

BIBFRAME BASICS



AMBER BILLEY Columbia University Libraries #NELA2015



ABOUT ME

- Catalog/Metadata Librarian
- Zepheira BIBFRAME alumna
- Curious by nature
- Early adopter
- Avid tinkerer
- @justbilley

AGENDA

1. Why BIBFRAME?
2. What is BIBFRAME?
3. How to BIBFRAME?
4. Where to BIBFRAME?
5. When to BIBFRAME?



WHY BIBFRAME?

WHY BIBFRAME

- Replace MARC
- Integrate and engage library data with the wider information community

REPLACE MARC?!

- It is just machine readable
- It is not machine actionable

MARC makes great cards.

PZ8
G882
F
14
Grimm, Jakob Ludwig Karl, 1785-1863.
Grimm's fairy tales; tr. from the German by Margaret
Hunt. Complete ed., illustrated by John B. Gruelle.
New York, Cupples and Leon company [1914]
6 p. l., 419 p. col. front., illus., col. plates. 25^{cm}. \$1.50
Illus. t-p.

Kinder und Hausmärchen
Eng.

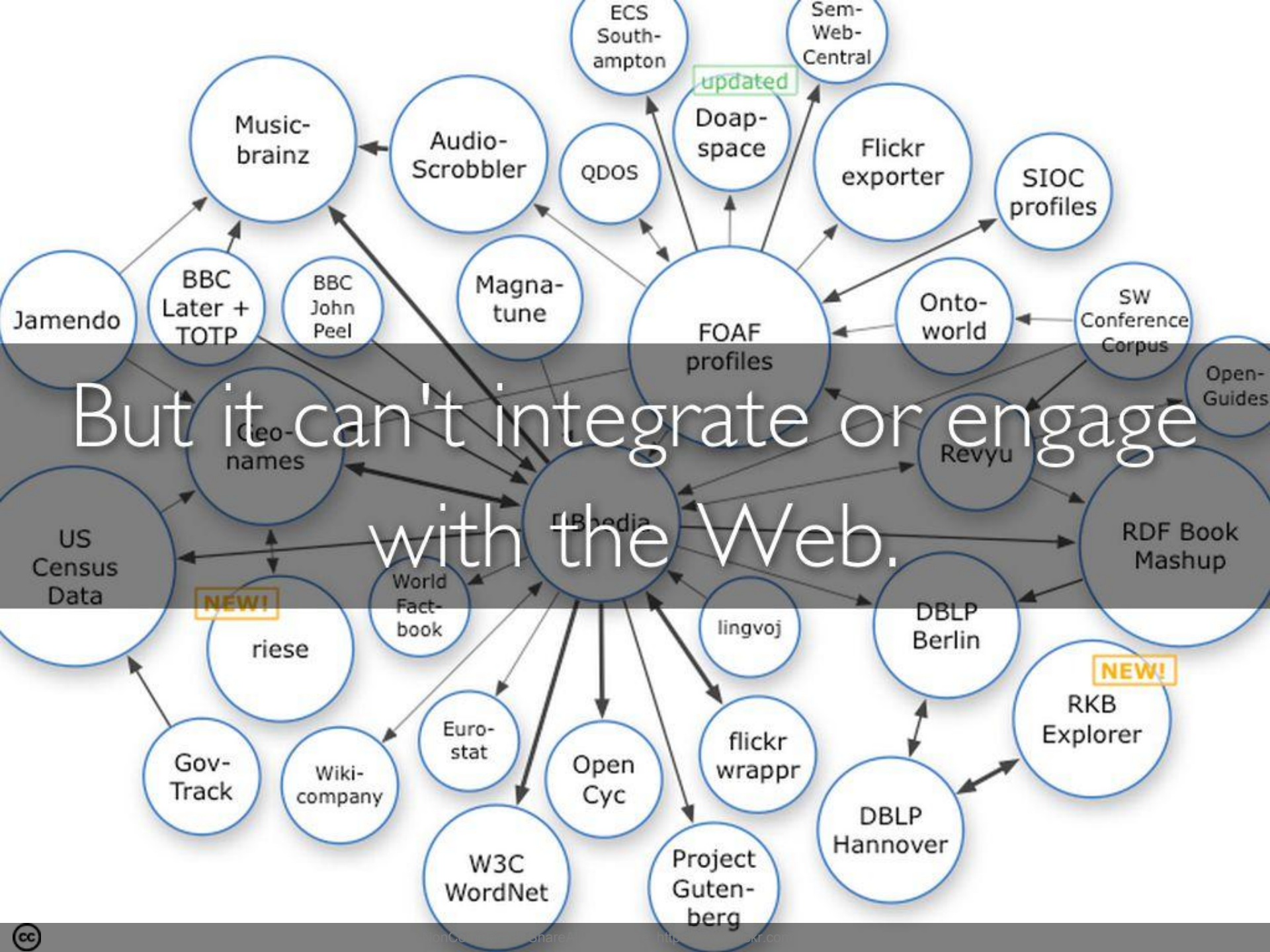
1. Fairy tales.
II. Hunt, Margaret, tr. I. Grimm, Jakob Ludwig Karl, 1786-1859, joint auth.
Copyright A 387044
PZ8.G882F 4
14-1812

© GlynLowe.com





MARC makes reliable data.



