Pavlov's Cataloger and Schrödinger's Data:

Teaching Linked Data at NLM

Tina Shrader

Cataloging and Metadata Management Section
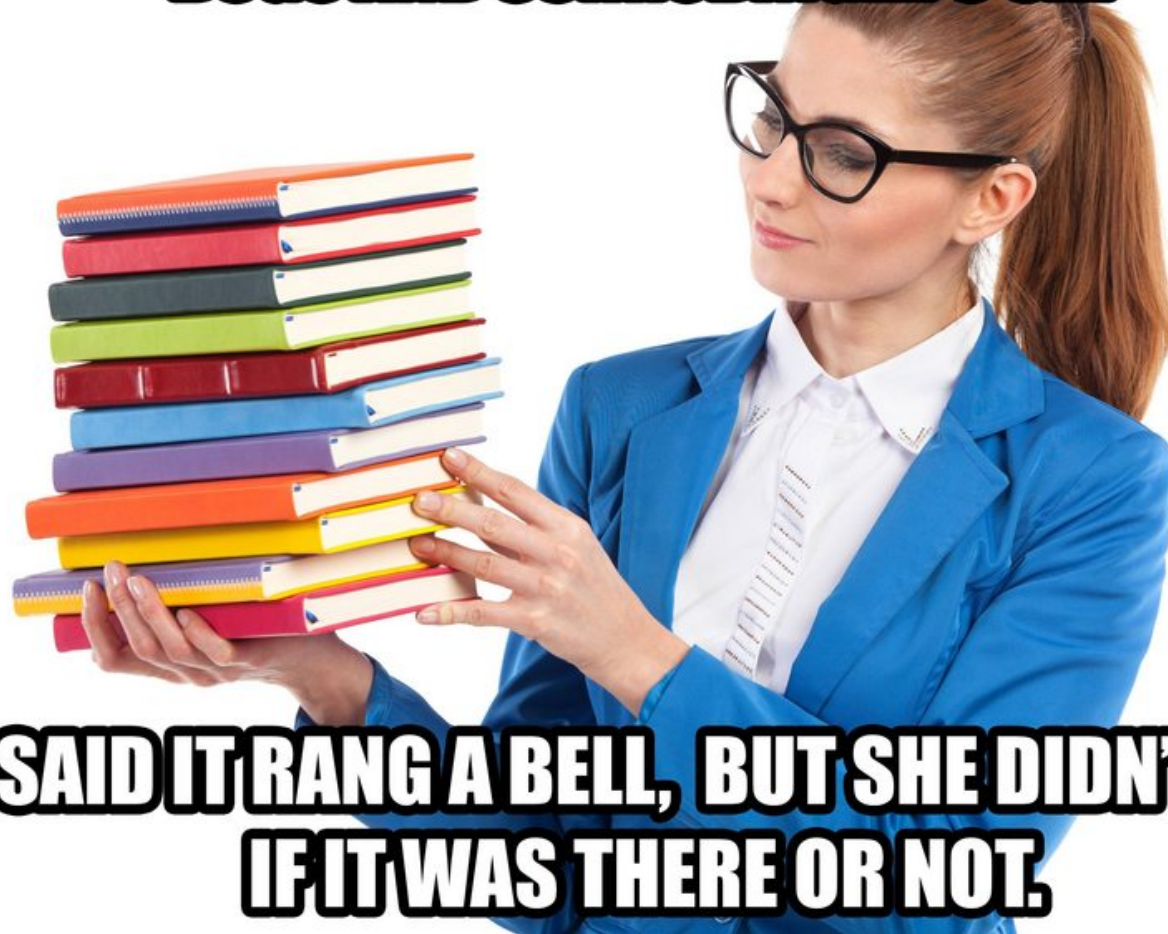Technical Services Division

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I ASKED THE LIBRARIAN FOR A BOOK ABOUT PAVLOV'S DOGS AND SCHRÖDINGER'S CAT

SHE SAID IT RANG A BELL, BUT SHE DIDN'T KNOW IF IT WAS THERE OR NOT.

Image from Picrail

LD4PE Competencies

http://explore.dublincore.net/

- Fundamentals of Resource Description Framework (RDF)
- Fundamentals of Linked Data
- RDF vocabularies and application profiles
- Creating and transforming Linked Data
- Interacting with RDF data
- Creating Linked Data applications

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LD4PE Competencies

- [Resources for Librarians](#)

- [Resources for Catalogers](#)

- [PCC Standing Committee on Training Recommended Linked Data Training Resources for Catalogers](#)

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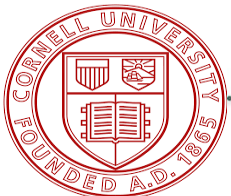
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So, why do you need me?

