The Strongest Link: Libraries and the Web of Linked Data

Click to edit Master subtitle style
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Memorial University of Newfoundland

Emerging Technologies in Academic Libraries 2010
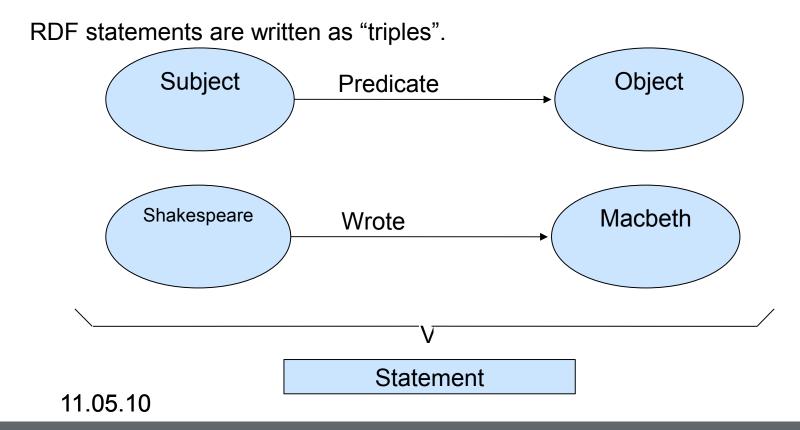Trondheim, Norway - April 2010

What is Linked Data?

- To employ the RDF data model to publish structured data on the Web.

- To [use http URIs] to set explicit RDF links between data items within different data sources.

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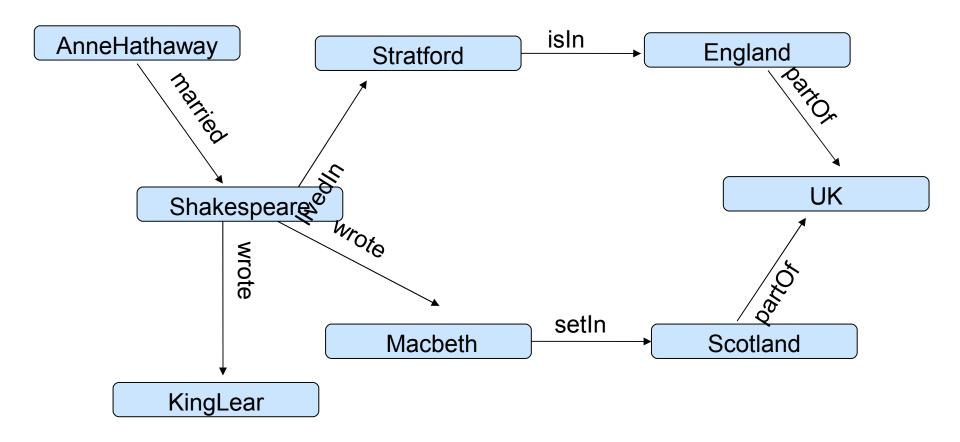# RDF Triples

Data model for writing simple statements about web objects.

RDF statements are written as "triples".

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RDF Triples

Subject	Predicate	Object
Shakespeare	Wrote	King Lear
Shakespeare	Wrote	Macbeth
Anne Hathaway	Married	Shakespeare
Shakespeare	Lived in	Stratford
Stratford	Is in	England
Macbeth	Set in	Scotland
England	Part of	UK
Scotland	Part of	UK

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RDF Graph: A Semantic Net
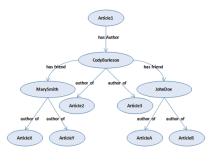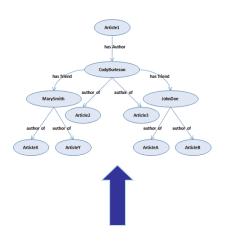
AnneHathaway —married→ Shakespeare

Shakespeare —livedIn→ Stratford

Stratford —isIn→ England

England —partOf→ UK

Shakespeare —wrote→ KingLear

Shakespeare —wrote→ Macbeth

Macbeth —setIn→ Scotland

Scotland —partOf→ UK

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Linking Data

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Linking Data

Linking Hubs

As of March 2009
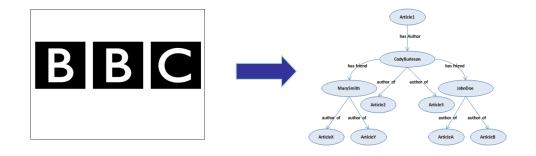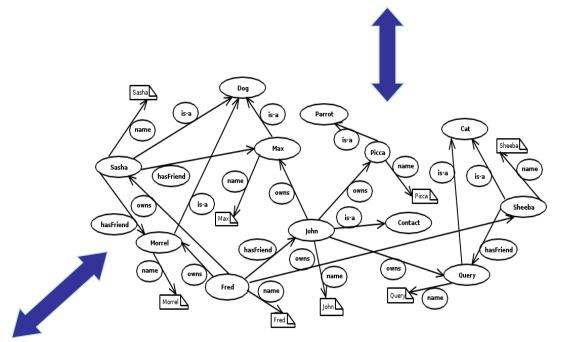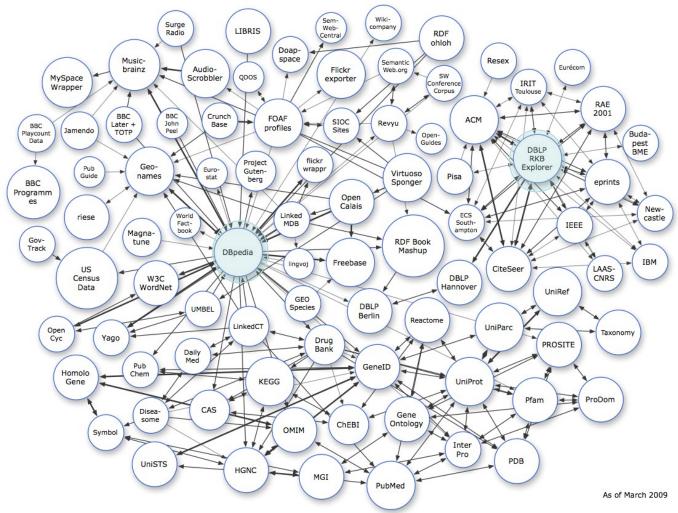
RDF Challenges

- **Identify people, places, things, and concepts in unstructured text documents**

- **Named entity extraction**

- **Term disambiguation**

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Library RDF Converters

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MARC2RDF Modeler

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MARC2RDF Output

```
<rdf:Description xmlns:n1="http://RDVocab.info/Elements/"
xmlns:n2="http://purl.org/dc/terms/"
xmlns:n3=http://purl.org/dc/elements/1.1/
about="http://library.cca.edu/core/m/76079693">
<n1:statementOfResponsibility>J. Garth Taylor</n1:statementOfResponsibility>
<n2:contributor
rdf:resource="http://library.cca.edu/core/people/taylor_j_garth_1941-
_james_garth"/>
<rdf:type rdf:resource="http://vocab.org/frbr/core#Manifestation"/>
<n2:type>Slide</n2:type>
<n2:date>1986</n2:date>
<n3:subject>Labrador</n3:subject>
<n2:subject rdf:resource="http://library.cca.edu/core/s/labrador#concept"/>
```

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Dublin Core® Metadata Initiative
Making it easier to find information.

