USE CASE 2 DEMO

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Linked Data for Libraries Workshop

Stanford University, February 23, 2015

Use Case 2

- *See and search on works by people to discover works of interest based on connection to people, and to understand people based on their relation to works*
- Links between catalog data and profile systems for the enhancement of each
- Catalog data: biblio-centric
- Profile system: people-centered

VIVO

- Faculty profile system used at Cornell
- Originally developed and implemented at Cornell
- Now adopted by a growing number of institutions of various types world-wide
- Information on people, research, publications, teaching activities, events, and departments within the institution
- vivo.cornell.edu

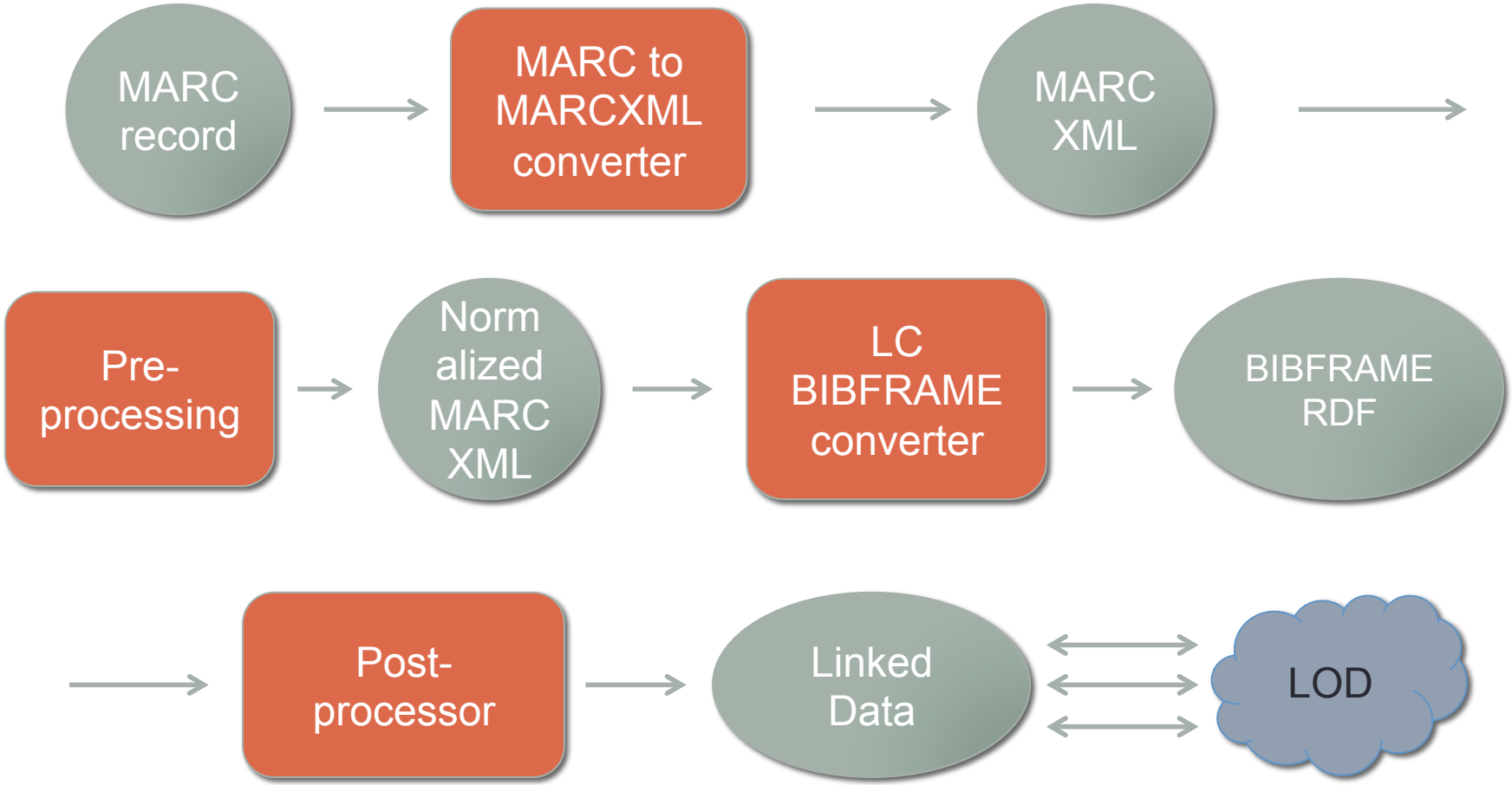
VIVO technology

- Open source semantic web application
- Vitro: general-purpose web-based ontology and instance editor with customizable public browsing
- VIVO = Vitro + ontologies
- www.vivoweb.org