BECAUSE TIM BERNERS-LEE SAID SO
ENTER LINKED DATA



THE 4 RULES OF LINKED DATA

1. Use URIs to denote things
2. Use HTTP URIs so that these things can be referred to and looked up (dereferenced)
3. Provide useful information about the thing when its URI is dereferenced, leveraging standards (RDF & SPARQL)
4. Include links to other related things (using their URIs) when publishing data on the Web

Google

Beyonce

Web

News

Images

Videos

Shopping

More

Search tools

About 117,000,000 results (0.50 seconds)

In the news

MaryKate Green

Believe me, I understand. My name's Green. I get all of the Green names cause you see major like - Reply · 4/11/08 · April 11 at 1:00pm

16 Replies

Jane Bond

Checking in. I have to use my boyfriend's of reservations because people find the long. Then it's name is James. And it's (3)

Like · Reply · 4/11/08 · April 11 at 1:00pm

111 Replies · 1 hr

Chris Brown

I feel you like - Reply · 4/11/08 · April 11 at 1:00pm

Dozens of people with celebrity names converge in an epic Facebook thread to help cheer up a woman named Beyoncé

Business Insider · 6 hours ago

This is hilarious and sweet.

Facebook post from woman called Beyonce goes viral

Daily Mail · 10 hours ago

Girl gives her boyfriend a Beyonce test, and says she will dump him if she fails

mirror.co.uk · 3 hours ago

More news for Beyonce

Beyonce

www.beyonce.com/ · [Beyoncé](#) · [Music](#) · [Albums](#) · [Songs](#) · [Videos](#) · [DVDs](#) · [#BeyGood](#) · [Fragrance](#) · [Shop](#) · [Beyonce](#) · [Search](#) · [Join](#) · [Follow](#) · [Terms](#) · [Privacy](#) · [Music](#) · [#BeyGood](#) · [Fragrance](#) · [Shop](#)

Beyoncé - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Beyoncé · [Wikipedia](#)

Beyoncé Giselle Knowles-Carter is an American singer, songwriter, and actress. Born and raised in Houston, Texas, she performed in various singing and ...

[Beyoncé \(album\)](#) · [Jay-Z](#) · [Beyoncé discography](#) · [Mathew Knowles](#)

Beyoncé (@beyonce) • Instagram photos and videos

<https://instagram.com/beyonce/>

See Instagram photos and videos from Beyoncé (@beyonce)

Beyoncé's Facebook

Linked data is everywhere



Beyoncé

Singer-songwriter

Ads

Listen now

Google Play

Rhapsody

iTunes

Beyoncé Giselle Knowles-Carter is an American singer, songwriter, and actress. Born and raised in Houston, Texas, she performed in various singing and dancing competitions as a child, and ...

[Wikipedia](#)

Born: September 4, 1981 (age 33), Houston, TX

Spouse: Jay-Z (m. 2008)

Children: Blue Ivy Carter

LINKED DATA



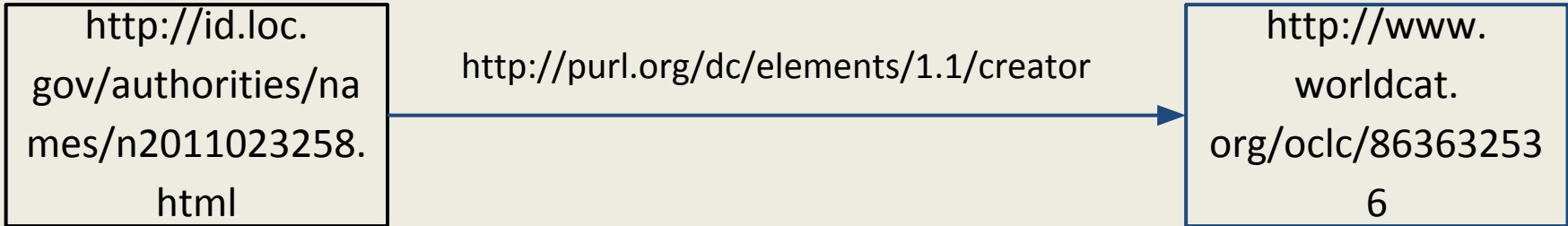
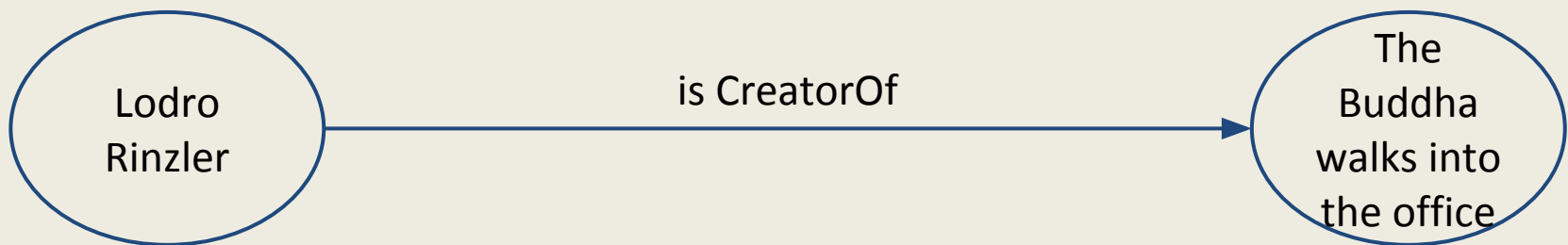
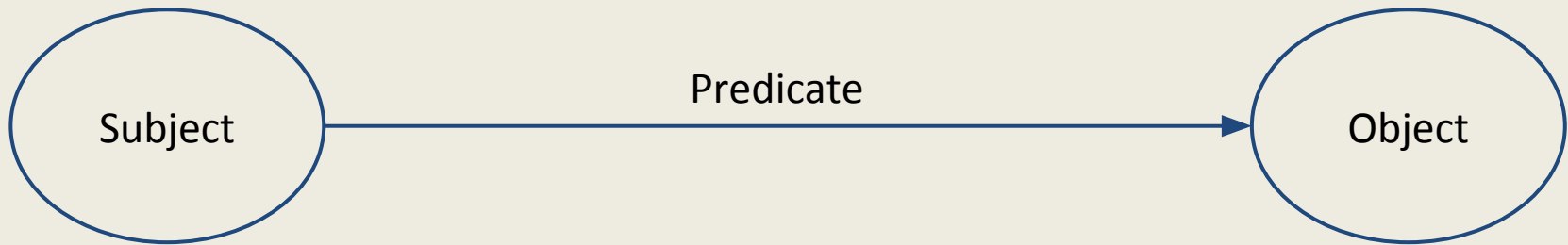
IS ALL ABOUT RELATIONSHIPS



RDF : THE FOUNDATION OF LINKED DATA

- Resource Description Framework
- RDF is a standard model for data interchange on the Web.
- It creates the relationships between things on the Web.