Enter keyword [Search]

Expressing Dublin Core metadata using the Resource Description Framework (RDF)

Creator:	Mikael Nilsson
	KMR Group, NADA, KTH (Royal Institute of Technology), Sweden
	Andy Powell
	Eduserv Foundation, UK
	Pete Johnston
	Eduserv Foundation, UK
	Ambjörn Naeve
	KMR Group, NADA, KTH (Royal Institute of Technology), Sweden
Date Issued:	2008-01-14
Identifier:	http://dublincore.org/documents/2008/01/14/dc-rdf/
Replaces:	http://dublincore.org/documents/2007/06/04/dc-rdf/
Replaces:	http://dublincore.org/documents/2002/07/31/dcmes-xml/
Replaces:	http://dublincore.org/documents/2002/05/15/dcq-rdf-xml/
Latest Version:	http://dublincore.org/documents/dc-rdf/
Status of Document:	This is a DCMI Recommendation.
Description of Document:	This document provides recommendations for expressing Dublin Core metadata using RDF, the Resource Description Framework.

OAI2RDF

OAI2RDF Output

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:default95="http://purl.org/dc/elements/1.1/">

<rdf:Description rdf:about="oai:collections.mun.ca:m_forbes/544">
    <default95:contributor>Forbes Family</default95:contributor>
    <default95:contributor>Glenn Deir, 1997</default95:contributor>
    <default95:date>1887</default95:date>
    <default95:description>1 photograph : b&amp;w ; 9 x 6 cm</
default95:description>
    <default95:description>Irene (Matthews) Forbes, as a baby.</
default95:description>
<rdf:type rdf:resource="http://www.ontoweb.org/ontology/1#Publication"/>
```

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BibTeX to RDF

bibtex2rdf - A configurable BibTeX to RDF Converter

Introduction

Many researchers use LaTeX to prepare their publications. They typically collect bibliographic references in the BibTeX format, because that way LaTeX can generate Reference lists automatically. In BibTeX, each reference is captured as one entry consiting of (tagged) fields. For an introduction to BibTeX see the references section. With the advent of the semantic web, several projects have started to translate this bibliographic information to RDF. bibtex2rdf is a highly configurable translator from BibTeX to RDF which allows to do exactly that. How it works and how to use it is explained in this document.

Usage

The most direct approach to understand how a program works is just to try it. Therefore, we start with the usage section.

bibtex2rdf is provided as jar file (the source code will be published soon). The current version is *1.0 beta 4*. Download it here. It is a command line tool and needs a Java JDK/JRE 1.4 as prerequisite. To translate `sample.bib` to `sample.rdf`, type

