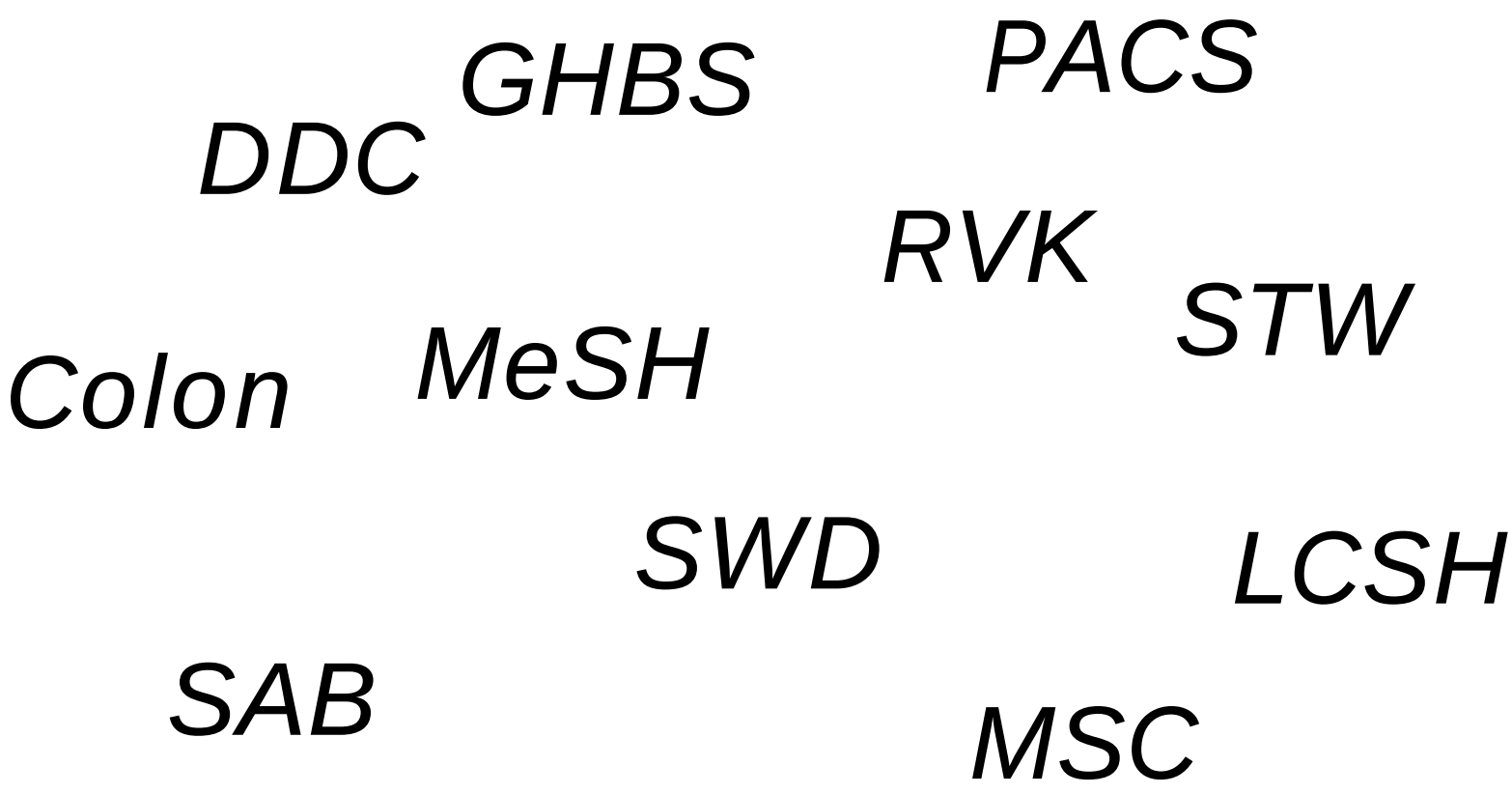
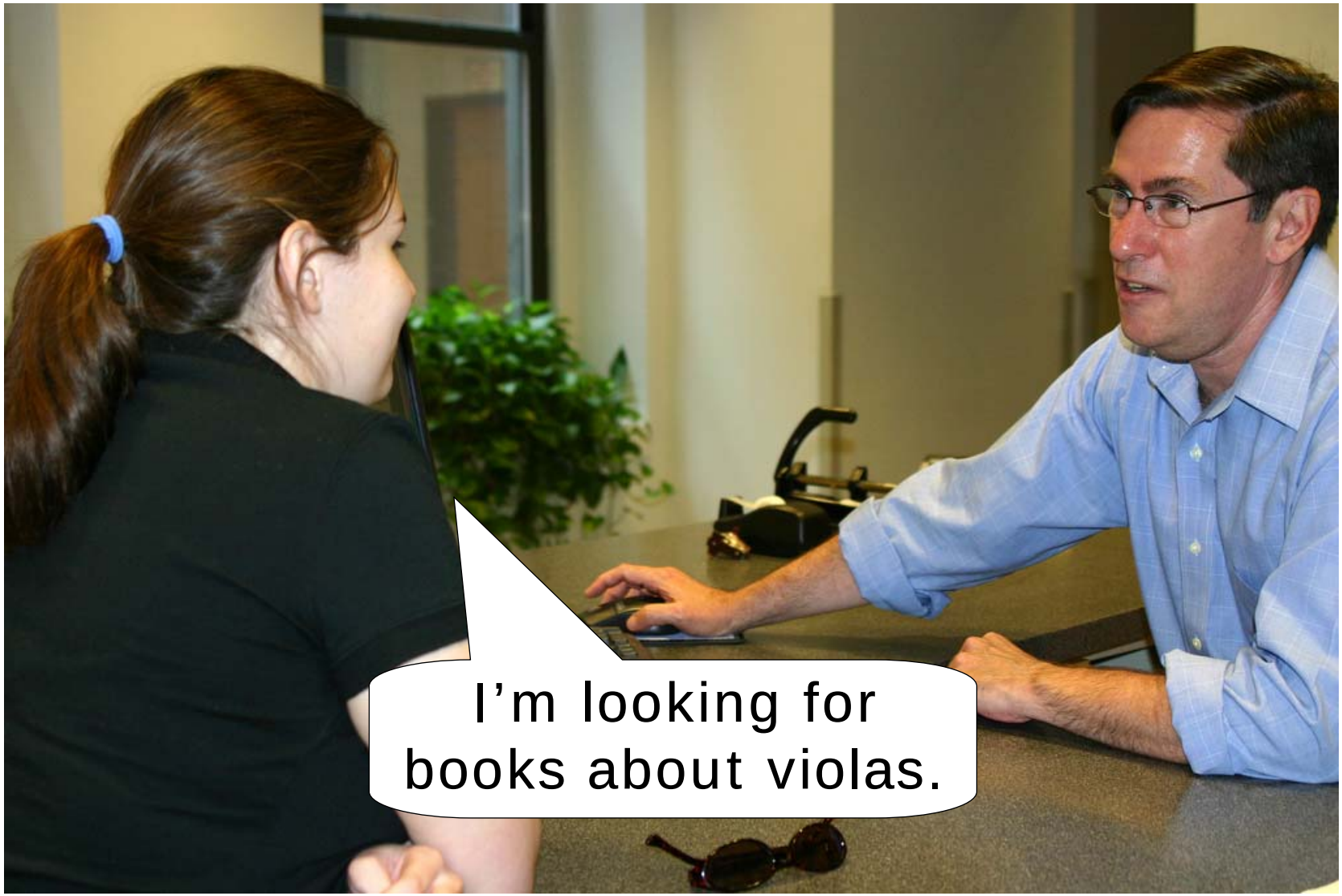
Lars G. Svensson