RDF Triple



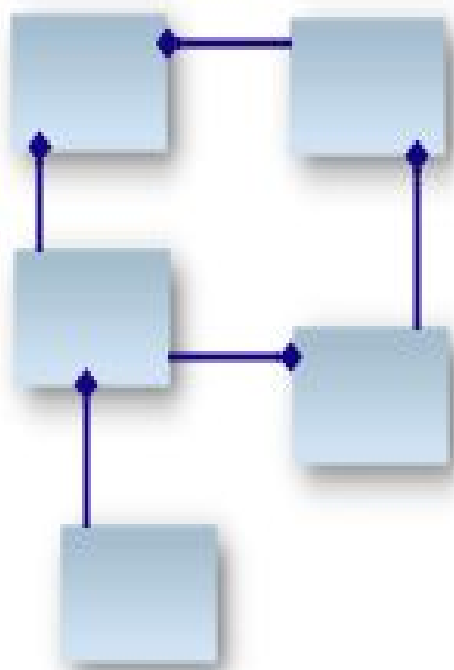
RDF Triple in XML

```
<?xml version="1.0"?>
<!DOCTYPE rdf:RDF PUBLIC "-//DUBLIN CORE//DCMES DTD 2002/07/31//EN"
    "http://dublincore.org/documents/2002/07/31/dcmes-xml/dcmes-xml-dtd.dtd">

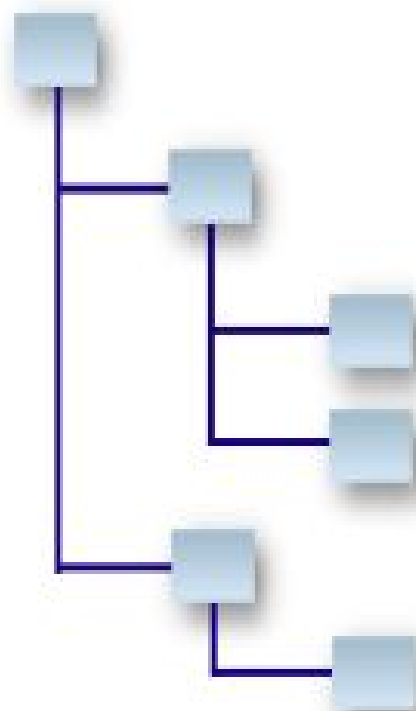
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns:dc=" http://purl.org/dc/elements/1.1/ ">

  <rdf:Description rdf:about=" http://www.worldcat.org/oclc/863632536http://id.loc.gov/authorities/names/n2011023258.html</dc:creator>
    <dc:publisher>Boston : Shambhala</dc:publisher>
    <dc:date>2014</dc:date>
  </rdf:Description>

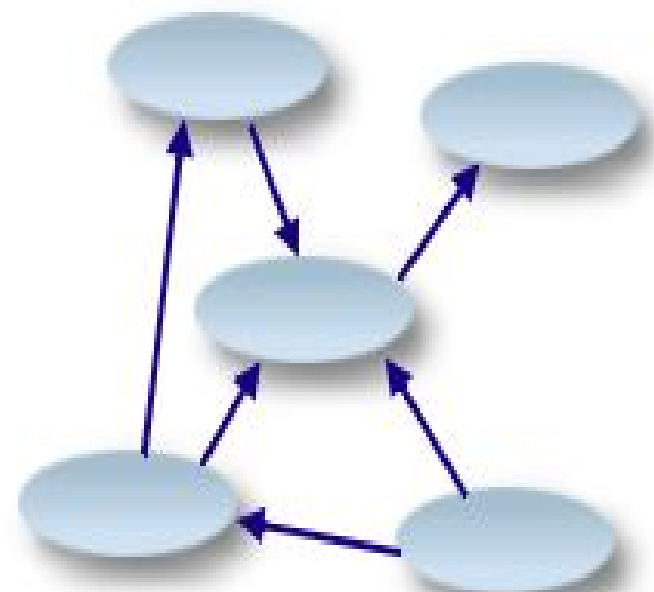
</rdf:RDF>
```