```
java -jar bibtex2rdf.jar sample.bib sample.rdf
```

The complete call syntax is `java -jar bibtex2rdf.jar [-schema <file>] [-baseuri <uri>] [-enc <enc>] <bibtex> [<output>]`. For parameter explanation, see the following table. The application generates a log file (`bibtex2rdf.log`) which contains all warnings and errors.

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Simile RDFizers

Ok, I'm interested, what RDFizers are there? [edit]

Here is the list of the RDFizers that we have built so far:

- JPEG -> RDF - scans a folder for JPEG files, parses the EXIF and IPCT metadata found in those files and dumps an RDF/N3 representation of it into a file.

- MARC/MODS -> RDF - transforms MARC records from Z39.2 format into MODS and then from MODS to an RDF representation of MODS.

- OAI-PMH -> RDF - harvests an OAI-PMH repository and transforms the captured metadata in an RDF representation thru pluggable XSLT stylesheets.

- OCW -> RDF - harvests metadata from the MIT OpenCourseWare web site and transforms it into an RDF representation of IEEE LOM.

- EMail -> RDF - transforms email mbox files into RDF/XML.

- BibTEX -> RDF - transforms BibTEX files into RDF/XML.

- POM -> RDF - transforms Maven POM (Project Object Model) files into RDF/N3.

- DEB -> RDF - extracts the metadata from a Debian software package and generates an RDF representation.

- CRW -> RDF - extracts the metadata from a Canon RAW image file and generates an RDF representation.

- Flat -> RDF - converts classic unix text database files, like /etc/passwd, into RDF/N3.
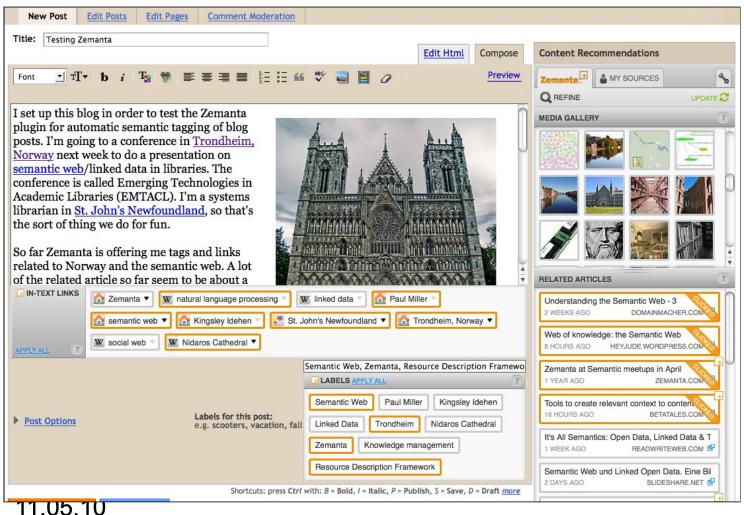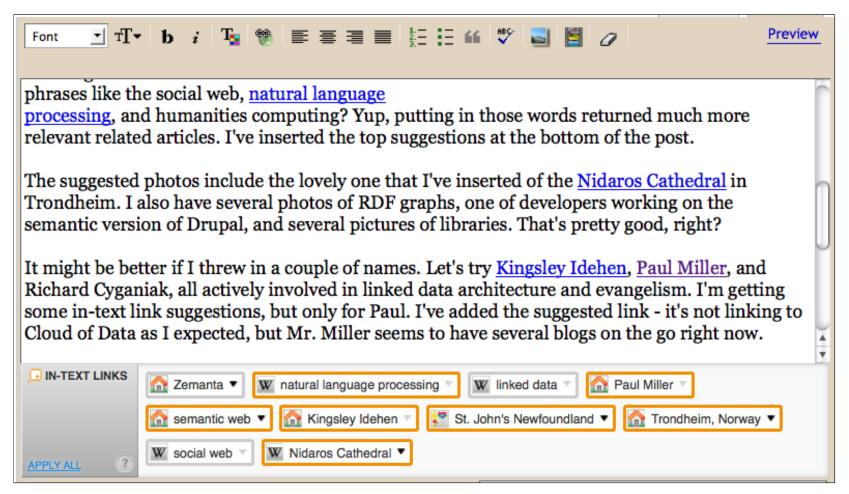
http://www.mulgara.org/

Simile

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RDF Publishing Tools

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Semantic Blogging: Zemanta

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Semantic Blogging: Zemanta

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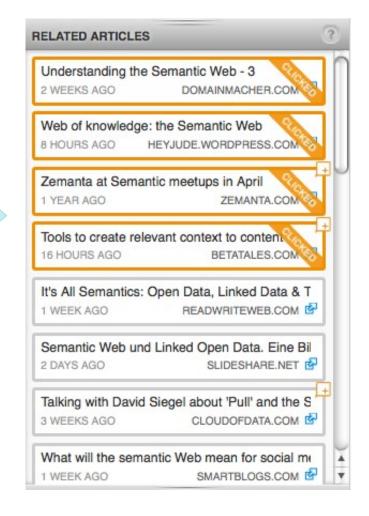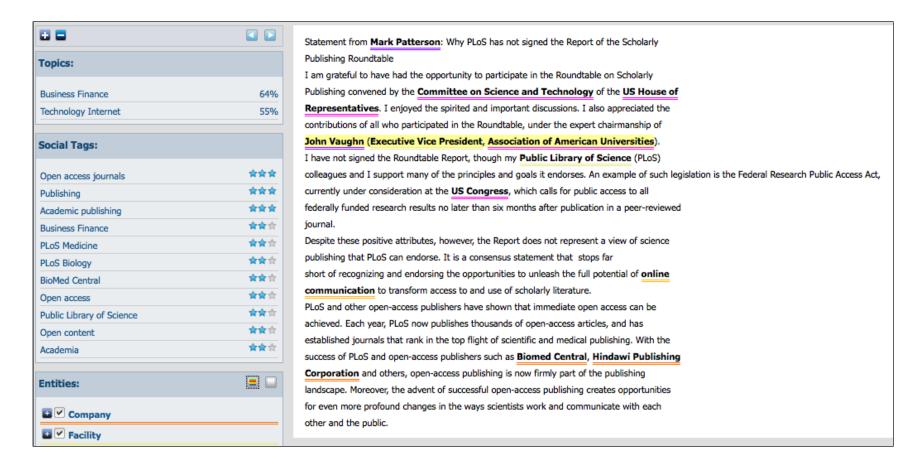
Calais Semantic Extraction

Calais Semantic Extraction

Statement from **Mark Patterson**: Why PLoS has not signed the Report of the Scholarly Publishing Roundtable

I am grateful to have had the opportunity to participate in the Roundtable on Scholarly Publishing convened by the **Committee on Science and Technology** of the **US House of Representatives**. I enjoyed the spirited and important discussions. I also appreciated the contributions of all who participated in the Roundtable, under the expert chairmanship of **John Vaughn** (**Executive Vice President**, **Association of American Universities**).
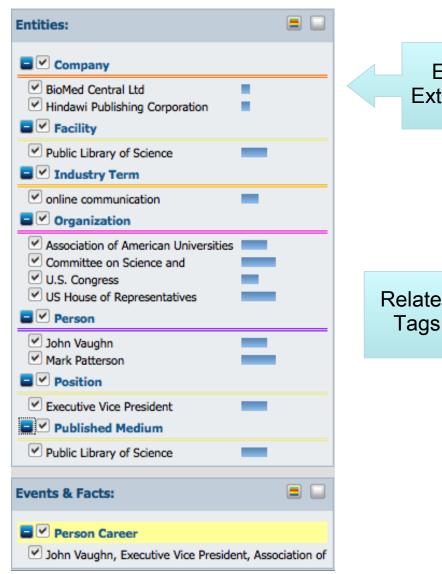
I have not signed the Roundtable Report, though my **Public Library of Science** (PLoS) colleagues and I support many of the principles and goals it endorses. An example of such legislation is the Federal Research Public Access Act, currently under consideration at the **US Congress**, which calls for public access to all federally funded research results no later than six months after publication in a peer-reviewed journal.

Despite these positive attributes, however, the Report does not represent a view of science publishing that PLoS can endorse. It is a consensus statement that stops far short of recognizing and endorsing the opportunities to unleash the full potential of **online communication** to transform access to and use of scholarly literature.

PLoS and other open-access publishers have shown that immediate open access can be achieved. Each year, PLoS now publishes thousands of open-access articles, and has established journals that rank in the top flight of scientific and medical publishing. With the success of PLoS and open-access publishers such as **Biomed Central**, **Hindawi Publishing Corporation** and others, open-access publishing is now firmly part of the publishing landscape. Moreover, the advent of successful open-access publishing creates opportunities for even more profound changes in the ways scientists work and communicate with each other and the public.

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Entities:

- ☑ **Company**
  - ☑ BioMed Central Ltd
  - ☑ Hindawi Publishing Corporation
- ☑ **Facility**
  - ☑ Public Library of Science
- ☑ **Industry Term**
  - ☑ online communication
- ☑ **Organization**
  - ☑ Association of American Universities
  - ☑ Committee on Science and
  - ☑ U.S. Congress
  - ☑ US House of Representatives
- ☑ **Person**
  - ☑ John Vaughn
  - ☑ Mark Patterson
- ☑ **Position**
  - ☑ Executive Vice President
- ☑ **Published Medium**
  - ☑ Public Library of Science