Unified Access: A SemanticWeb Based Model for Subject Access in Heterogeneously Indexed Repositories

Patrons want to search for resources no matter how they are indexed



We all know that it’s difficult to search across multiple vocabularies



Through Google et al users have grown used to verbal search

Libraries must offer verbal search across multiple vocabularies

Altfiol

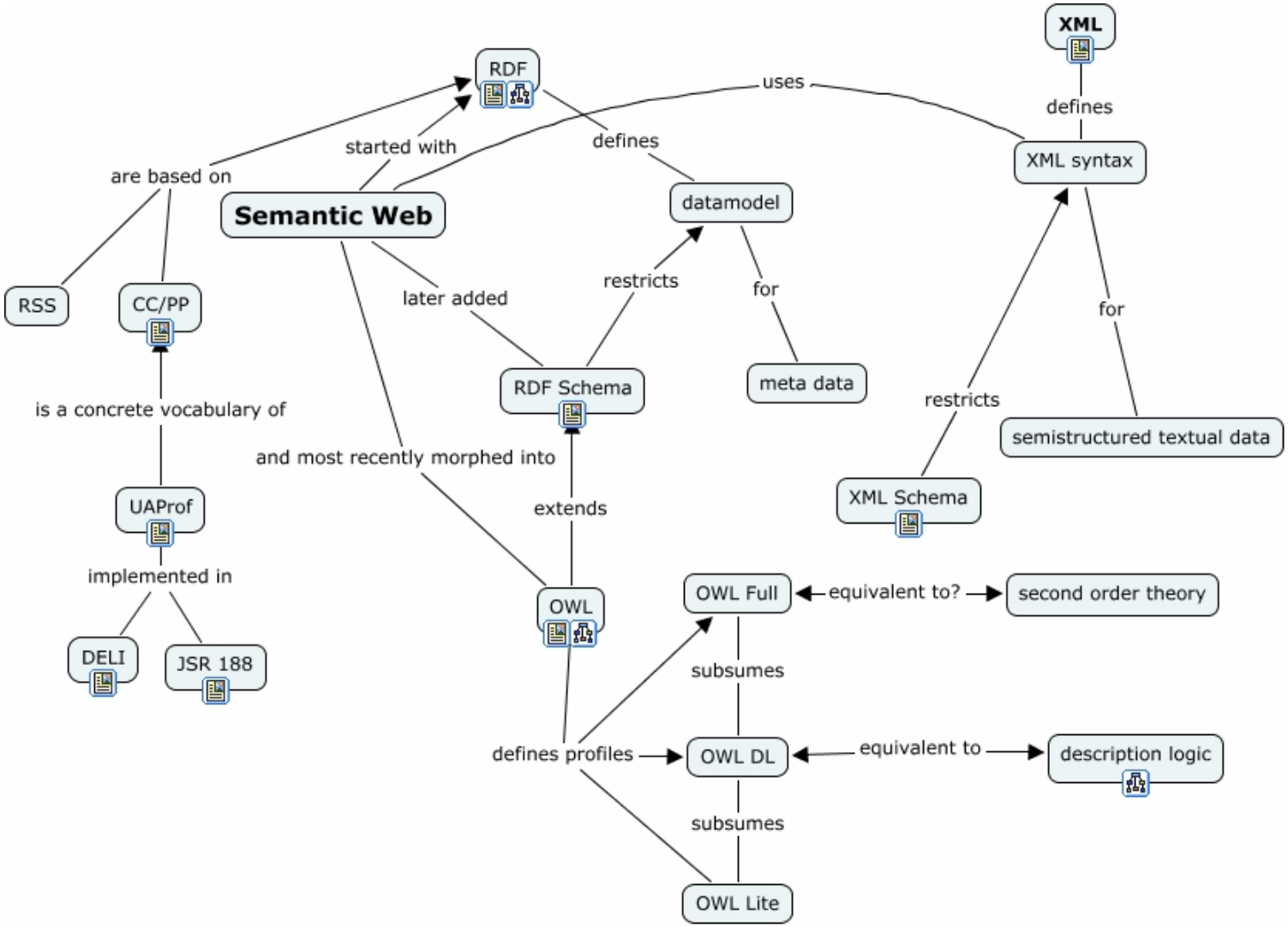
787.3

Bratsche

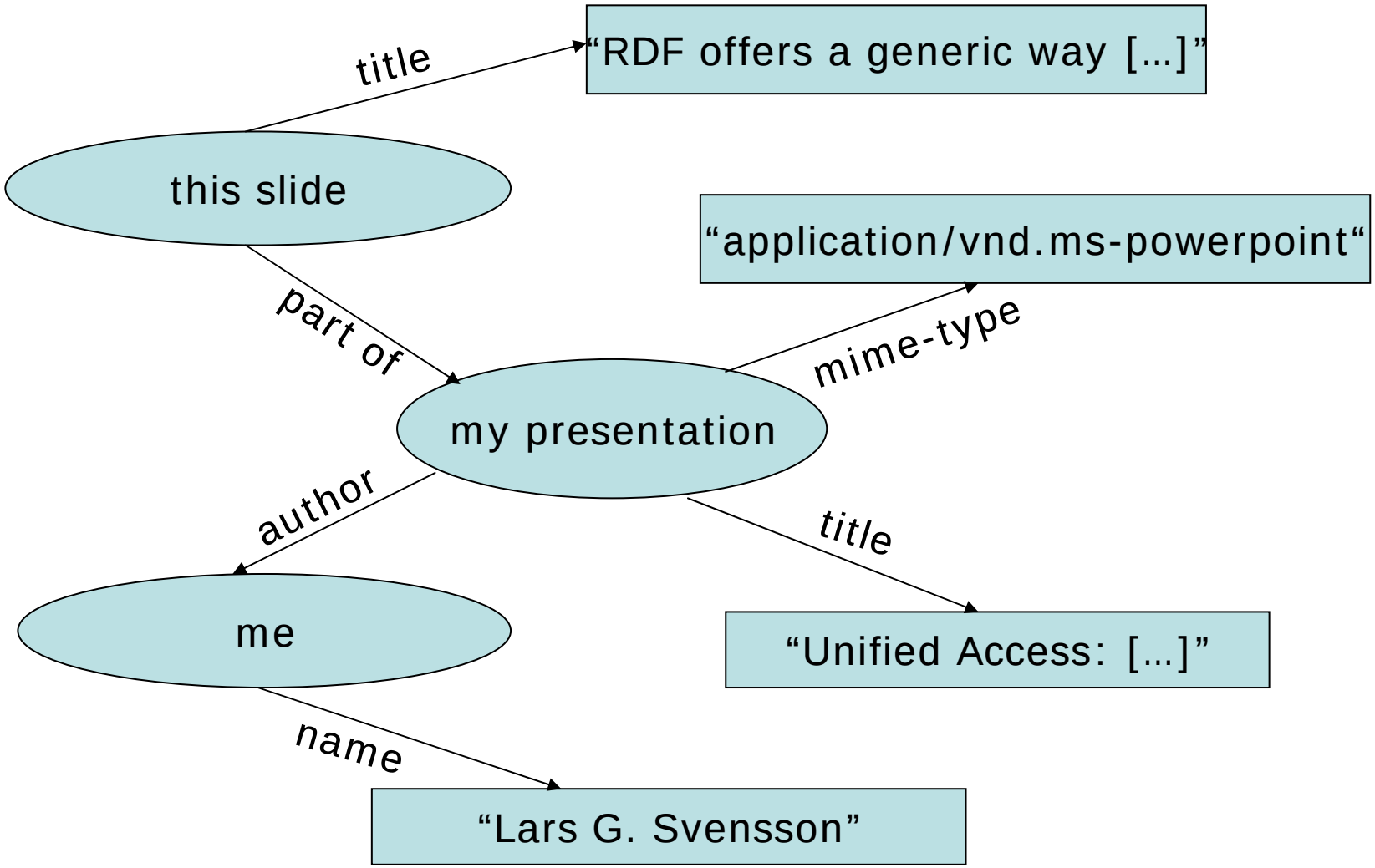
LR 11490a

Viola

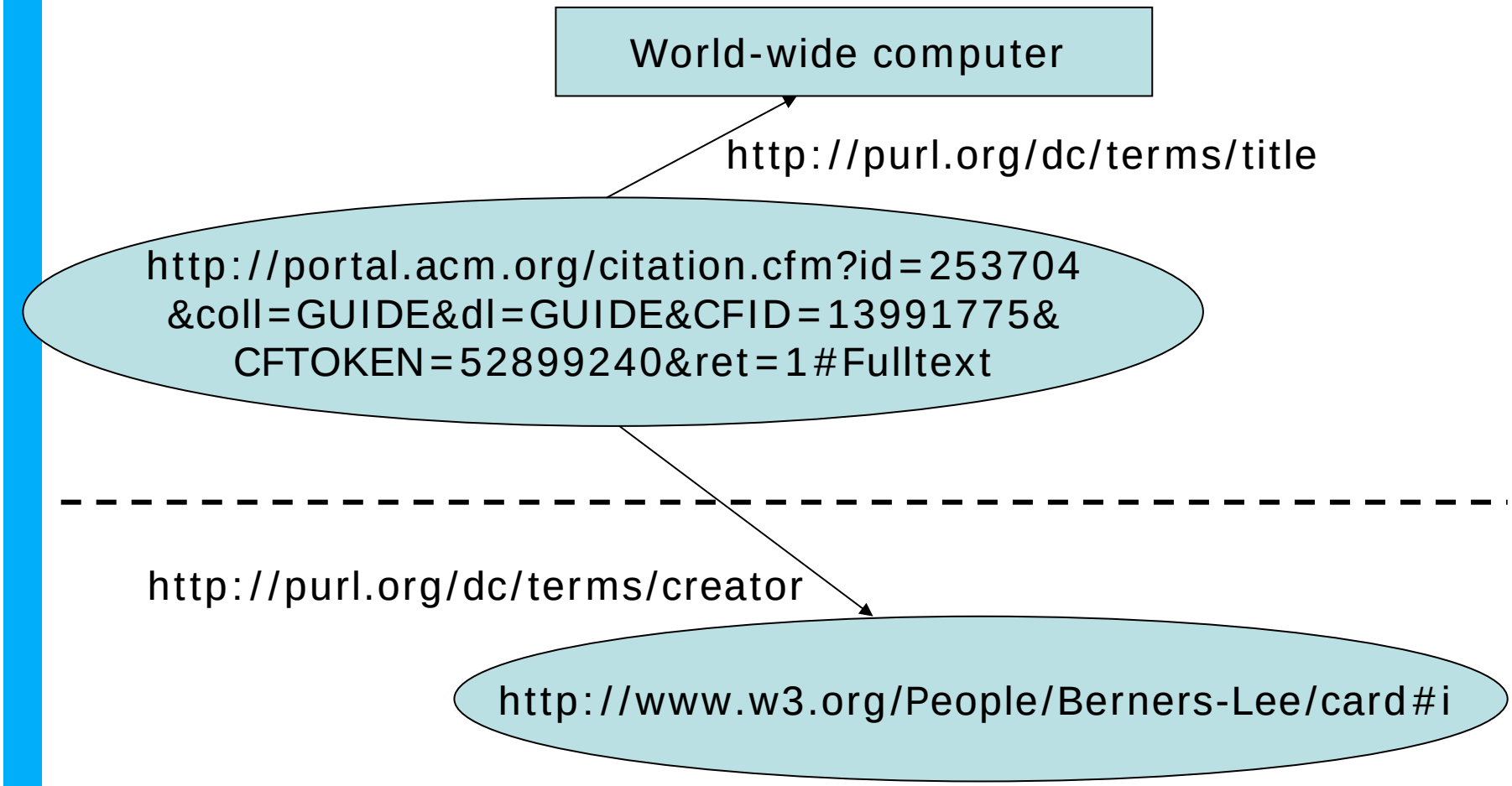
Semantic web technologies offer the possibility to search using multiple interlinked datasets