Relational DB
Tables Related By
Primary Key

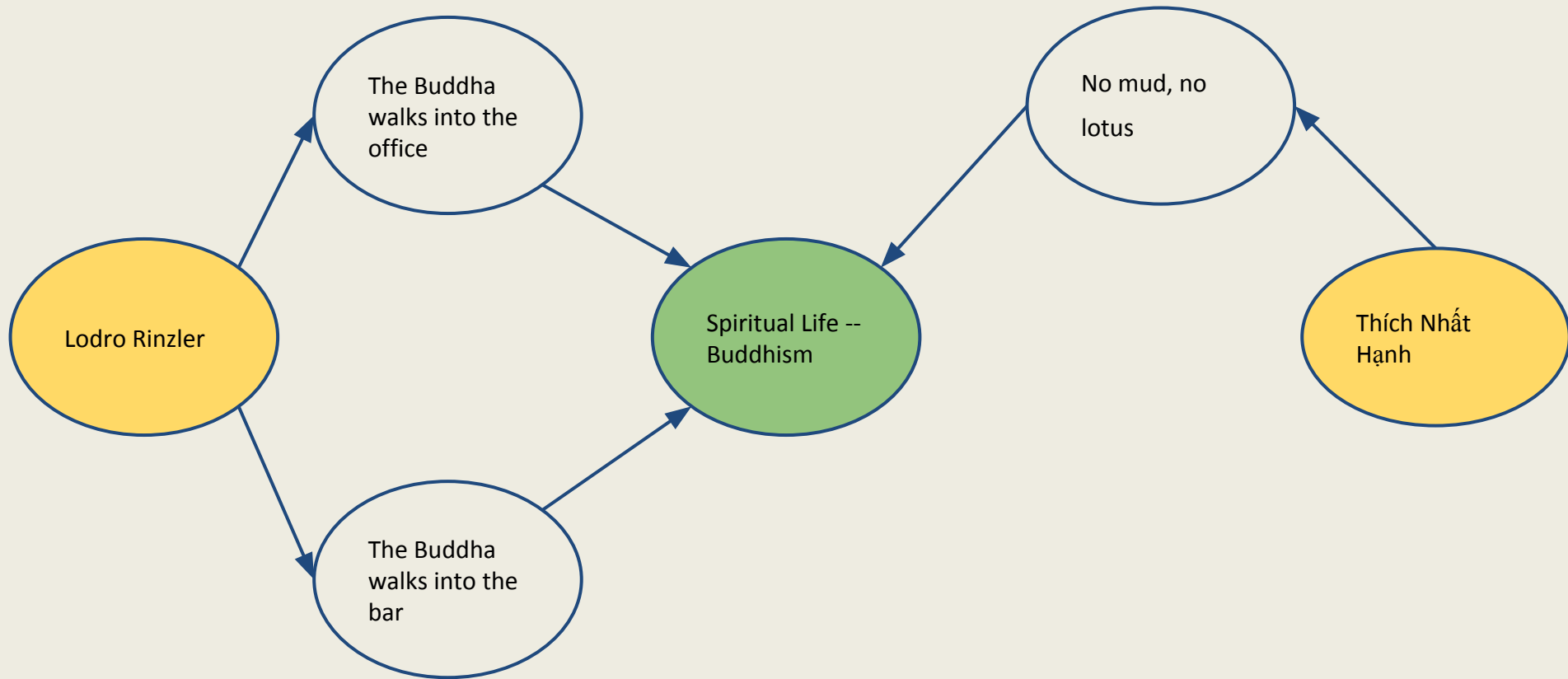


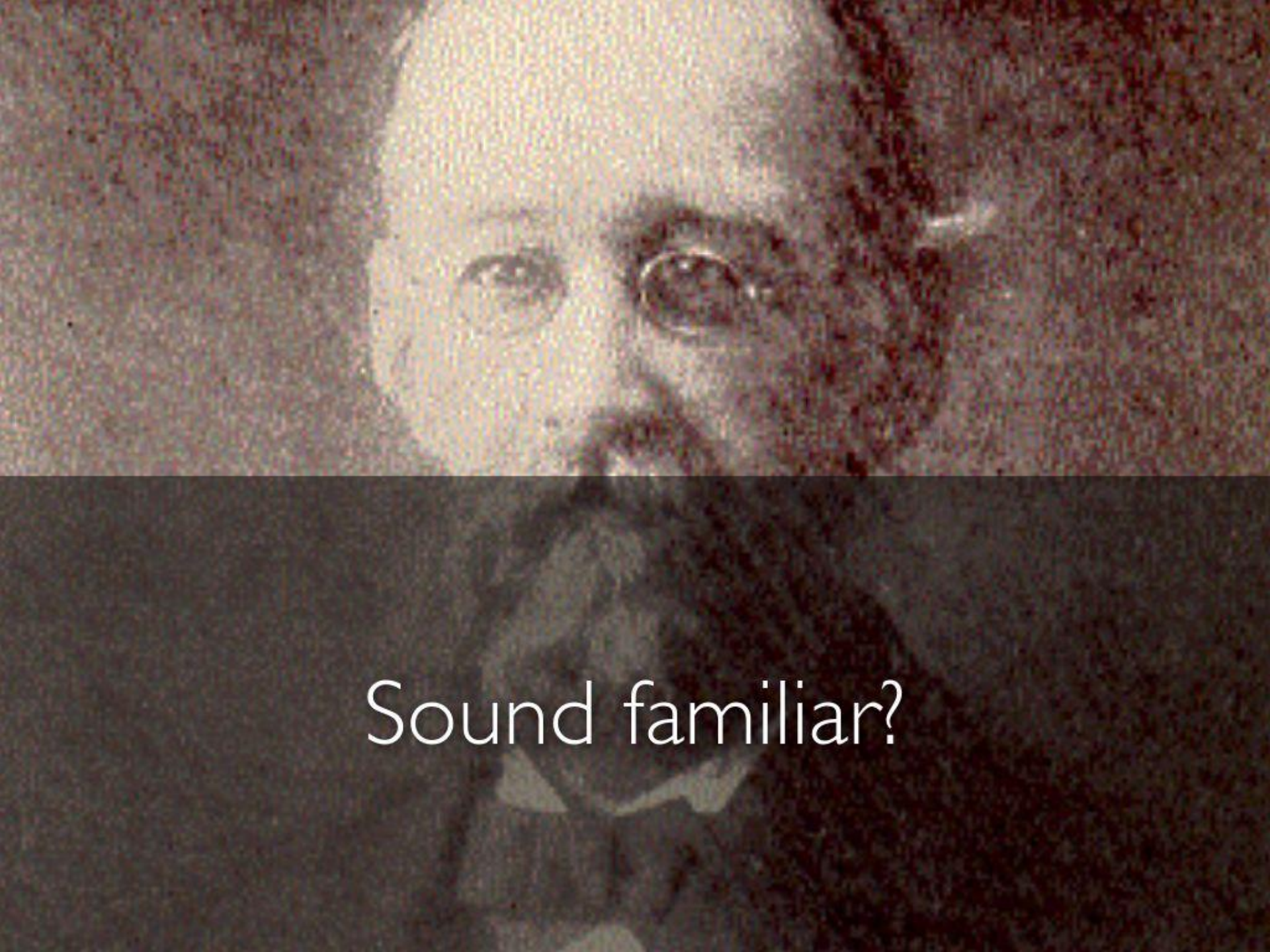
Hierarchical DB
Parent Nodes Have More
Intrinsic Importance