Events & Facts:

- ☑ **Person Career**
  - ☑ John Vaughn, Executive Vice President, Association of

Entity Extraction

Related Tags

Topics:

| Business Finance | 64% |
| Technology Internet | 55% |

Social Tags:

Open access journals	★★★
Publishing	★★★
Academic publishing	★★★
Business Finance	★★☆
PLoS Medicine	★★☆
PLoS Biology	★★☆
BioMed Central	★★☆
Open access	★★☆
Public Library of Science	★★☆
Open content	★★☆
Academia	★★☆

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Semantic MediaWiki

Semantic MediaWiki

Semantic MediaWiki

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Semantic MediaWiki

Facts about Lisagoddard ⓘ   RDF feed

Affiliation	Memorial University of Newfoundland + 🔍
Birth date	30 April 1972 + 🔍
Current project	Libraries & Linked Data + 🔍
Firstname	Lisa + 🔍
HasCategory	Category:Person + 🔍
HasGeocoordinates	49°27′25.181″N, 48°36′42.694″W + 🔍
Homepage	http://twitter.com/lisagoddard + 🔍
Knows	Jennifer Lokash + 🔍, Gillian Byrne + 🔍, and Tim Berners-Lee + 🔍
Lastname	Goddard + 🔍
Location	Pedagogues Close, St. John's, Newfoundland + 🔍
Mbox	lgoddard@mun.ca + 🔍
Name	Lisa Goddard + 🔍
Phone	(555) 555-5555 + 🔍
User image	+ 🔍

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Semantic MediaWiki

Drupal 6 CMS

Drupal 6 CMS

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Drupal CMS

Drupal 7 CMS

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Drupal 7 RDFa - Visinav

manfred hauswirth ⊠ **Knows** ⊠

Detail List Table 🔊RSS

Axel Polleres
http://www.polleres.net/foaf.rdf#me ⧉

Person Spatial Thing Person

Benjamin Melançon
http://srvgal65.deri.ie/projectblogs/node/2#this ⧉
Person Spatial Thing Person

Stefan Decker
http://www.deri.ie/about/team/member/Stefan_Decker#me ⧉

Person Spatial Thing Person

Aidan Hogan
http://sw.deri.org/~aidanh/foaf/foaf.rdf#Aidan_Hogan ⧉

Person Spatial Thing Person

manfred hauswirth ⊠ Knows ⊠ **made** ⊠

Detail List Table Timeline 🔊RSS

Transforming co-NP Checks to Answer Set Computation by Meta-Int...
http://dblp.l3s.de/d2r/resource/publications/conf/agp/EiterP03 ⧉
document InProceedings
2003

Context Dependent Reasoning for Semantic Documents in Sindice
http://data.semanticweb.org/workshop/ssws/2008/paper/main/6 ⧉
document Post InProceedings

polleres-feier
http://data.semanticweb.org/conference/eswc/2006/paper/polleres... ⧉

Axel Polleres' Personal Web Page
http://www.polleres.net/ ⧉
document
This is the homepage of Axel Polleres. I currently work as a senior researcher and lecturer at the National University
Galway, where I am afffiliated with the Digital Enterprise Research Institute (DERI).
2007-06-25

debruijn-lausen
http://data.semanticweb.org/conference/eswc/2006/paper/debruijn... ⧉

paper-119
http://data.semanticweb.org/conference/eswc/2007/paper-119 ⧉

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Library RDF Publishing Tools

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Dspace & RDF

Dspace & RDF

11.05.10

Dspace & RDF

Fedora & RDF

11.05.10

Fedora & RDF

Fedora & RDF

Reference: Alison Shaw ; Katharine Charsley , (2006). *Rishtas*: adding emotion to strategy in understanding British Pakistani transnational marriages . *Global Networks* , **6** (4), 405-421

Link to this archived copy: http://ora.ouls.ox.ac.uk/objects/uuid:96efaceb-fcc8-46db-94c9-c2e0bd99d34d

Relationships for "em>: adding emotion to strategy in understanding British Pakistani transnational marriages":
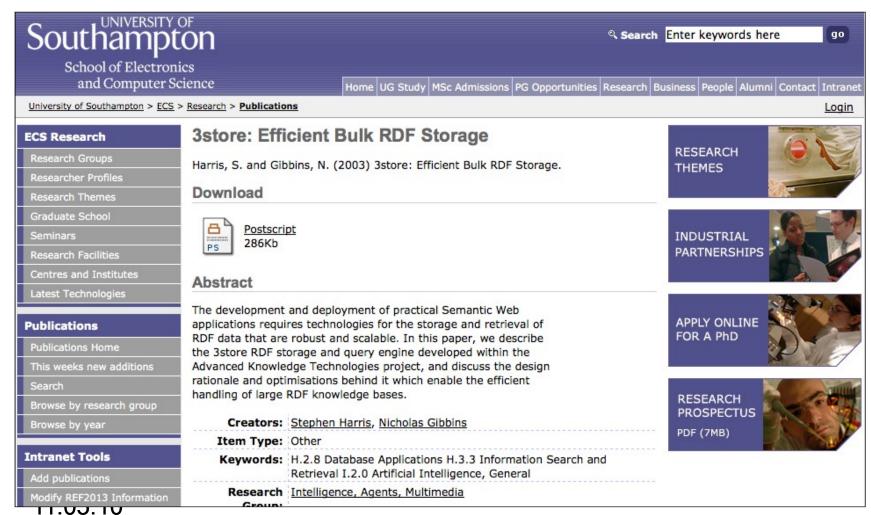
View full list as RDF in format:

HTML Lite HTML Full RDF/XML N-Triples N3 Turtle

Disclaimer and Data Protection statement | Accessibility statement | Download Copyright guide (100kB PDF) | Take-down procedure and

11.05.10
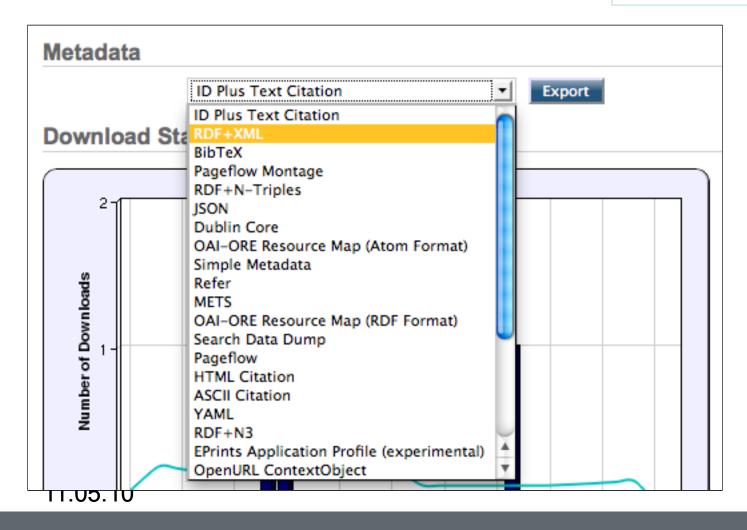
Eprints & RDF

Eprints & RDF

Library Linking Hubs

Linked Data is about reusing existing ontologies and data as far as possible – so it isn't just about about allowing users to link to our data, but linking when the data already exists.

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Subject linking: loc.id.gov

Subject linking: loc.id.gov

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Subject linking: loc.id.gov

Swedish subject heading: "Mödrar"

Broader terms
- Föräldrar

Narrower terms
- Ensamstående mödrar
- Lesbiska mödrar
- Soldatmödrar
- Styvmödrar
- Surrogatmödrar
- Unga mödrar
- Yrkesarbetande mödrar

Related terms
- Gravida kvinnor
- Mor-barnrelationer

LCSH:
- Mothers

misc.

- text/rdf+n3
- application/rdf+xml
- OpenLink RDF browser

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Virtual International Authority File

Virtual International Authority File

http://viaf.org/viaf/34456780.rdf

