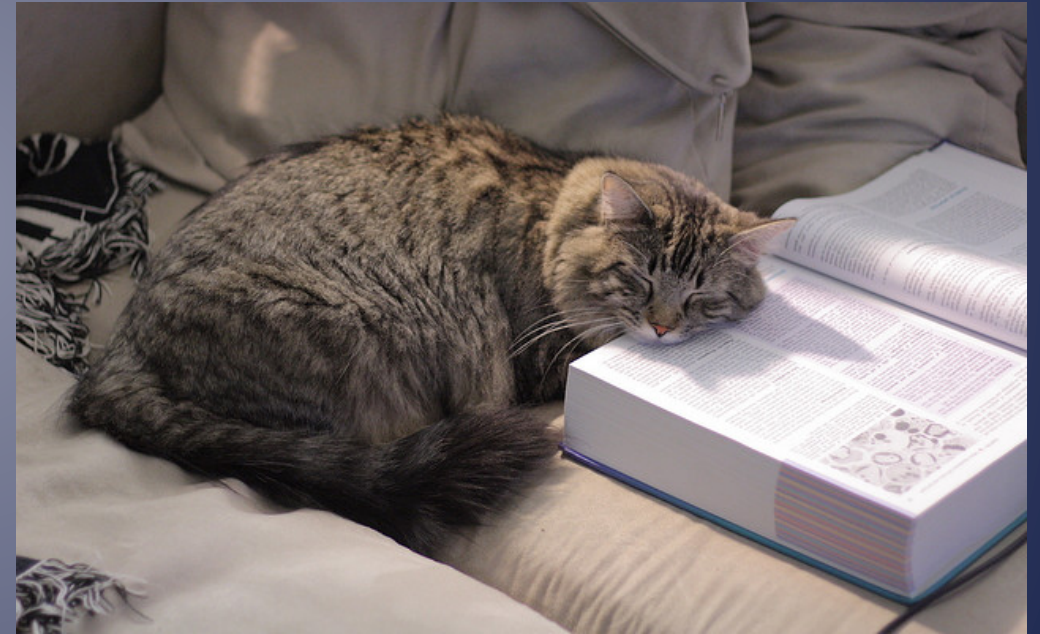


Photo credit: [Sage Ross](#) CC BY-SA 2.0

# Workflow

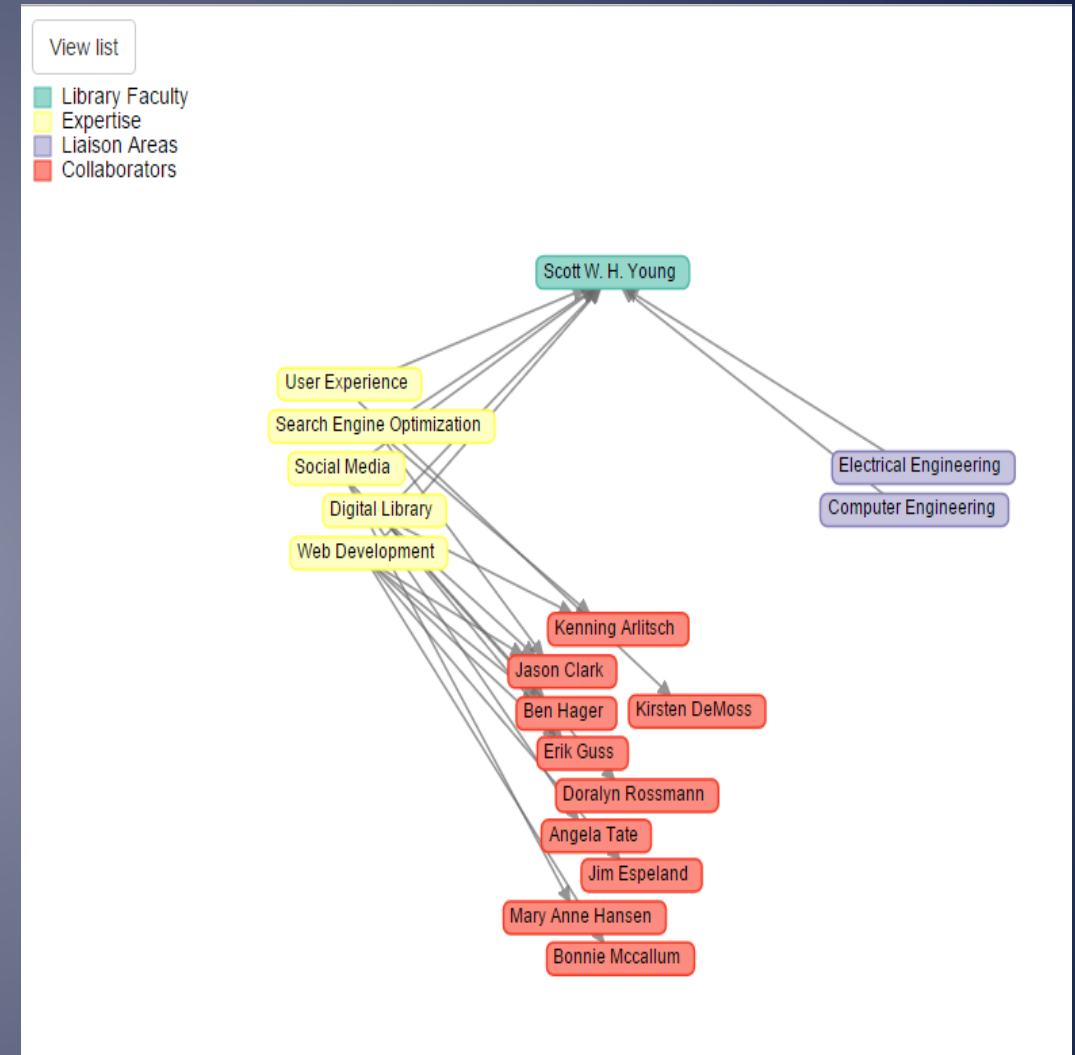
- › Beyond MARC transformation
- › Impact on technical services work
- › Impact on vendor systems
- › Example: UC Davis BIBFLOW project