Graph DB
Arbitrary Object Relations
No Intrinsic Importance

Graph data structure





Sound familiar?

CHARLES AMNI CUTTER (1876)

PURPOSES OF A CATALOG

1. TO ENABLE A PERSON TO FIND A DOCUMENT OF WHICH

- THE AUTHOR, OR
- THE TITLE, OR
- THE SUBJECT IS KNOWN
- **LOCATION**

2. TO SHOW WHAT THE LIBRARY HAS

- BY A GIVEN AUTHOR
- ON A GIVEN SUBJECT
- IN A GIVEN KIND OF LITERATURE
- **COLLOCATION**

3. TO ASSIST IN THE CHOICE OF A DOCUMENT

- BIBLIOGRAPHICALLY (E.G. EDITION, FORMAT, ETC.)
- AS TO ITS CHARACTER (I.E. LITERARY OR TOPICAL)
- **RECOMMENDATION**

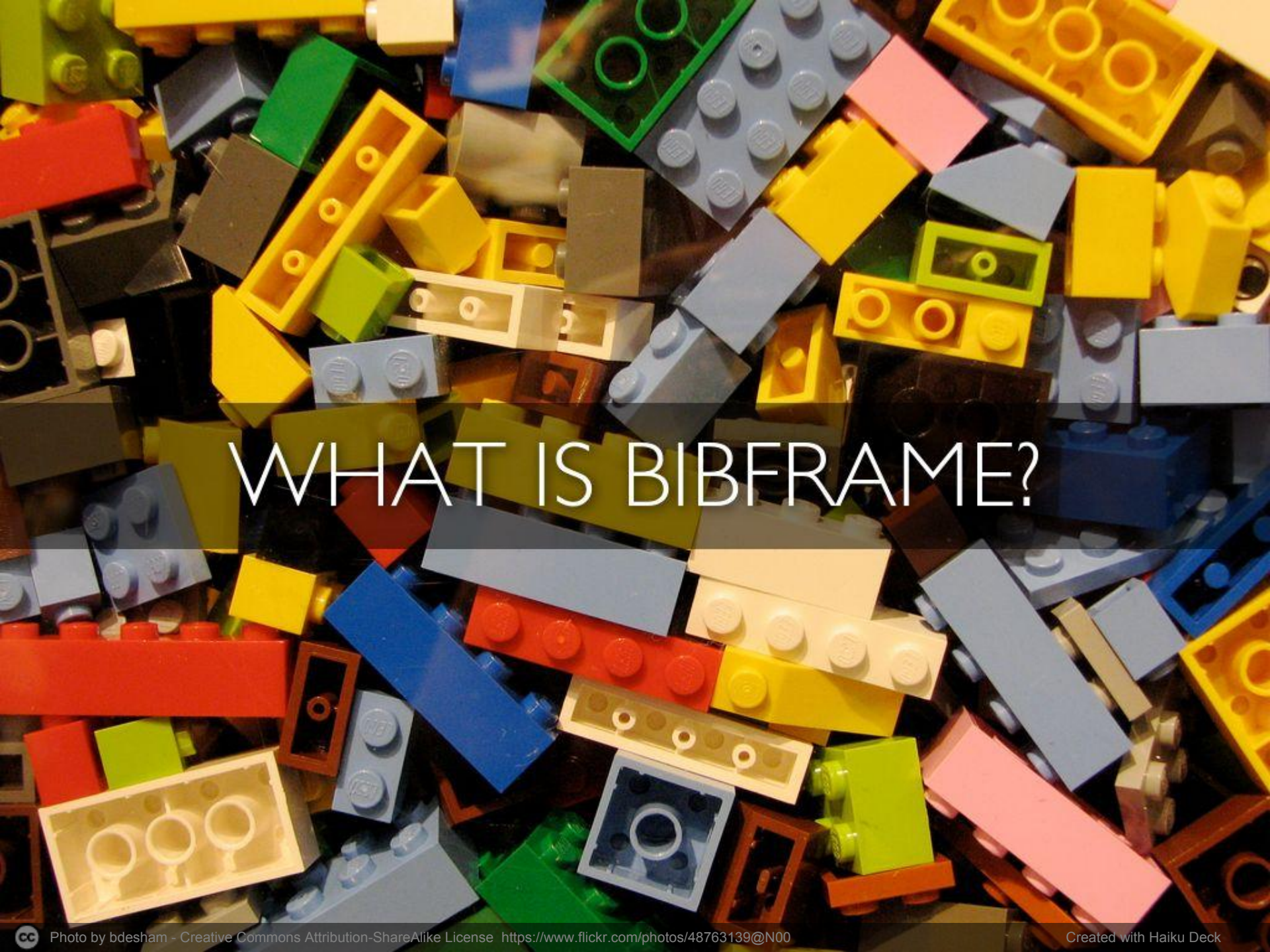


EXPRESSING LINKED DATA

- RDF/XML
- RDFS
- JSON
- Turtle

STANDARDIZING LINKED DATA

- Vocabularies
- Ontologies
- Enter BIBFRAME!