```
<rdf:RDF
 xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
 xmlns:dcterms="http://purl.org/dc/terms/"
 xmlns:skos="http://www.w3.org/2004/02/skos/core#"
 xmlns:default90="http://xmlns.com/foaf/0.1/">
    <rdf:Description rdf:about="http://viaf.org/viaf/34456780.rwo">
        <dcterms:created>2009-03-03T12:03:23+00:00</dcterms:created>
        <dcterms:identitifer>34456780</dcterms:identitifer>
        <dcterms:modified>2010-02-22T06:44:10+00:00</dcterms:modified>
        <dcterms:type xml:lang="en">person</dcterms:type>
        <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Conce
        <skos:altLabel>Faryūḍ, Sigmanḍ,</skos:altLabel>
        <skos:altLabel>Firūyid, Sighmund,</skos:altLabel>
        <skos:altLabel>Fo-lo-i-te,</skos:altLabel>
        <skos:altLabel>Freids, Zigmunds</skos:altLabel>
        <skos:altLabel>Freïd, Zigmund</skos:altLabel>
        <skos:altLabel>Freïd, Zigmund,</skos:altLabel>
        <skos:altLabel>Frejd, Sigmund</skos:altLabel>
        <skos:altLabel>Frejd, Z.</skos:altLabel>
        <skos:altLabel>Frejd, Zigmund</skos:altLabel>
        <skos:altLabel>Frejd, Zigmund,</skos:altLabel>
        <skos:altLabel>Frejd, Zigmund.</skos:altLabel>
        <skos:altLabel>Freud</skos:altLabel>
```

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Authority Linking: VIAF
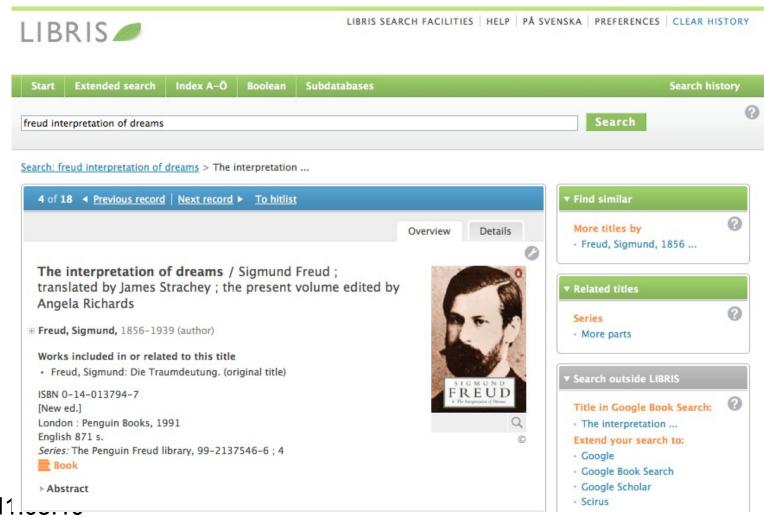
Person: Strindberg, August, 1849-1912

Other names
  Strindberg, Johan August, 1849-1912
  Härved, Ulf, 1849-1912
  Strindberg, Avgust Juchan, 1849-1912
  Estrïndberg, Agūst, 1849-1912
  Strintmperg, August, 1849-1912
DBPedia
  http://dbpedia.org/resource/August_Strindberg
Wikipedia
  http://sv.wikipedia.org/wiki/August_Strindberg
VIAF
  http://viaf.org/viaf/54154627
Depiction
  http://libris.kb.se/images/August_Strindberg.jpg
misc.
  text/rdf+n3
  application/rdf+xml
  OpenLink RDF browser

11

Linked Marc Records

RDF Book Mashup

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Linked Periodicals Data

Work Employment & Society
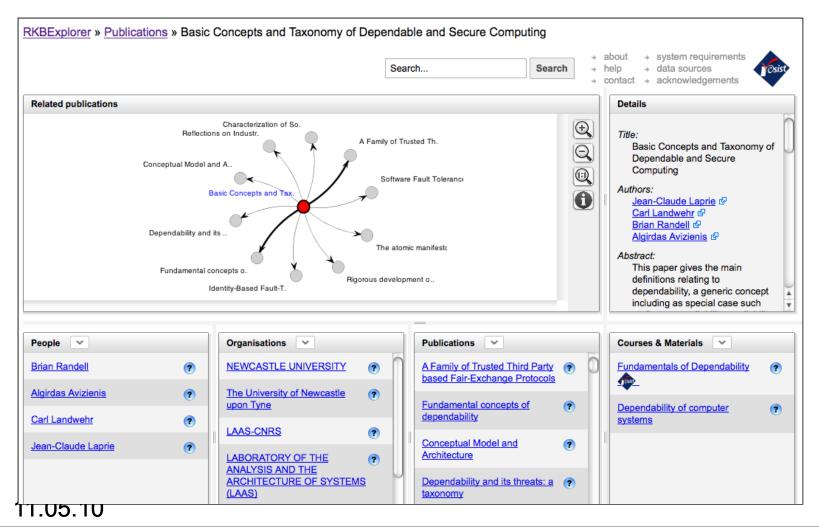
http://periodicals.dataincubator.org/journal/work-employment-and-society

RDF/XML   JSON   Turtle

[   ] Search

Titles	Work Employment & Society
	Work, Employment & Society
Type	bibo:Journal
Publisher	organization:sage-publications
Subjects	authorities:sh85065928
	authorities:sh85065946
	authorities:sh85148133
Subjects	Arbeidssociologie
	Industrial relations
	Industrial sociology
	Relations industrielles
	Sociologie industrielle
	Travail
	Work
Homepage	http://wes.sagepub.com
ISSN	0950-0170
EISSN	1469-8722
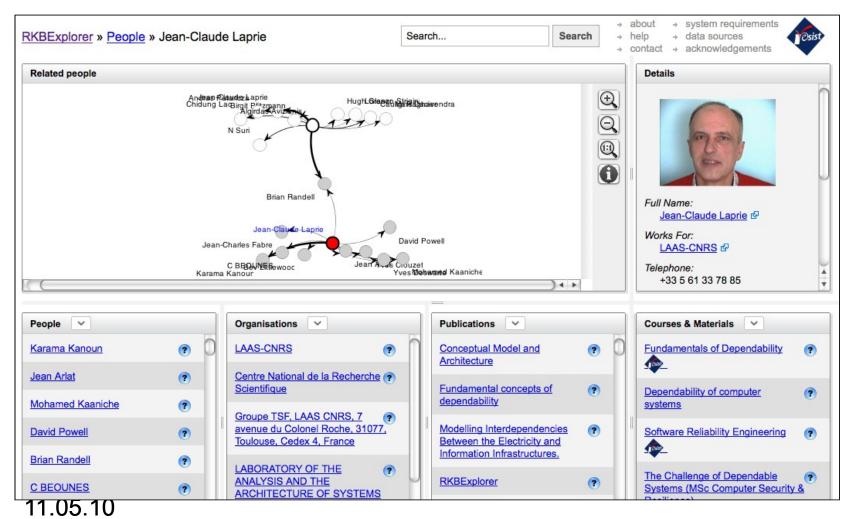
RKBExplorer - Publication

RKBExplorer - Person
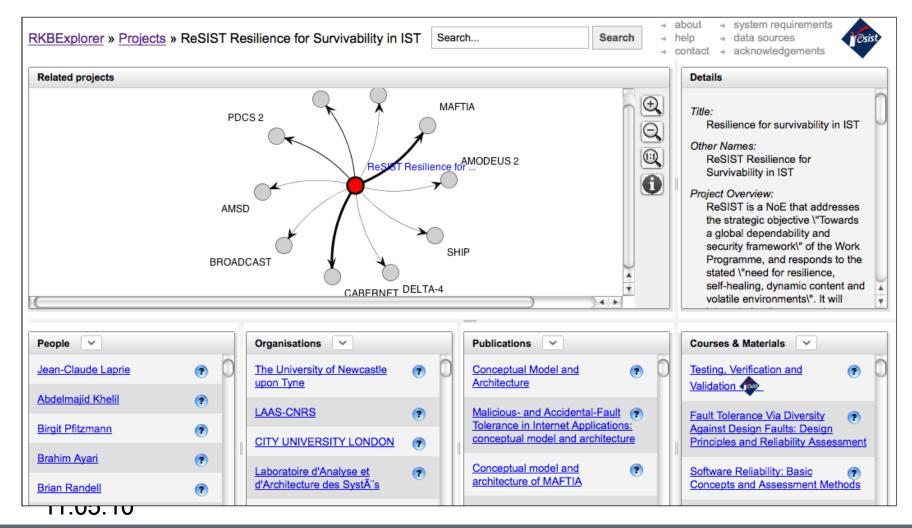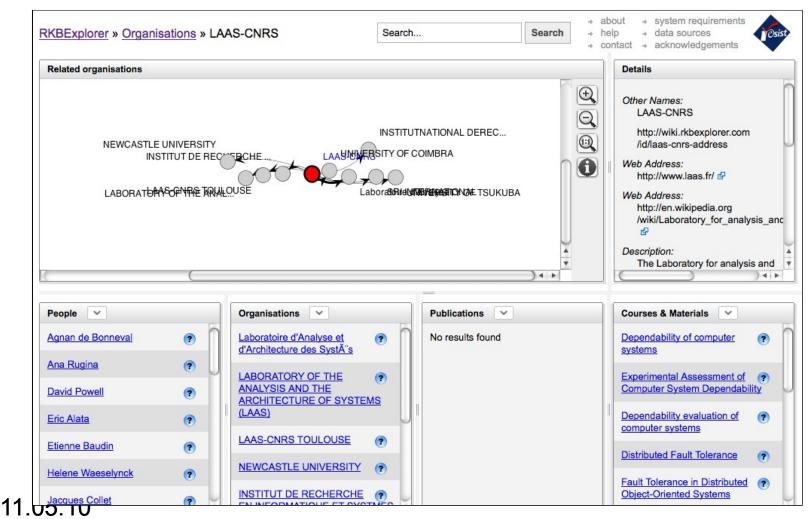
RKBExplorer - Project

RKBExplorer - Organization

What's the promise?

- Better, smarter discovery
- Enriched content
- Enhanced personalization

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Smarter linking
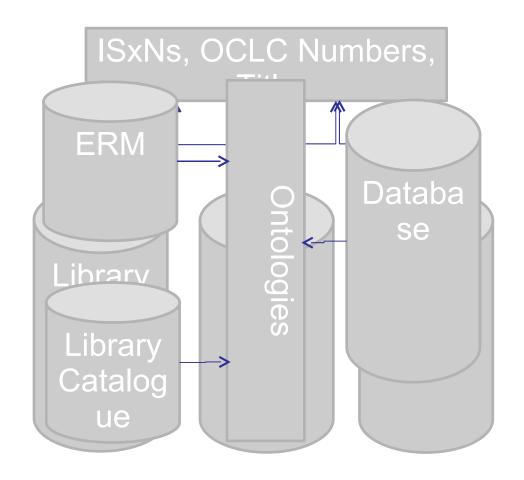
Title: Deviance and crime in colleges and universities: What goes on in the halls of ivy.

Authors: Hickson, Mark, III
Roebuck, Julian B.

Source: Springfield, IL, US: Cha

ISBN: 978-0-398-07879-9 (Ha
978-0-398-07880-5 (Pa

Language: English

Keywords: interdisciplinary typolog
drinking; date rape; ass

Abstract: (from the cover) This *b*
shootings were aberrat
binge drinking, date rap
behavior and crime in
including coaching *beh*
behavior, sexual issue
commercialism at the e
pressures of external g
deviance and crime tha
academic would rather