RDF offers a generic way to describe those datasets



With URIs we can link pre-defined datasets together



With Ontologies and SPARQL we can structure and query the datasets

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Dublin Core

FOAF

OWL

SKOS

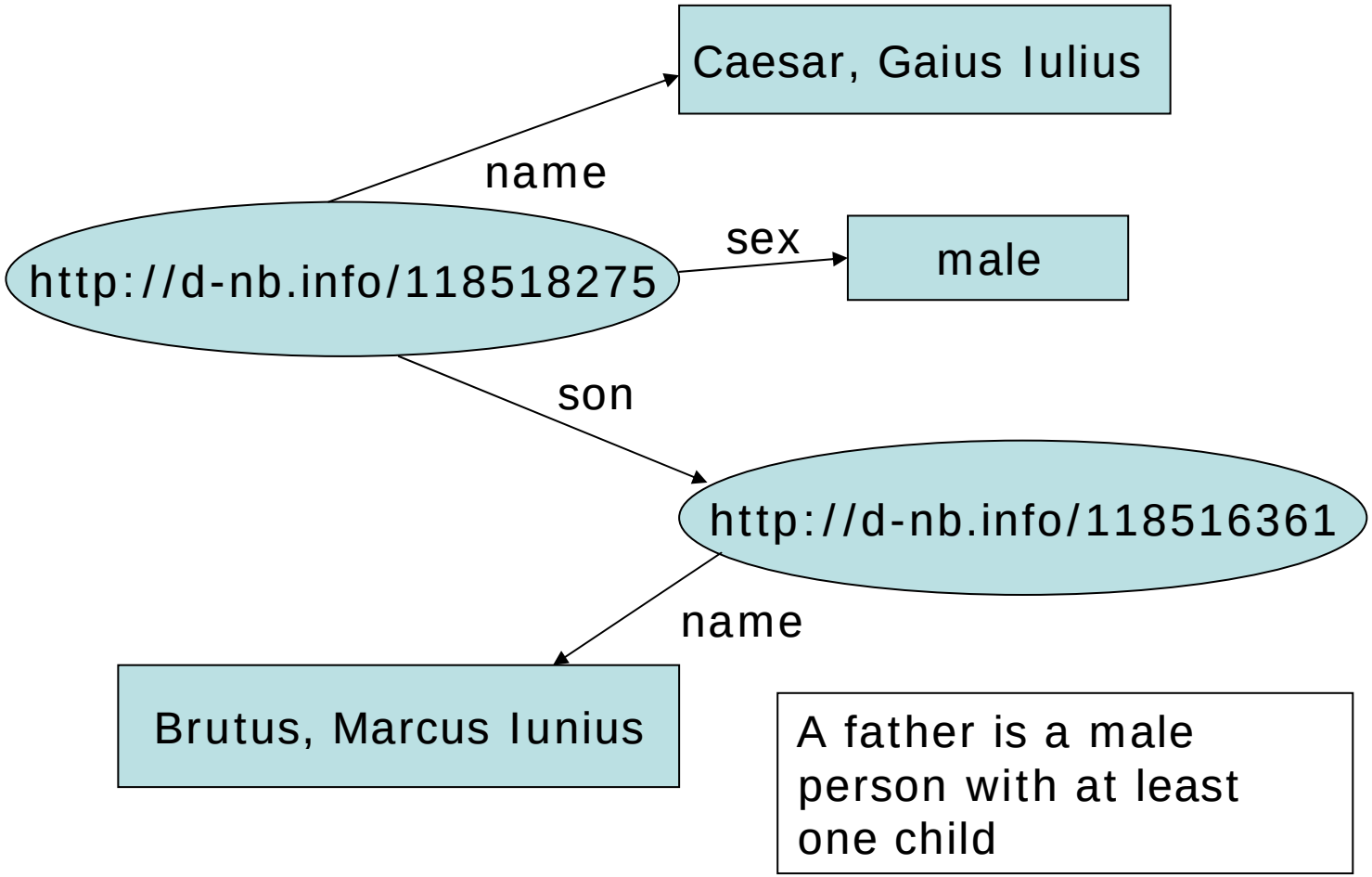