NLM Linked Data Activities

National Forum on Shareable
Name Authorities

BIBFRAME

PCC
Program for
Cooperative Cataloging
BIBCO / CONSER / NACO / SACO

Task Group on Linked Data Best Practices
Linked Data Advisory Committee
Task Group on Adding URIS to MARC
BIBFRAME Task Group: CONSER and BIBCO Subgroups

Bibframe Lite

MeSH
RDF

BIBFLOW

OCLC
Person Entity Lookup Pilot
Linked Data Wikibase Prototype

MarcEdit

SHARE Virtual
Discovery
Environment

casalinilibri
@cult

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NLM's Linked Data Training
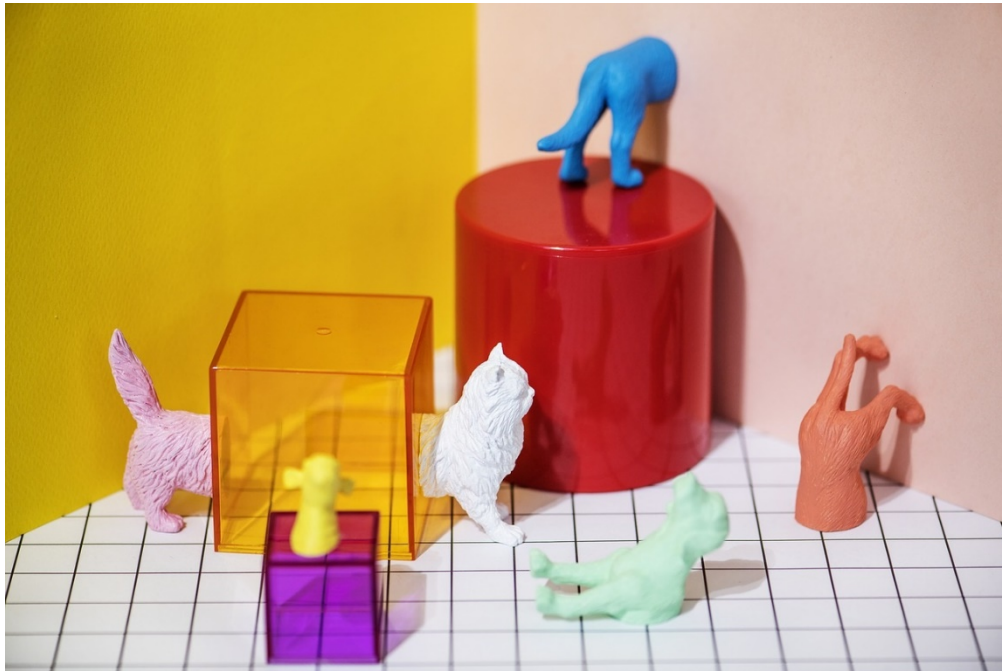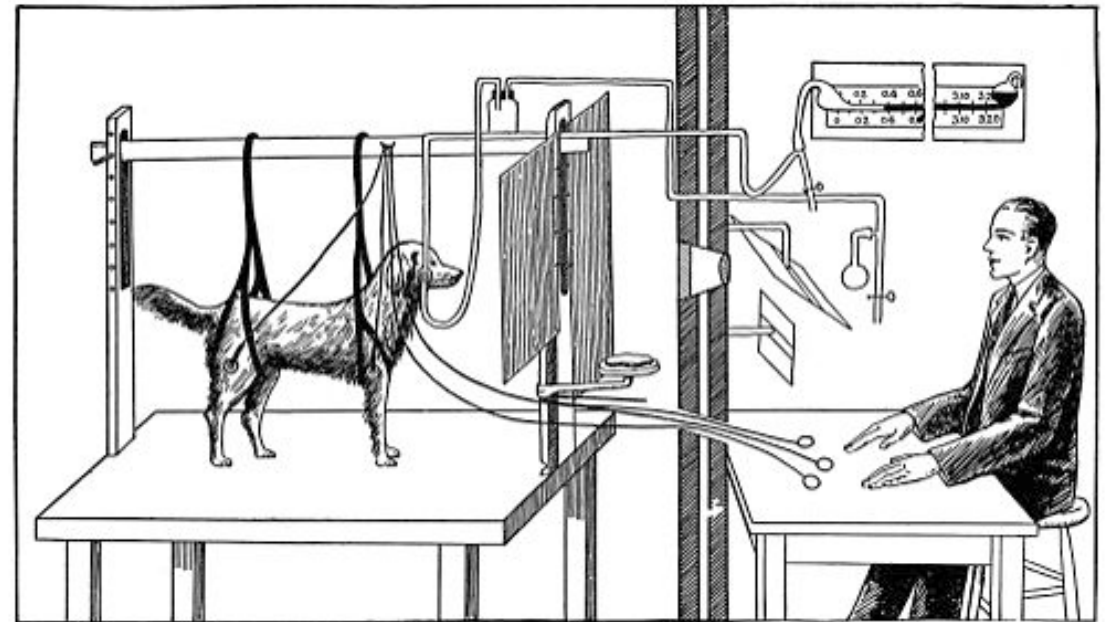
- Modeling and conceptual