all rights reserved)

Deviance and crime in colleges and universities : what goes on in the halls of ivy

Personal Author: Hickson, Mark.
Title: Deviance and crime in colleges and universities : what goes on in the halls of ivy / by Mark Hickson III and Julian B. Roebuck.
Publication info: Springfield, Ill. : Charles C Thomas, c2009.
Physical descrip: xiv, 253 p. ; 26 cm.
Subject term: Universities and colleges--United States--Sociological aspects.
Subject term: Universities and colleges--Corrupt practices--United States.
Subject term: College discipline--United States.
Subject term: Deviant behavior--United States.
Subject term: College students--United States--Psychology.
Bibliography note: Includes bibliographical references and index.
Added author: Roebuck, Julian B.
ISBN: 9780398078799 (hard)
ISBN: 0398078793 (hard)
ISBN: 9780398078805 (pbk.)
ISBN: 0398078807 (pbk.)

Summary
This volume aims to present a complete picture of deviant behavior and crime at universities, based on the authors' personal experiences from 1945-2007, stories of professors, staff, journalists, and students, and news accounts in the Chronicle of Higher Education from 2004-2007, and other sources. From a sociological viewpoint, the authors examine fraternity and sorority, athletic, administrative, and other deviance, including hazing, binge drinking, and date rape; gambling and cheating in sports; plagiarism, sexual issues, tenure issues, false reports, and bullying; and illegal hiring practices, commercialism at the expense of learning, intellectual scandal, and research conflict of interest. Other groups investigated include donors and governing boards. They also identify potential solutions to these problems. Hickson, who has degrees in sociology and law, has taught at Auburn U., Mississippi State U., the American U., and the U. of Alabama at Birmingham. Roebuck, a former case worker for the US Bureau of Prisons, has taught at the U. of North Alabama, the U. of Maryland, and the US European and African Oversea School Program. Annotation ©2009 Book News, Inc., Portland, OR (booknews.com) Distributed by Syndetic Solutions,

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Subjects: *Antisocial Behavior; *Colleges; *Criminal Behavior; *School Environment; *Taxonomies; Campuses; Classroom Environment; Crime; Educational Administration; Higher Education; Morality; Social Behavior

Classification: Classroom Dynamics & Student Adjustment & Attitudes (3560)
Criminal *Behavior* & Juvenile Delinquency (3236)

Population: Human (10)

Age Group: Adulthood (18 yrs & older) (300)

Intended Audience: Psychology: Professional & Research (PS)

Format Covered: Print

Publication Type: *Book*; Authored *Book*

Release Date: 20100118

Accession Number: 2009-17252-000

Data integration

ISxNs, OCLC Numbers, Tit...

ERM

Database

Library

Ontologies

Library Catalogue

11.05.10

Disambiguation

Madonna at Raphael's nightclub (NSFW)
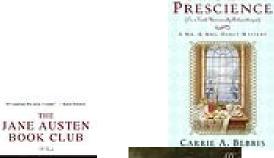
courtesy of www.raphaelsanzio.org

Raphael's Madonna (NSFW)

11.05.10

`<img src="09821.jpg" alt="madonna">`

Related Works to Relationships
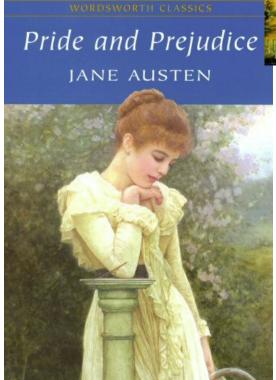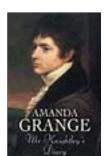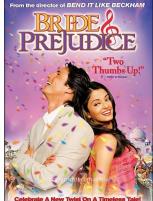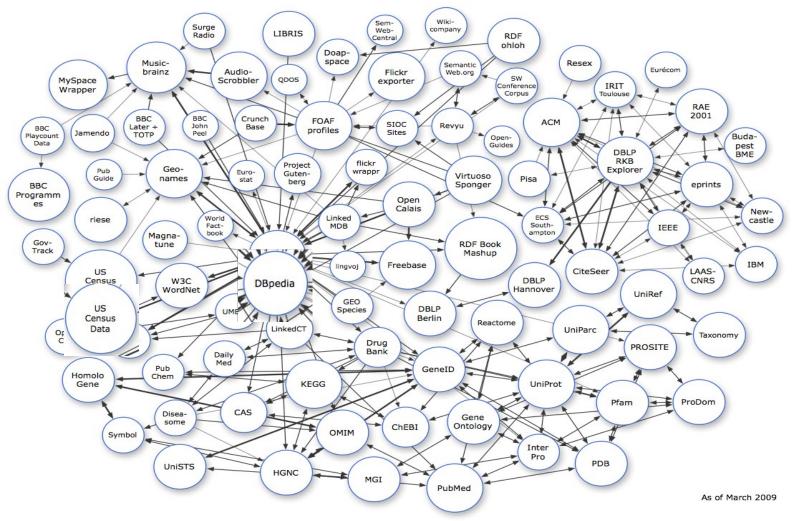
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Enriched content

As of March 2009

Enhanced personalization

Julie

Is patron type

Student

Has major

History

Takes course

Hist102

Has reading

Citation

11.05.10

The Holy Grail?