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

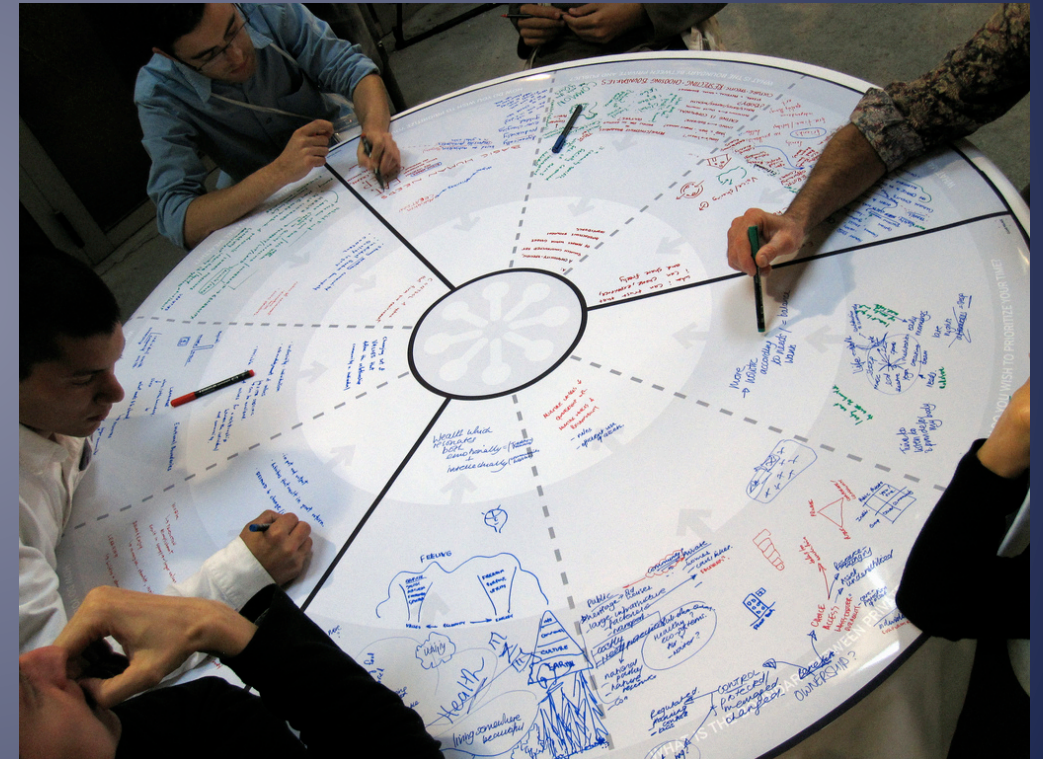



Image credit: [Jennifer Leonard](#) CC BY-NC-ND 2.0



# Q&A



## Contact

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  - Head, Digital Initiatives, University of Waterloo Library
- › Aida Rudnik [arudnik@hpl.ca](mailto:arudnik@hpl.ca)
  - Head, Technical Services, Hamilton Public Library
- › Christopher Carr [ccarr@hpl.ca](mailto: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/g212v178360/> (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>