- Hands-on experimentation

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PCC Mapping Projects

- CONSER Standard Record (CSR) and BIBCO Standard Record (BSR) to BIBFRAME
- Matched RDA data elements to BIBFRAME properties
- Identified RDA data elements without BF properties
- Provided feedback to BF developers
- Identified areas where community standards were needed

sillyeaglebooks

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PCC Mapping Projects

Program for Cooperative Cataloging
PCC
BIBCO / CONSER / NACO / SACO

Competencies Addressed

- Fundamentals of RDF
  - Identity in RDF
  - RDF Data Model
  - RDF Serialization
- Fundamentals of linked data
  - Linked data principles

Potential classroom applications

- Mapping across different vocabularies

THE WORLD IS A CAT

PLAYING WITH AUSTRALIA

MontyBoy.net

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Assigning URIs to MARC fields

- OCLC asks PCC URI Task Group for guidance determining the RDF Object in MARC data fields
    - What parts of a MARC field should match the label represented by a URI?
    - Analyzed each MARC field in terms of RDF triples, identifying subject/predicate/object
    - Determined whether a URI should be added to each MARC field to facilitate conversion to RDF

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Assigning URIs to MARC fields

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Example in MARC:

245 00 Pavlovian response

650 12 $a Sialorrhea

As a triple:

Subject	Predicate	Object	URI?
Pavlovian response	hasSubject (MeSH)	Sialorrhea	Yes

Assigning URIs to MARC fields

Competencies addressed
- Fundamentals of RDF
- Fundamentals of linked data

Potential classroom applications
- Mapping existing metadata schemes into a triple structure
- Identifying elements that could be represented by URIs

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OCLC Linked Data Prototype

- aka "Project Passage"
  - Wikibase platform
  - Experimental framework for creating and managing bibliographic and authority data as linked data entities and relationships
  - Participants used actual resources from collections to create descriptions of entities and relationships

Linked Data Prototype

- NLM's participation
  - Postcard from NLM's History of Medicine Division
  - Issues
    - Digitization and sources of description
    - Creation of statements for objects
    - Disambiguation of entities

Postcard with image of Princess Maria Josepha of Saxony in a nursing uniform
(image source)

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Linked Data Prototype

Image by Free-Photos from Pixabay

Competencies addressed

- Fundamentals of linked data
- Creating and transforming linked data
- Interacting with RDF data

Potential classroom applications

- Experiment with Wikidata.org
- Set up a Wikibase instance for classroom experimentation

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schema.org

SEO Project

– Mapped metadata to schema.org

– Added URIs to metadata with MARCNext

– Created JSON-LD files

 • Validated with Google tool

– Inserted JSON-LD files into HTML

– Configured Google Analytics and Search Console to monitor results

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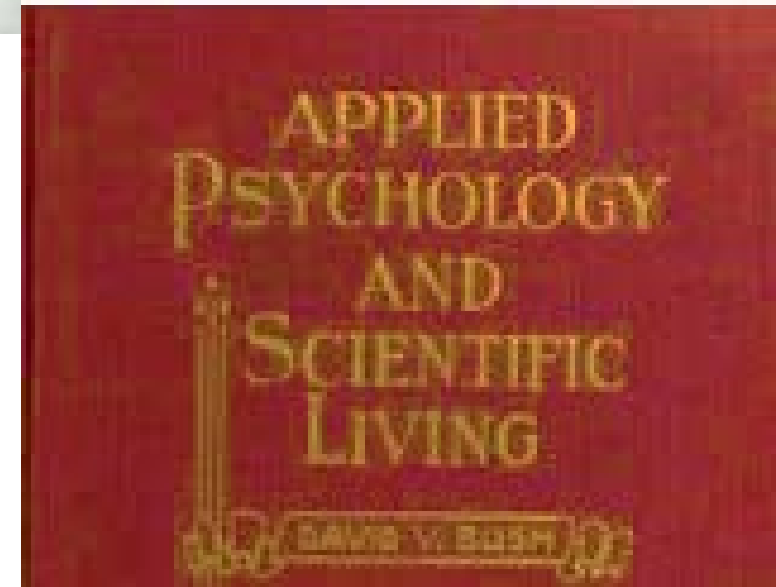
schema.org SEO Project