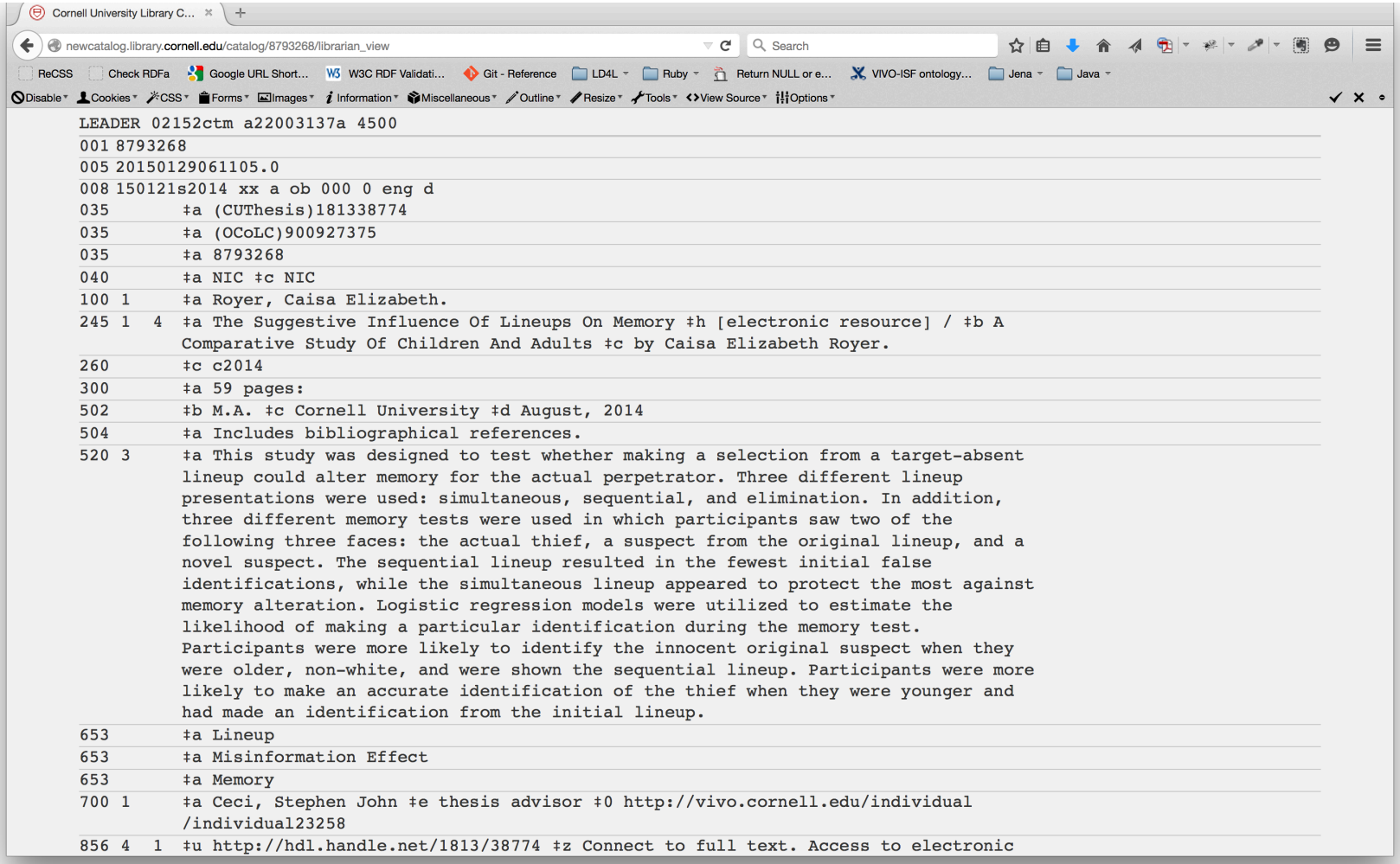
Cornell Use Case 2 Demo

- Demonstrate links between CUL catalog and VIVO
- Round-trip from catalog to VIVO and back to catalog
- Sample data: Cornell thesis records
- Convert records to RDF
- Ingest RDF into Vitro as a browse and search interface

Stages of data transformation



MARC thesis record



Cornell University Library C...

newcatalog.library.cornell.edu/catalog/8793268/librarian_view

Search

ReCSS | Check RDFa | Google URL Short... | W3C RDF Validati... | Git - Reference | LD4L | Ruby | Return NULL or e... | VIVO-ISF ontology... | Jena | Java