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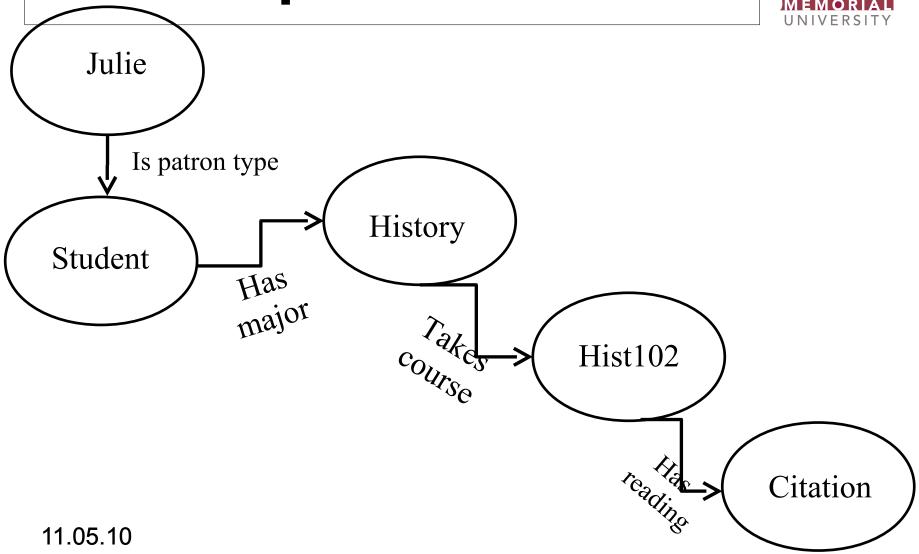
What are the obstacles?

- Privacy
- Trust
- Data ownership
- It's…well…hard

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Privacy/Trust
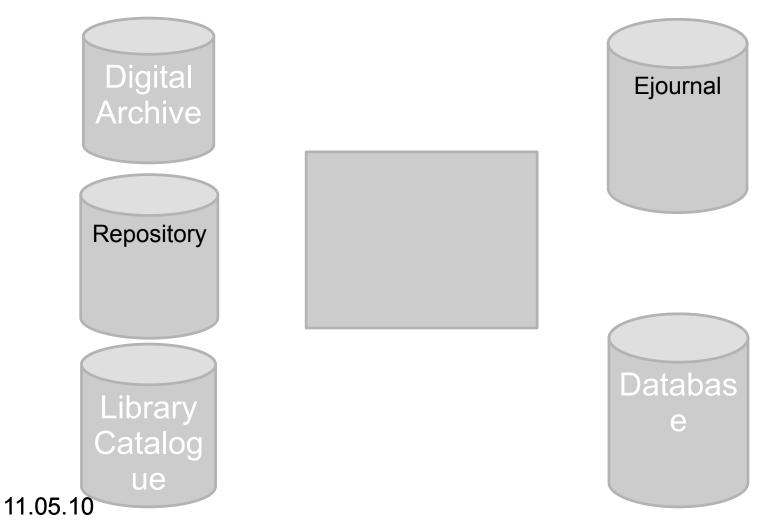
   The largest hurdle to library adoption of Linked Data, though, may not be educational or technological … The sticking point for librarians may be an issue of trust.

- Ross Singer, "Linked Data Now!"

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Data ownership

Digital Archive

Repository

Library Catalogue

Ejournal

Database

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Rocking the foundations

- **MARC**
- **RDA**
- **DCMI/RDA Task Group**

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What can we do...now?

- **Eric Miller noted in a 2004 talk that libraries have four major roles in the semantic web:**
  1. exposing collections – use Semantic Web technologies to make content available;
  2. web'ifying thesaurus/mappings/services;
  3. sharing lessons learned;
  4. persistence.

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Exposing collections

.org/OAI/2.0/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/
OAI-PMH.xsd">
sponseDate>
="oai_dc" set="cns">http://collections.mun.ca/cgi-bin/oai.exe</request>

s/0</identifier>
>

v.openarchives.org/OAI/2.0/oai_dc/" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
penarchives.org/OAI/2.0/oai_dc/ http://www.openarchives.org/OAI/2.0/oai_dc.xsd">
      <dc:title>Cover</dc:title>
      <dc:relation>(4.7 MB) -- http://collections.mun.ca/PDFs/cns/FF_1015_C57.pdf</dc:relation>
      <dc:identifier>http://collections.mun.ca/u?/cns,0</dc:identifier>
    </oai_dc:dc>
  </metadata>
</record>
- <record>
  - <header>
      <identifier>oai:collections.mun.ca:cns/1</identifier>
      <datestamp>2005-10-17</datestamp>
      <setSpec>cns</setSpec>
    </header>
  - <metadata>
    - <oai_dc:dc xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:xsi="http://www.w3.org/200
        xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/ http://www.openarchives.org/OAI/2.0/oai_dc.xsd">
        <dc:title>Inside Cover</dc:title>
        <dc:identifier>http://collections.mun.ca/u?/cns,1</dc:identifier>
      </oai_dc:dc>
    </metadata>
  </record>
- <record>
  - <header>
      <identifier>oai:collections.mun.ca:cns/2</identifier>
      <datestamp>2005-10-17</datestamp>
      <setSpec>cns</setSpec>
    </header>
  - <metadata>
    - <oai_dc:dc xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:xsi="http://www.w3.org/200
        xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/ http://www.openarchives.org/OAI/2.0/oai_dc.xsd">
        <dc:title>Opening Page</dc:title>
        <dc:identifier>http://collections.mun.ca/u?/cns,2</dc:identifier>
      </oai_dc:dc>
    </metadata>
  </record>

web'ifying thesaurii, etc.

Cataloguing
NT
Descriptive cataloguing
RT
Authority control (Local)
Subject analysis

Charging/discharging (library materials)
USE Circulation

Circulation
UF Borrowing (library materials)
Charging /discharging (Library materials)
Lending (library materials)
Loans (library materials)
RT
Holds (library materials) (Local)
Loan periods (Local)
Recall (library materials) (Local)
Renewals (Local)
Reserve materials (Local)

Citations (Local)
UF Bibliographic citations

Classification

Classification schemes
RT
Controlled vocabularies

Collection development
NT
Selection of materials

Colleges and universities

Computer searching
USE Online searching