GeoNames

MusicOntology

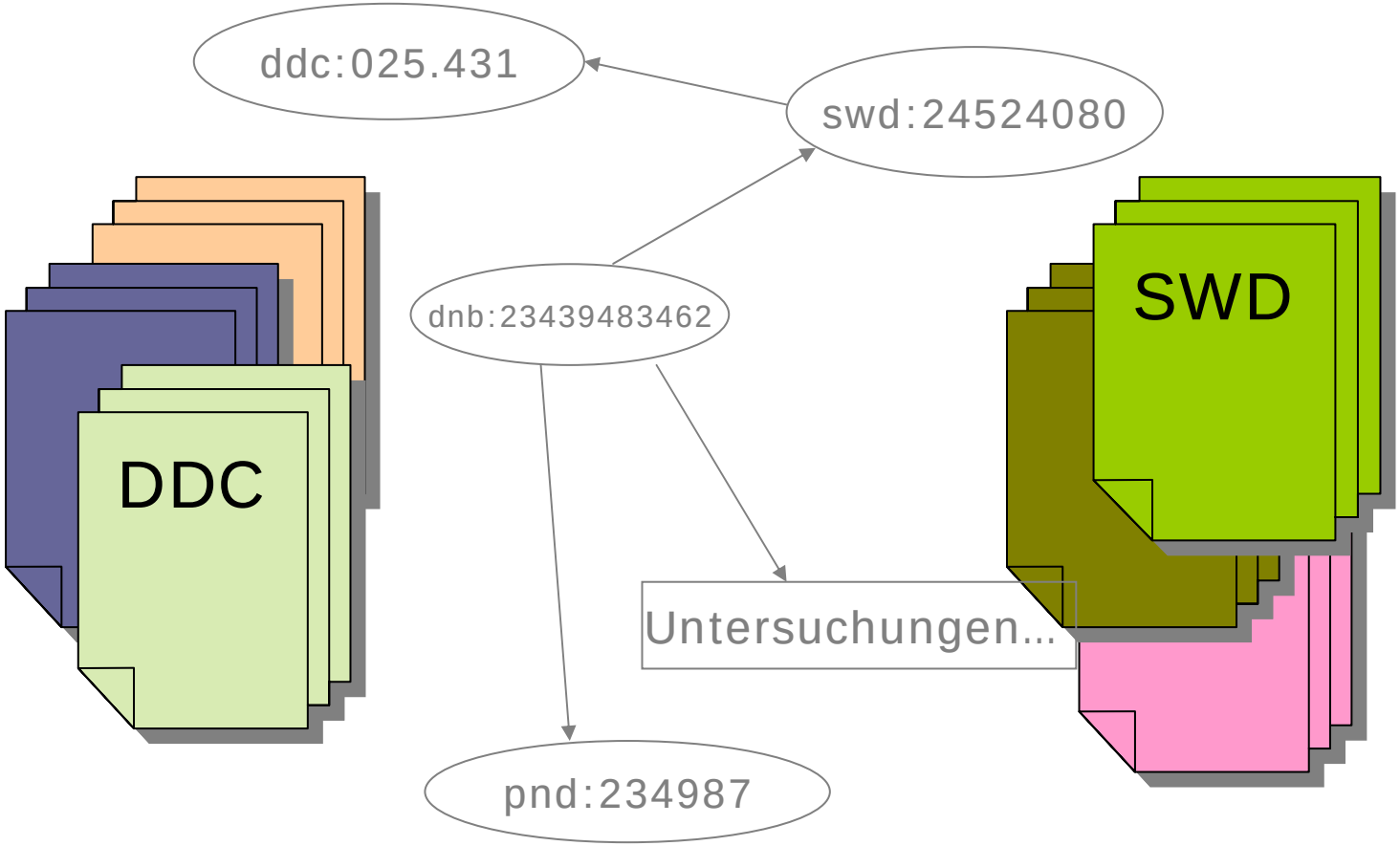
FRBR

```
SELECT ?x
WHERE {
        ?x
        dc:title “Unified
        Access: A
        SemanticWeb Based
        Model for Subject
        Access in
        Heterogeneously
        Indexed Repositories”
}
```