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040       ‡a NIC ‡c NIC
100 1     ‡a Royer, Caisa Elizabeth.
245 1  4  ‡a The Suggestive Influence Of Lineups On Memory ‡h [electronic resource] / ‡b A
          Comparative Study Of Children And Adults ‡c by Caisa Elizabeth Royer.
260       ‡c c2014
300       ‡a 59 pages:
502       ‡b M.A. ‡c Cornell University ‡d August, 2014
504       ‡a Includes bibliographical references.
520 3     ‡a This study was designed to test whether making a selection from a target-absent
          lineup could alter memory for the actual perpetrator. Three different lineup
          presentations were used: simultaneous, sequential, and elimination. In addition,
          three different memory tests were used in which participants saw two of the
          following three faces: the actual thief, a suspect from the original lineup, and a
          novel suspect. The sequential lineup resulted in the fewest initial false
          identifications, while the simultaneous lineup appeared to protect the most against
          memory alteration. Logistic regression models were utilized to estimate the
          likelihood of making a particular identification during the memory test.
          Participants were more likely to identify the innocent original suspect when they
          were older, non-white, and were shown the sequential lineup. Participants were more
          likely to make an accurate identification of the thief when they were younger and
          had made an identification from the initial lineup.
653       ‡a Lineup
653       ‡a Misinformation Effect
653       ‡a Memory
700 1     ‡a Ceci, Stephen John ‡e thesis advisor ‡0 http://vivo.cornell.edu/individual
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856 4  1  ‡u http://hdl.handle.net/1813/38774 ‡z Connect to full text. Access to electronic
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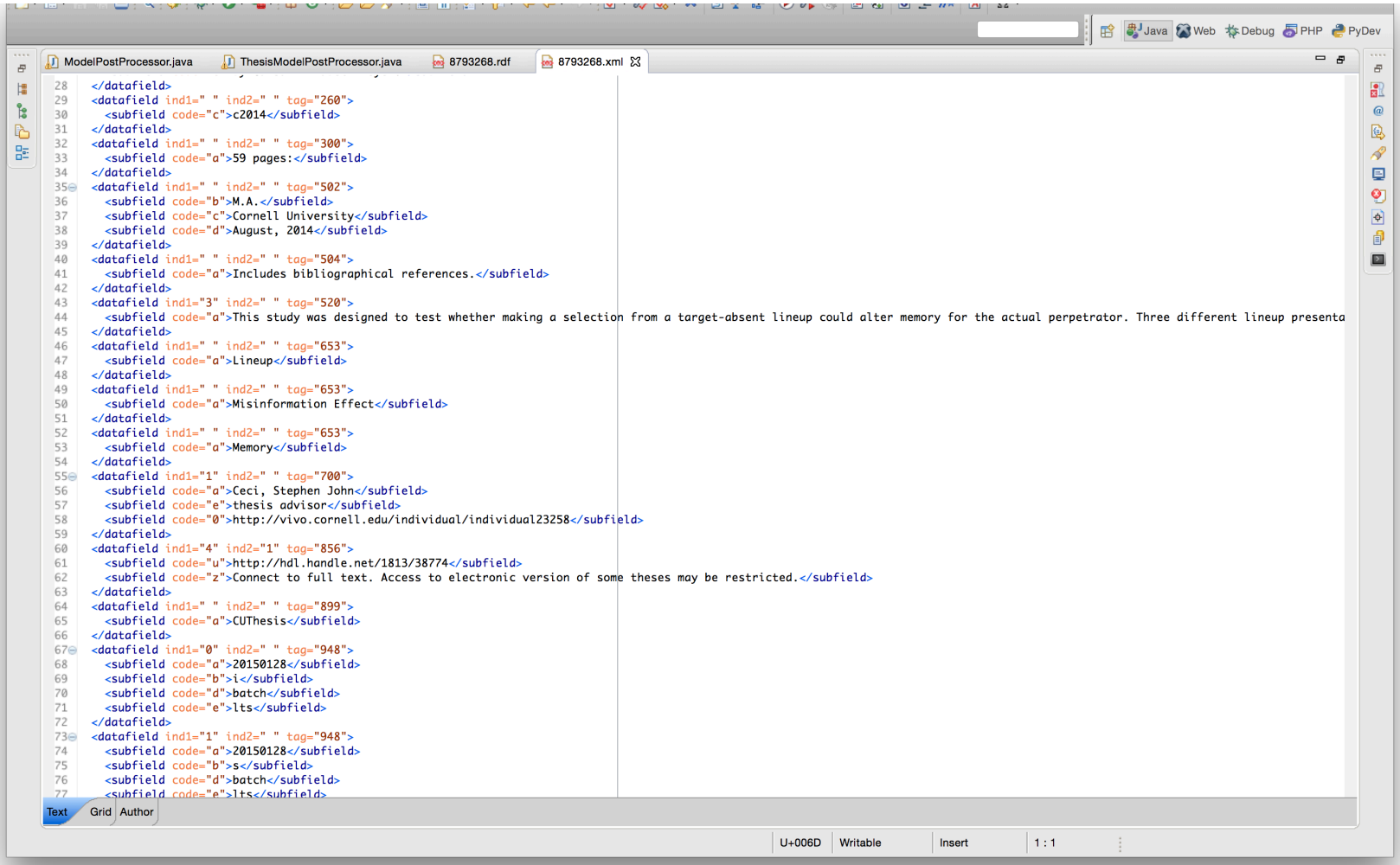