```xml
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
xmlns:skos="http://www.w3.org/2004/02/skos/core#">
<skos:Concept rdf:about="http://staff.library.mun.ca/staff/staffdir/libweb/controlled/concept/13" />

<skos:prefLabel>Circulation</skos:prefLabel>
<skos:altLabel>Borrowing</skos:altLabel>
<skos:altLabel>Loans</skos:altLabel>
<skos:scopeNote>Refers to functions related to circulating material, not the administrative
department.</skos:scopeNote>
<skos:narrower rdf:resource="http://staff.library.mun.ca/staff/staffdir/libweb/controlled/concept/38"/>
 <skos:narrower rdf:resource="http://staff.library.mun.ca/staff/staffdir/libweb/controlled/concept/103"/>
<skos:narrower rdf:resource="http://staff.library.mun.ca/staff/staffdir/libweb/controlled/concept/16"/>
<skos:inScheme rdf:resource="http://staff.library.mun.ca/staff/staffdir/libweb/controlled"/>

</skos:Concept>

</rdf:RDF>
```
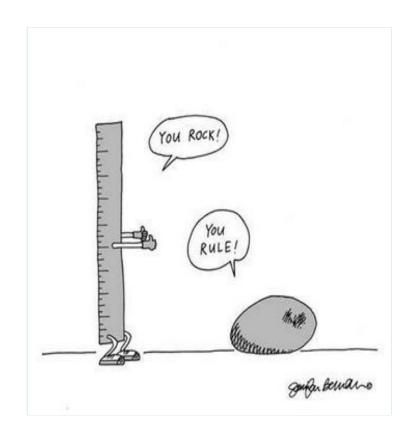
Sharing lessons

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Persistence

As of March 2009