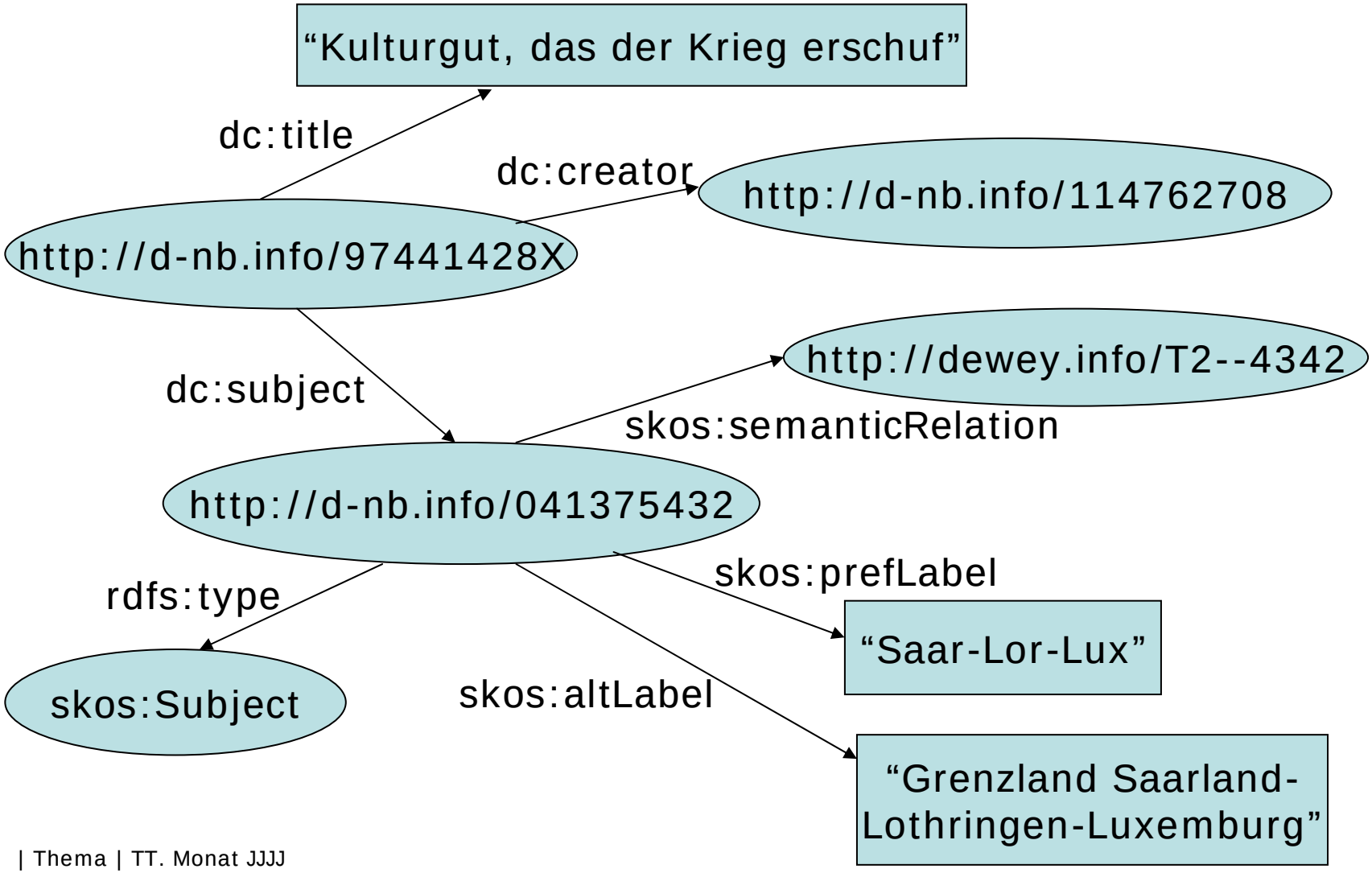
Through rules, reasoning and inferencing we can extract implicit knowledge