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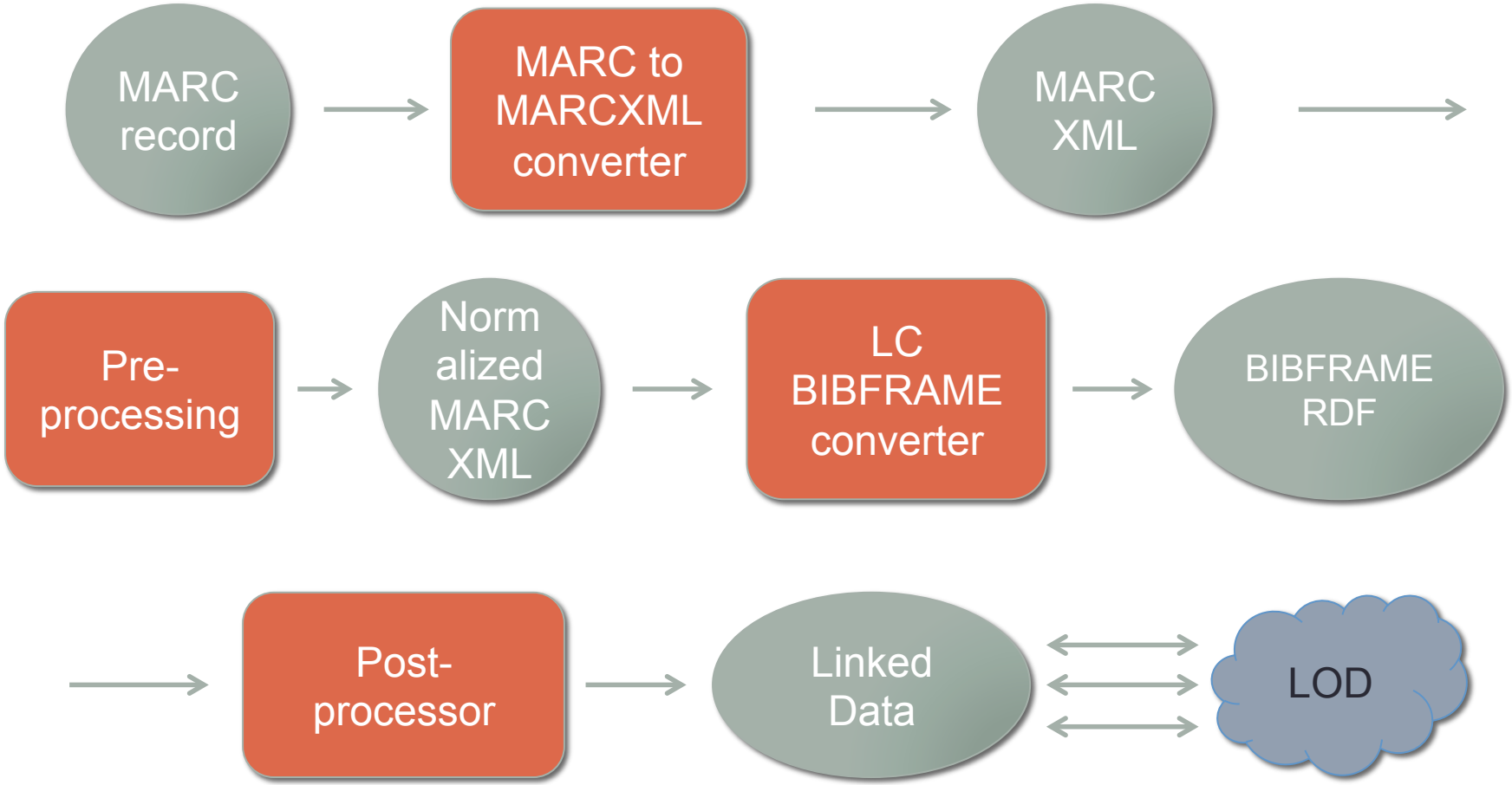
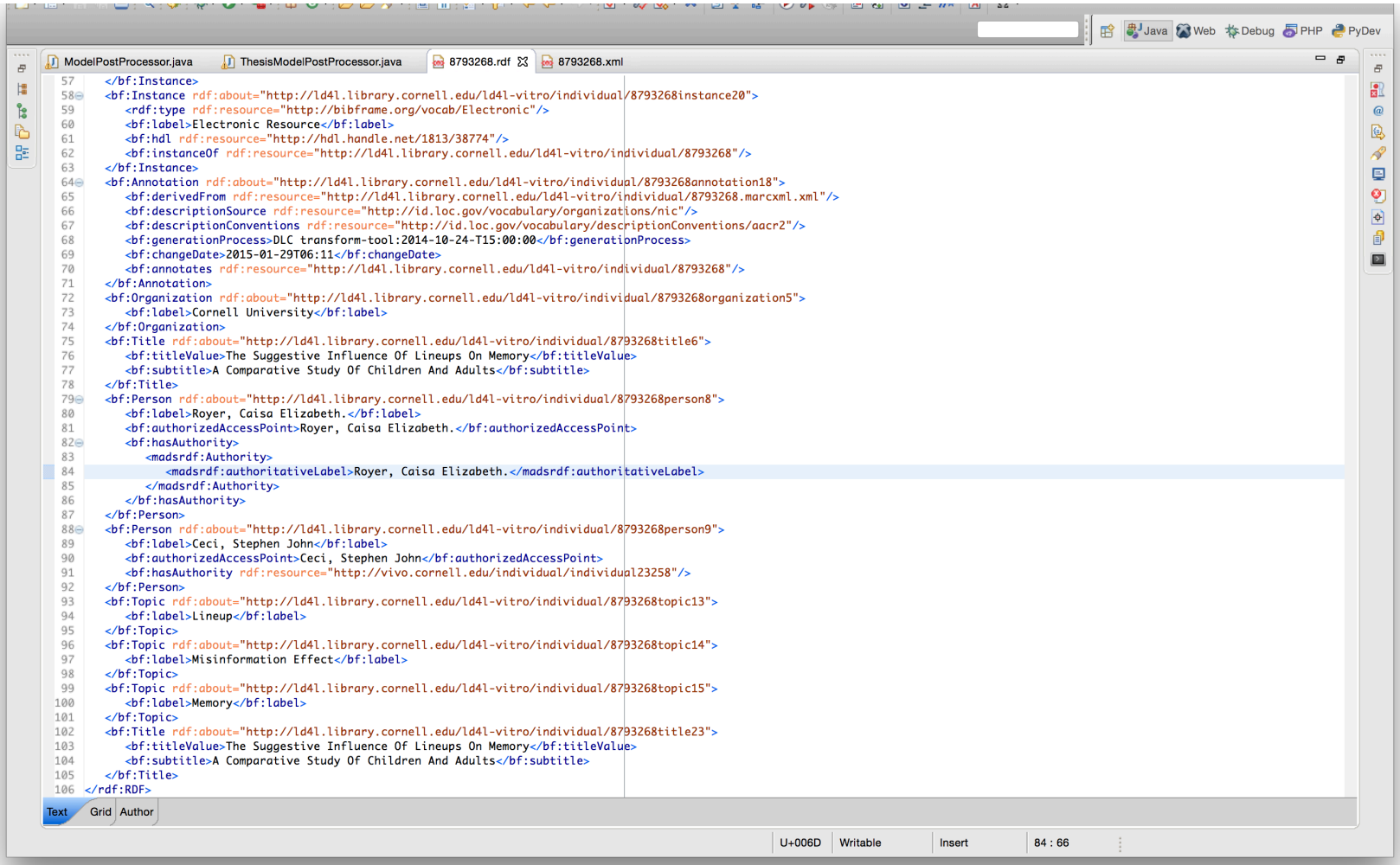
Stages of data transformation