WHAT IS BIBFRAME?

WHAT IS BIBFRAME?

- Replacement for MARC
- Bibliographic relationship model
- Vocabulary for creating bibliographic metadata as linked data

Primary Descriptive Cataloging Model (in Libraries) and their Rules

Structure Standard

- ISBD, MARC, FRBR, Dublin Core, EAD, MODS, VRACore, CIDOC, **BIBFRAME!**

Content Standard

- AACR2, RDA, CCO, DACS, ...

Encoding Standard

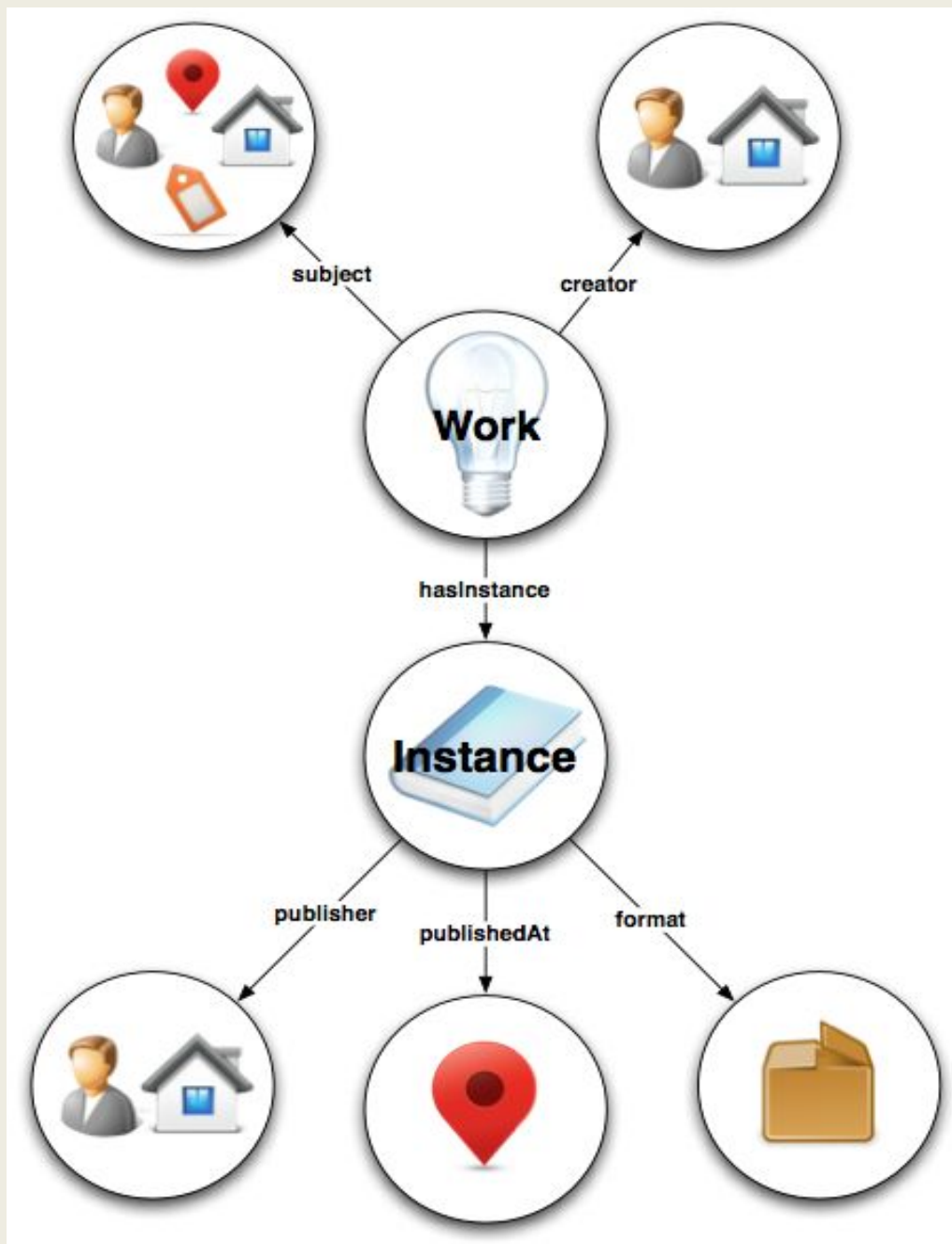
- 3x5 card, MARC, CVS, XML, RDF-XML, JSON, ...

Value Standard

- LCSH, NAF, LCGFT, RDA Vocabularies, RBMS Thesauri, AAT, ...

#MARCMUSTDIE

- BIBFRAME was designed to convert legacy MARC
- It also can be used to create new bibliographic information as linked data
- Imagine what search engines could do with library data!



BIBFRAME IS A VOCABULARY

- Classes - are a type of thing (subjects or objects)
- Properties - connect or relate resources to each other (predicates)

ORGANIZATION OF BIBFRAME

- 4 "Main" Classes
- 52 Classes
- 272 Properties

"MAIN" CLASSES

1. Works
2. Instances
3. Authorities
4. Annotations

Let's explore!