Competencies addressed

- Creating and transforming Linked Data
- Interacting with RDF data

Potential classroom applications

- Partner with institutional repository
- Experiment with adding linked data to specific resources or sets of resources
- Track usage

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LD4P2

- Profile development
  - Developing profiles and resource templates to guide bibliographic description in BIBFRAME
- Workflow development
  - Cataloging
  - Authority control
- Conversion specifications
  - MARC to BIBFRAME
  - BIBFRAME to MARC
- Hands-on cataloging
  - Describing serials using BF

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LD4P2

Competencies addressed

- Fundamentals of RDF
- RDF vocabularies and application profiles
- Creating and transforming linked data
- Interacting with RDF
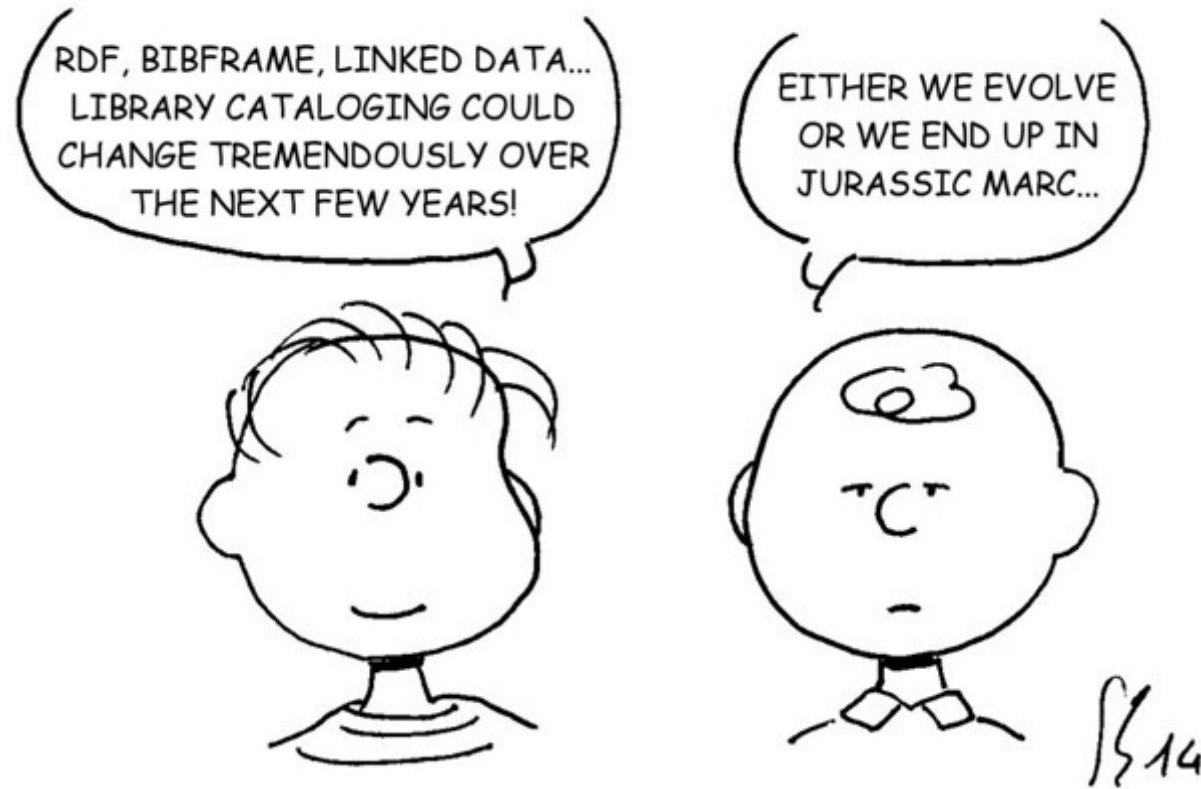
Classroom applications