BIBFRAME RDF

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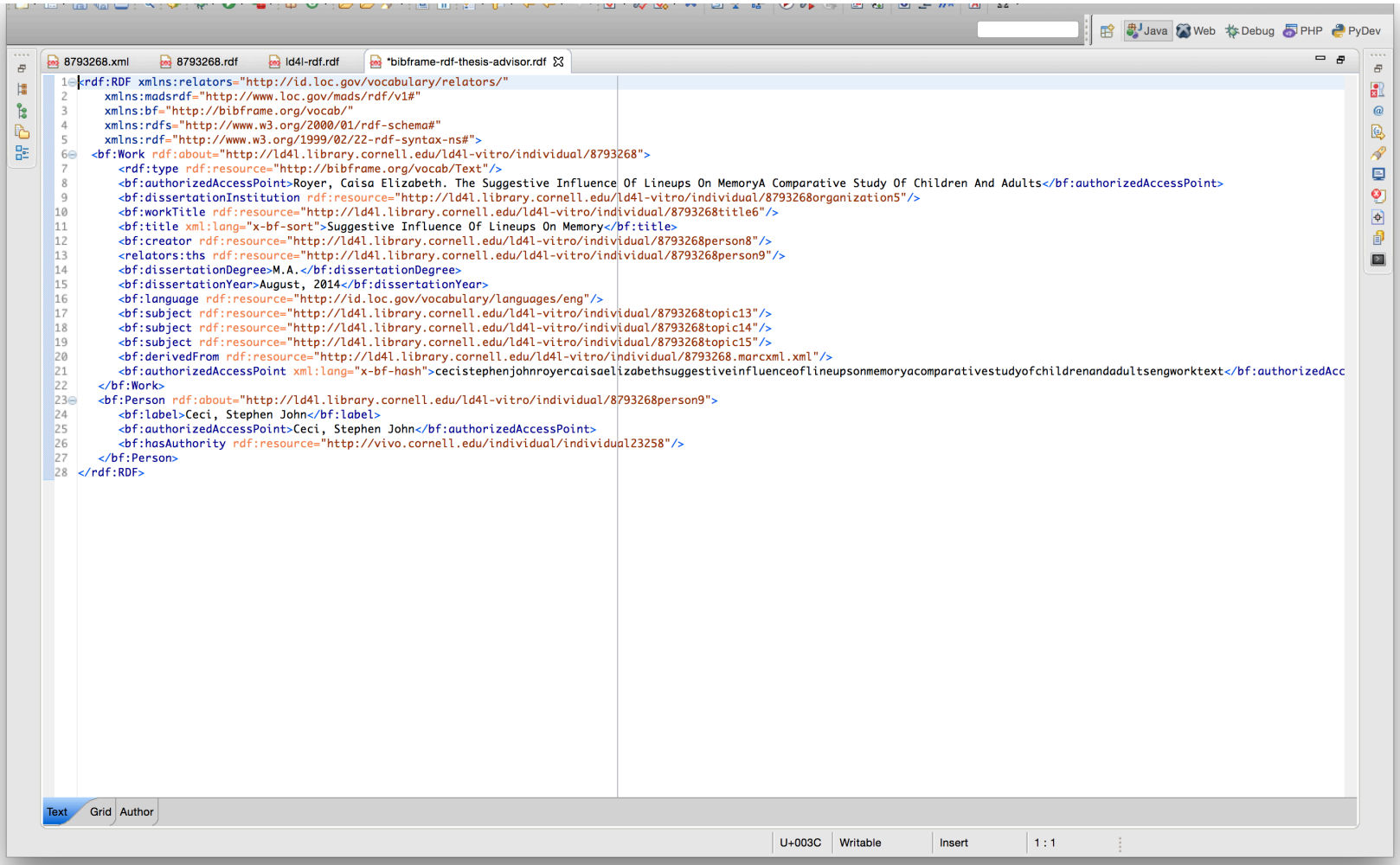
Thesis advisor in Bibframe