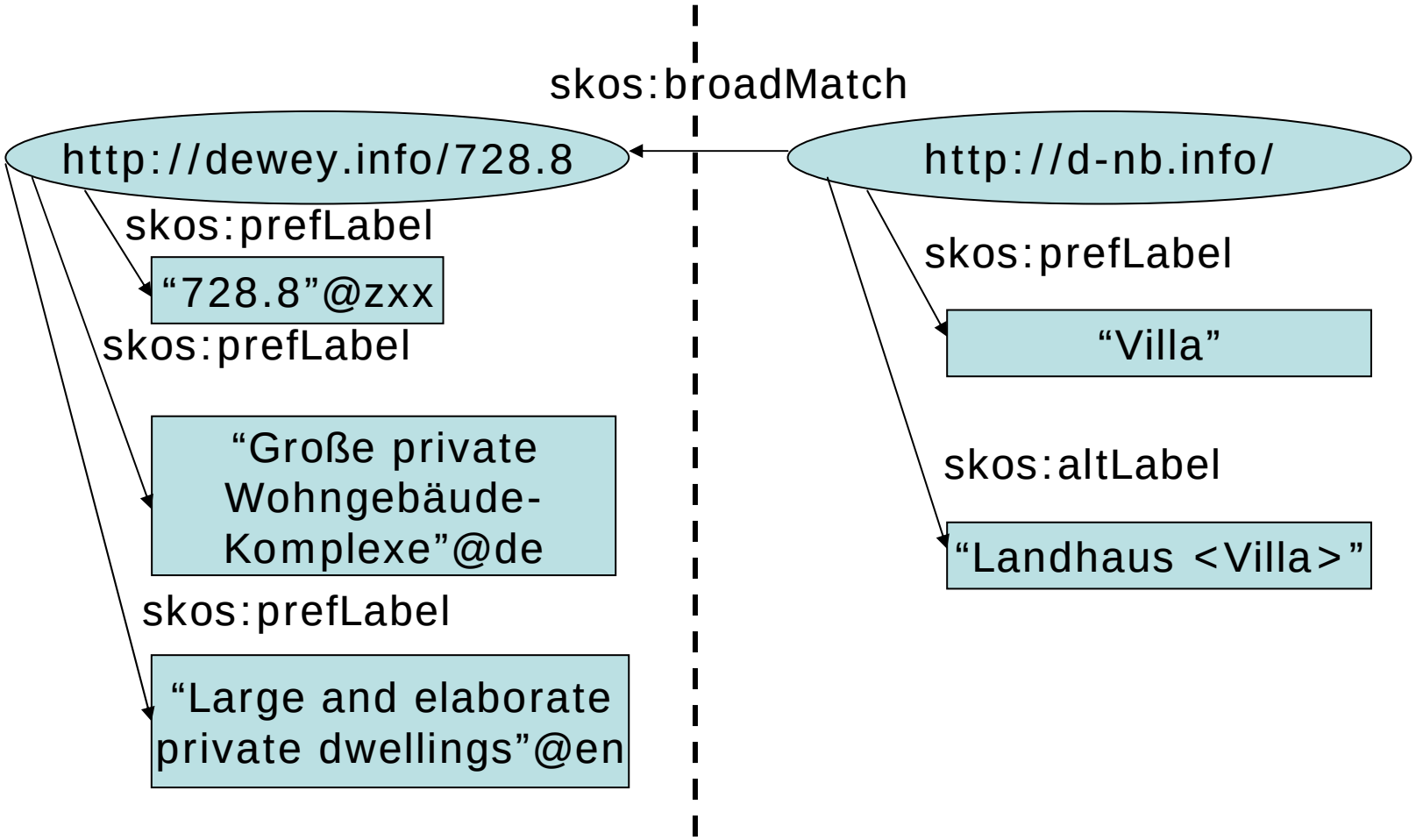
We built a prototype for subject search in ETDs