<http://bibframe.org/vocab/>



HOW TO BIBFRAME

HOW TO BIBFRAME

- Code
- Scribe
- Customize
- Transform
- Store
- Deliver

=LDR 02770cam 2200505 i 4500
 =010 \\\$a 2013043415
 =040 \\\$aDLC\$beng\$Serda\$cDLC\$dIG#\$dYDXCP\$dBDX\$dBTCTA\$dOCLCF\$dJP3\$dILC
 =019 \\\$a866615188\$a889890432\$a889958881
 =020 \\\$a9781611800616 (alk. paper)
 =020 \\\$a1611800617 (alk. paper)
 =035 \\\$a(OCOLC)863632536\$z(OCOLC)866615188\$z(OCOLC)889890432\$z(OCOLC)889958881
 =042 \\\$apcc
 =050 00\$aBQ4570.B86\$bR56 2014
 =082 00\$a294.3/444\$223
 =100 1\\\$aRinzler, Lodro.
 =245 14\$aThe Buddha walks into the office :\$ba guide to livelihood for a new generation /\$cLodro Rinzler.
 =250 \\\$aFirst edition.
 =264 \1\$aBoston :\$bShambhala,\$c[2014]
 =300 \\\$axiv, 217 pages ;\$c22 cm
 =336 \\\$atext\$2rdacontent
 =337 \\\$aunmediated\$2rdamedia
 =338 \\\$avolume\$2rdacarrier
 =504 \\\$aIncludes bibliographical references.
 =520 \\\$aDoes it ever seem that a lot of the people you work with are jerks? This book is about how not to let work turn you into one of them. Apply the simple Buddhist teachings and practices Lodro Rinzler provides here to whatever you do for a living, and you'll not only avoid jerk-hood, but you'll be setting out on the path toward making your livelihood an expression of your inherent wisdom, honesty, and compassion. In the process, you'll discover genuine empathy for the folks you once found so difficult. You'll also learn leadership skills that apply compassion to management in a way that increases happiness along with efficiency. As Lodro shows, even if the path of work shifts beneath your feet, it's possible to make your livelihood a source of satisfaction and of deep meaning.
 =505 0\\\$aHinayana: live with purpose -- Mahayana: on-the-job compassion -- Mahayana: six tools for compassionate leadership -- Vajrayana: be awake for each moment.
 =650 \0\$aBusiness\$xReligious aspects\$xBuddhism.
 =650 \0\$aInterpersonal relations\$xReligious aspects\$xBuddhism.
 =650 \0\$aQuality of work life.
 =650 \0\$aSpiritual life\$xBuddhism.

Our old friend, MARC

```

<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <bf:Work xmlns:bf="http://bibframe.org/vocab/" xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#" xmlns:
madsrdf="http://www.loc.gov/mads/rdf/v1#" xmlns:relators="http://id.loc.gov/vocabulary/relators/" rdf:about="http:
//bibframe.org/resources/cgE1428510453/ocn863632536">
    <rdf:type rdf:resource="http://bibframe.org/vocab/Text"/>
    <bf:authorizedAccessPoint>Rinzler, Lodro. The Buddha walks into the office :a guide to livelihood for a new
generation</bf:authorizedAccessPoint>
    <bf:workTitle rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536title5"/>
    <bf:title xml:lang="x-bf-sort">Buddha walks into the office :</bf:title>
    <bf:creator rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536person7"/>
    <bf:contentCategory rdf:resource="http://id.loc.gov/vocabulary/contentTypes/txt"/>
    <bf:language rdf:resource="http://id.loc.gov/vocabulary/languages/eng"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic11"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic12"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic13"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic14"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic15"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic16"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic17"/>
    <bf:subject rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536topic18"/>
    <bf:classificationLcc rdf:resource="http://id.loc.gov/authorities/classification/BQ4570.B86"/>
    <bf:classification rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536classification20"/>
    <bf:derivedFrom rdf:resource="http://bibframe.org/resources/cgE1428510453/ocn863632536.marcxml.xml"/>
    <bf:authorizedAccessPoint
</bf:Work>

```

```
[
{
  "@id": "http://example.org/1f907792-fa71-881d-8b3c-675880ae2fe0",
  "@type": [
    "http://bibframe.org/vocab/Work"
  ],
  "http://bibframe.org/vocab/authorizedAccessPoint": [
    {
      "@value": "Rinzler, Lodro"
    }
  ],
  "http://bibframe.org/vocab/title": [
    {
      "@value": "The Buddha walks into the office : a guide to livelihood for a new generation"
    }
  ],
  "http://id.loc.gov/vocabulary/relators/aut": [
    {
      "@id": "http://example.org/705edefd-00e7-4f9f-ac2c-960103274353"
    }
  ],
  "http://bibframe.org/vocab/originDate": [
    {
      "@value": "2014"
    }
  ],
  "http://bibframe.org/vocab/subject": [
    {
      "@id": "http://example.org/1248bdc0-9a4d-f8ce-601d-578764e962b9"
    }
  ]
},
]
```

JSON-LD

BIBFRAME EDITOR

- An open source tool for creating BIBFRAME metadata
- Available to test on the web
- Available for download
- <http://bibframe.org/tools/> LINK

CUSTOMIZE

- BIBFRAME profiles
- Profiles allow for custom editor interfaces
- Currently only locally hosted installs can be customized using profiles

BIBFRAME Lite

- A “modular, layered vocabulary management” subset of the full BIBFRAME ontology
- “Serve as a basis for further scoping by BIBFRAME profiles”
- “Demonstrate the flexibility of BIBFRAME”
- <http://www.bibfra.me/>