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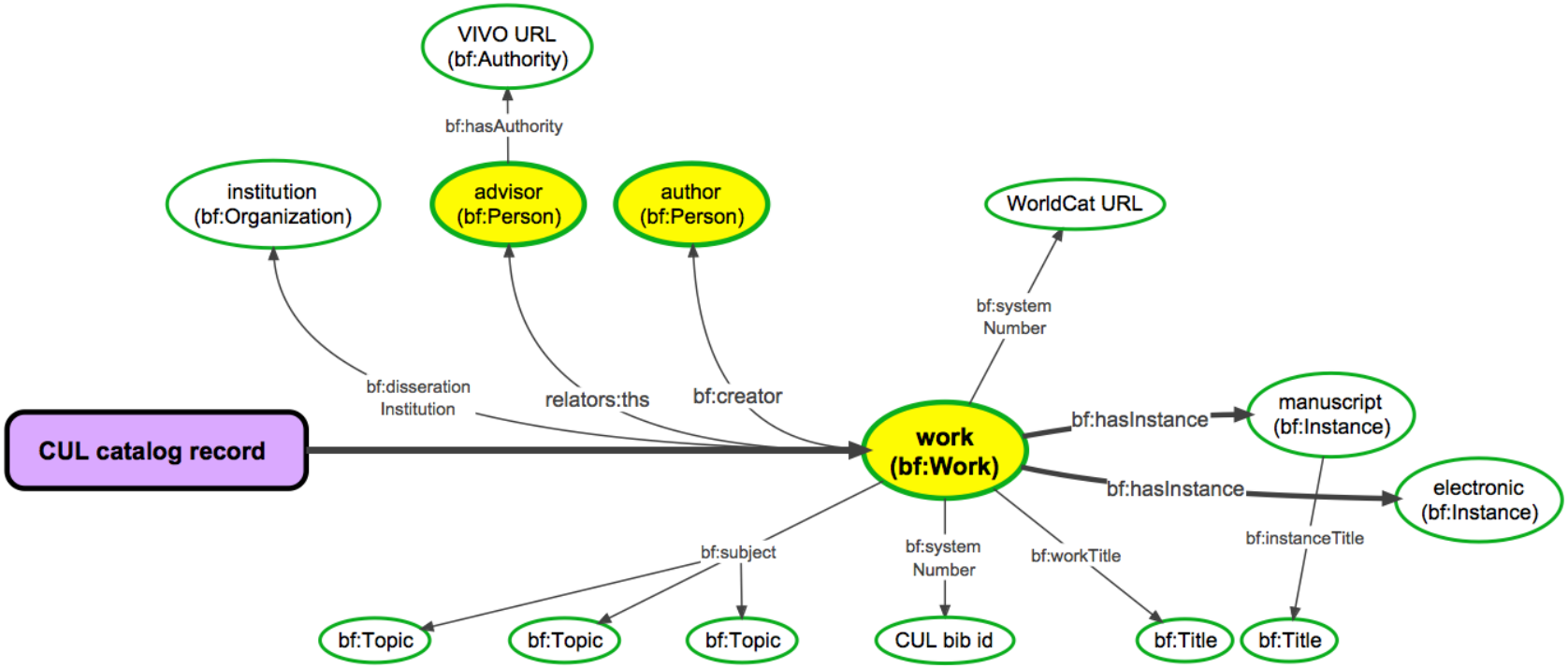