- Use LC's BIBFRAME editor to describe resources
- Analyze RDF output

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Final Thoughts

Follow Peanuts Reloaded at http://www.flickr.com/photos/steveb59/

Acknowledgements

- NLM's LD4P2 Project Team
  - Nancy Fallgren
    - (Project Lead)
  - Diane Boehr
  - Barbara Bushman
  - Jen Diffin
  - Jennifer Marill

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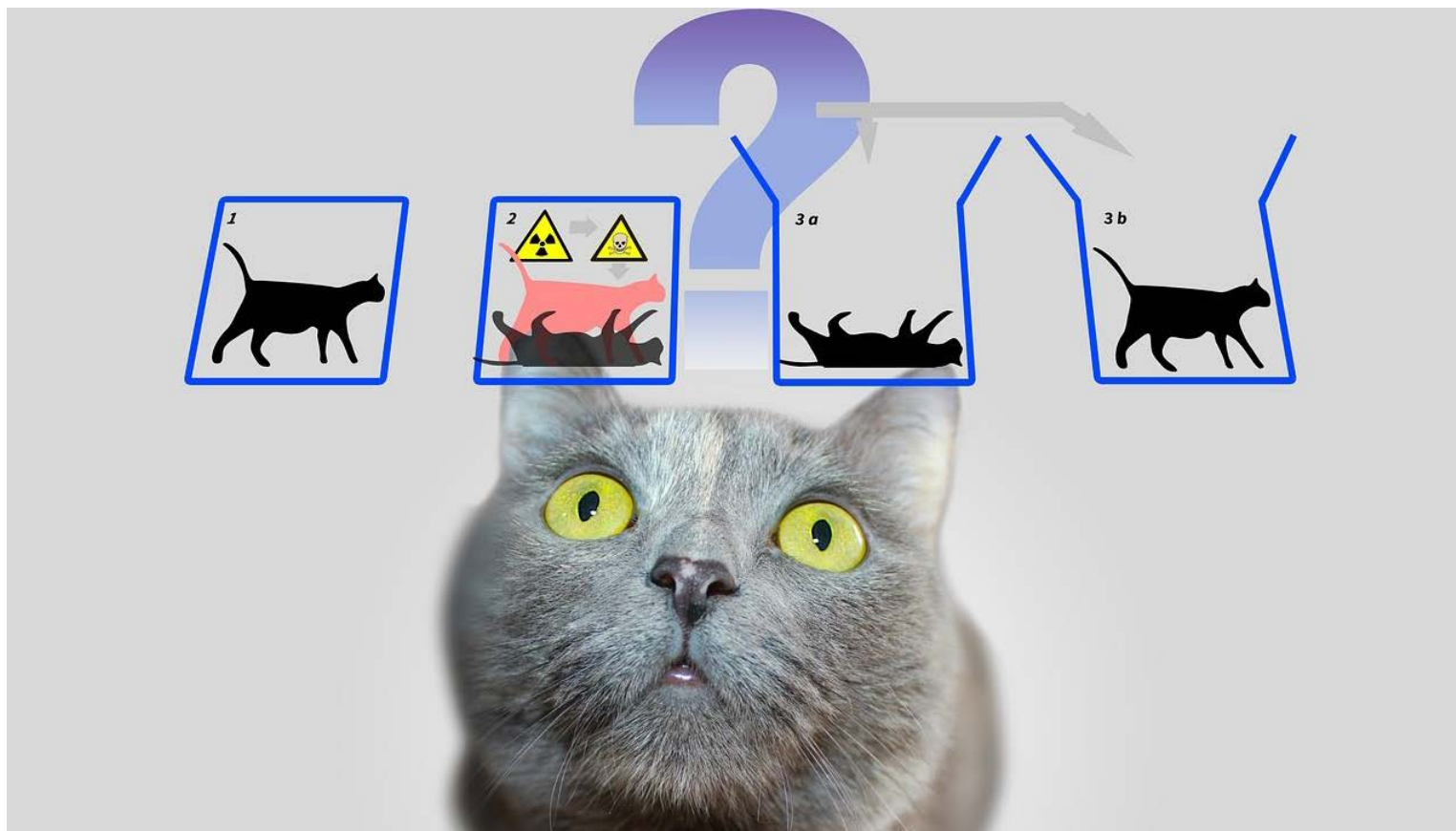
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Questions

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