TRANSFORM

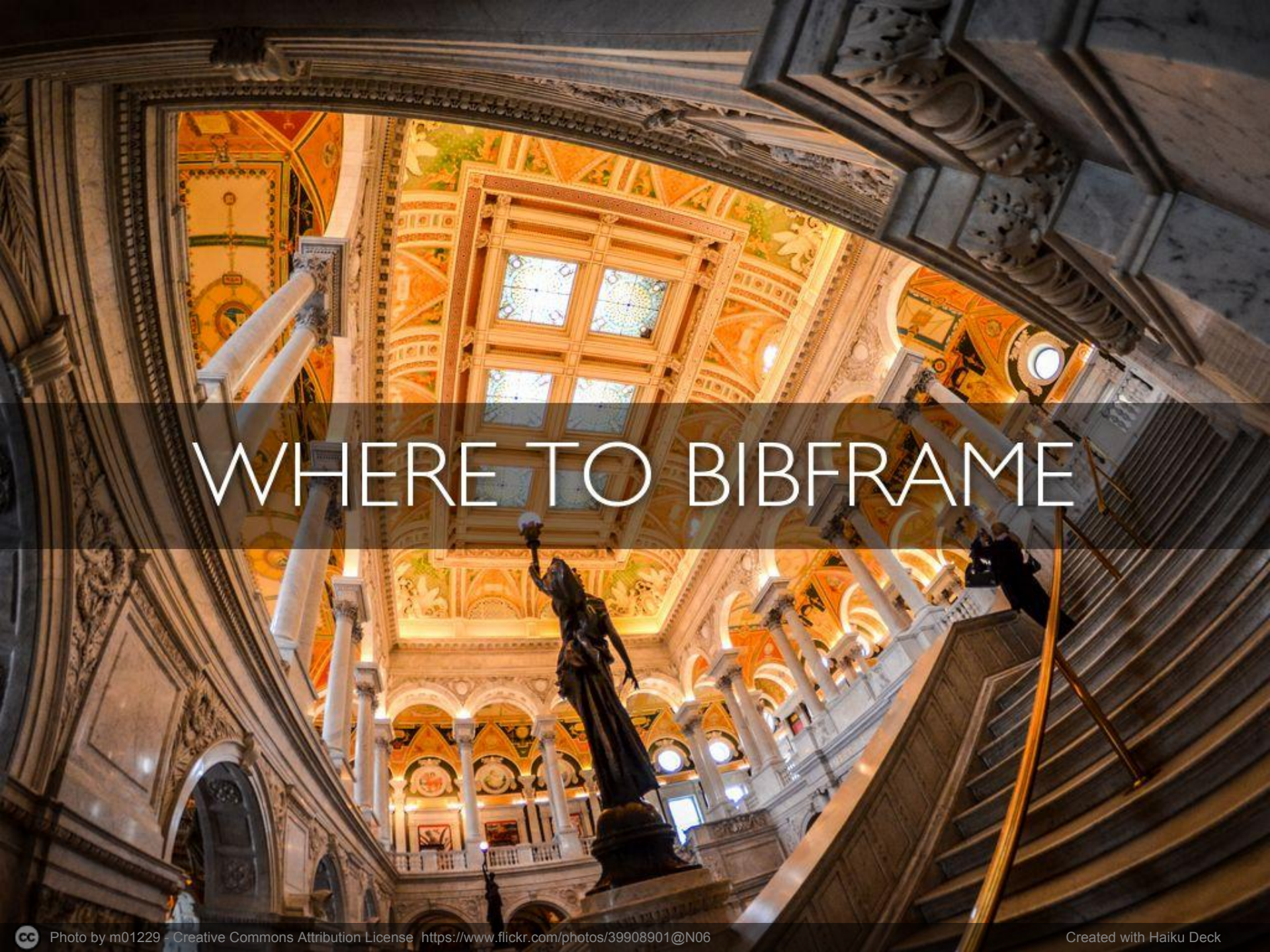
- MARC to BIBFRAME Transformation Service
- Supply URL to MARCXML data
- OR paste MARCXML data
- <http://bibframe.org/tools/transform/start> LINK

STORE

- storage of bibframe data is up to implementers.
- nosql database
- a triplestore
- Library of Congress with developer partners are working on pilot projects

DELIVER

- Test your own dataset
- Look at a demonstration dataset
- <http://www.loc.gov/bibframe/implementation/> [LINK](#)

A low-angle, wide shot of a grand, ornate interior space, likely a library or a grand hall. The ceiling is high and features a complex, colorful geometric and floral pattern. Large, arched windows with stained glass are visible. The walls are lined with tall, white columns. In the center, a large, dark statue of a figure holding a torch stands on a pedestal. To the right, a wide, curved staircase with a wooden railing leads upwards. The overall atmosphere is one of historical grandeur and architectural detail.

WHERE TO BIBFRAME

WHERE TO BIBFRAME

- Only a handful of institutions are developing and testing BIBFRAME
- Implimentation register
- <http://www.loc.gov/bibframe/implementation/register.html>

[LINK](http://www.loc.gov/bibframe/implementation/register.html)



WHEN TO BIBFRAME

WHEN TO BIBFRAME

- not yet
- not really even soon
- but you can test it out

WHAT'S NEXT?



[LD4L](#)

- Continued testing and development by implimenters
- Researchers are developing use cases, vocabularies comparisons, and tools

STAY IN TOUCH!

- BIBFRAME listserv :-/
- Renegade BIBFRAME Slack group :-)
- #BIBFRAME
- #ldmodels
- #mashcat

WEBLIOGRAPHY

- http://en.wikipedia.org/wiki/Linked_data
- <http://www.loc.gov/bibframe/pdf/marclid-report-11-21-2012.pdf>
- <http://www.loc.gov/bibframe/>
- <http://bibframe.org/>
- <http://www.w3.org/RDF/>
- <http://www.oclc.org/research/publications/2015/oclcresearch-loc-linked-data-2015.html>



THANK YOU!

ANY QUESTIONS?