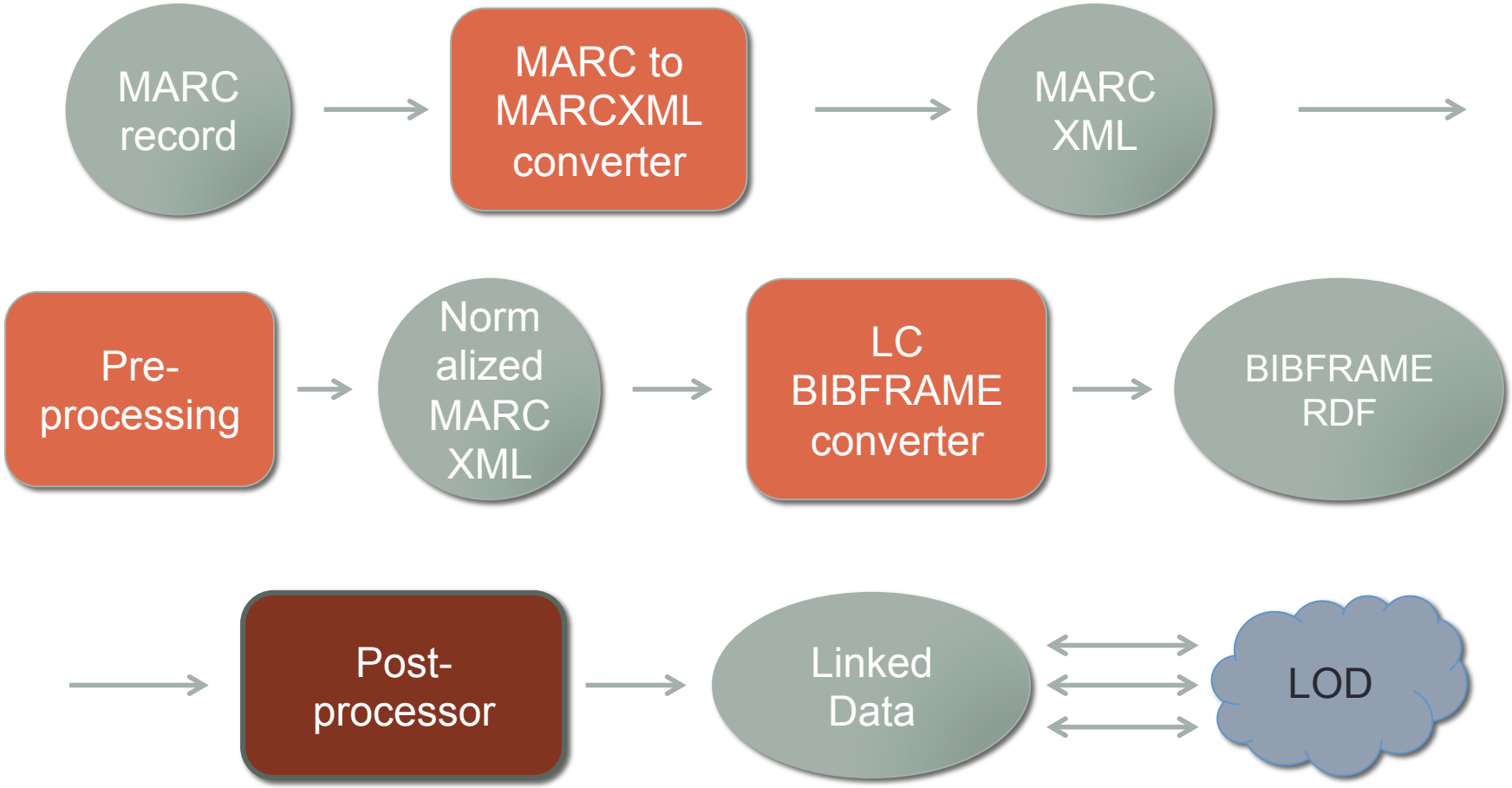
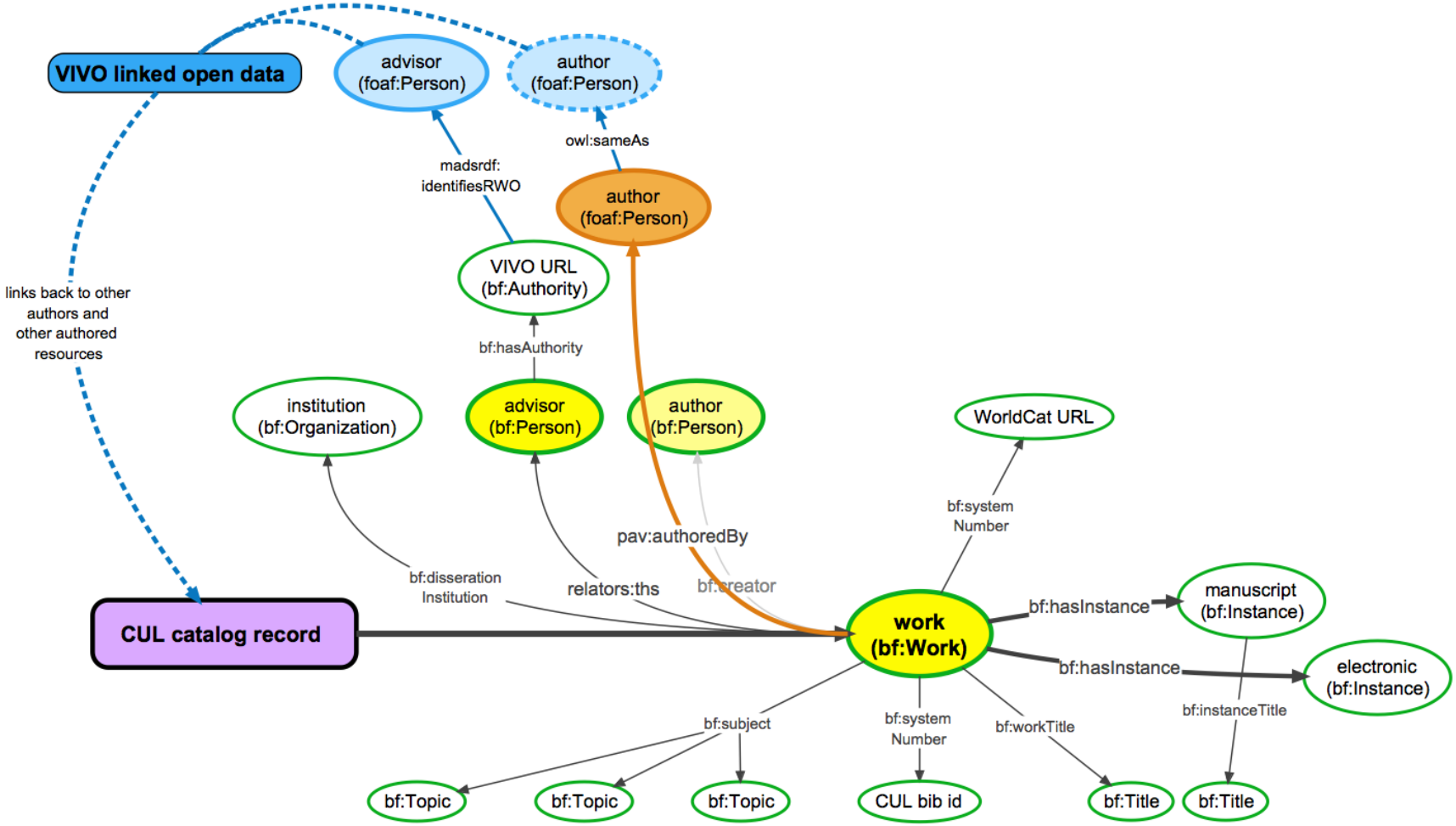
BIBFRAME RDF



Stages of data transformation



LD4L Linked Data fragment



Sample post-processor functions

- Asserts that the bf:Work is an Id4I:Thesis
- Creates foaf:Person from thesis author
  - Links bf:Person to foaf:Person via madsrdf:identifiesRWO / madsrdf:isIdentifiedByAuthority
  - Links work to foaf:Person via pav:authoredBy
- Creates foaf:Person from thesis advisor
  - Re-uses VIVO URI rather than minting a new URI
  - Links bf:Person to foaf:Person via madsrdf:identifiesRWO / madsrdf:isIdentifiedByAuthority
  - Requires entity resolution where same advisor has multiple advisees

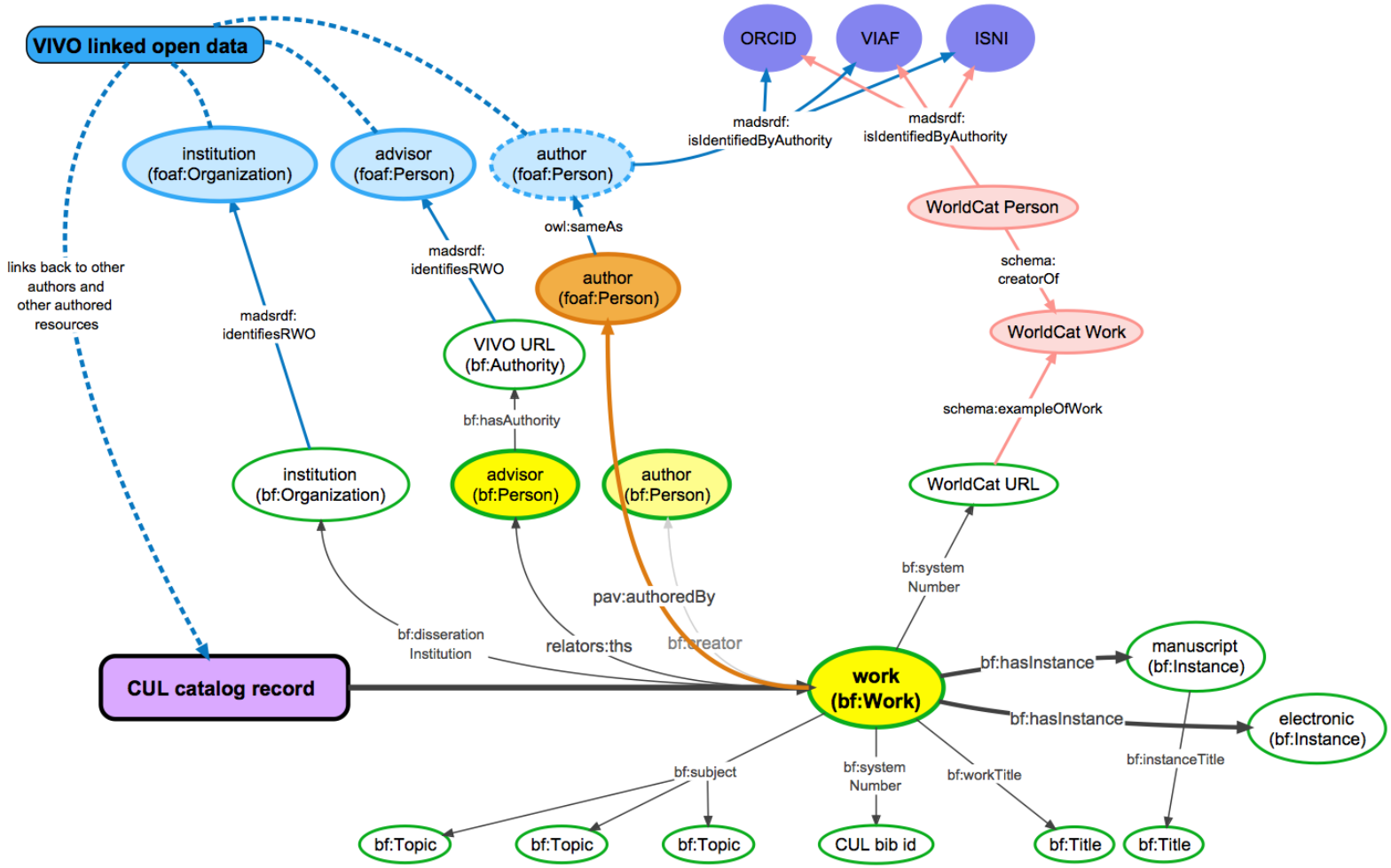
Post-processor functions, cont.

- Creates foaf:Organization from degree-granting institution
  - Requires entity resolution where same institution has granted degrees to multiple individuals
- Adds rdfs:labels
  - Application-specific – Vitro depends on them for display
  - Multiple input sources: bf:label, bf:title, bf:Title

LD4L data in Vitro

- Live at ld4l.library.cornell.edu/ld4l-vitro
- Simulates catalog records augmented with LOD
- Links to external LOD – in this case, VIVO
- Then VIVO brings us:
  - Back to additional catalog records
  - Out to the LOD cloud

Future post-processing challenges

- Scale up to real world magnitude of library catalog data
- Extend to full variety of different types of catalog records
- Entity resolution in the real world
- Integrate catalog updates into existing triplestore
- Link to other external data sources for people, organizations, and works

Additional connections to global identifiers for works, organizations, and people