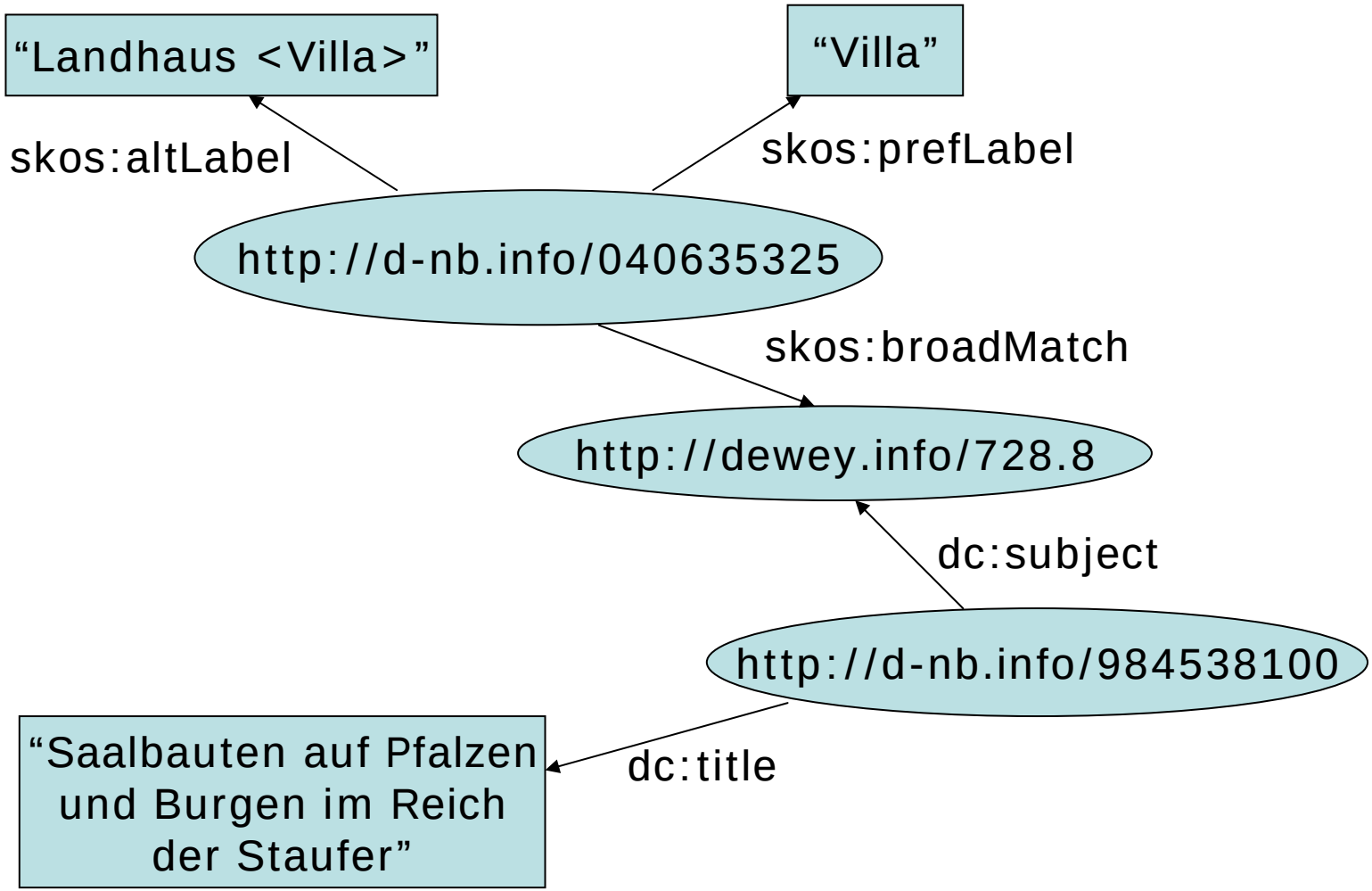
With DC and SKOS we modelled bibliographic and thesaurus data



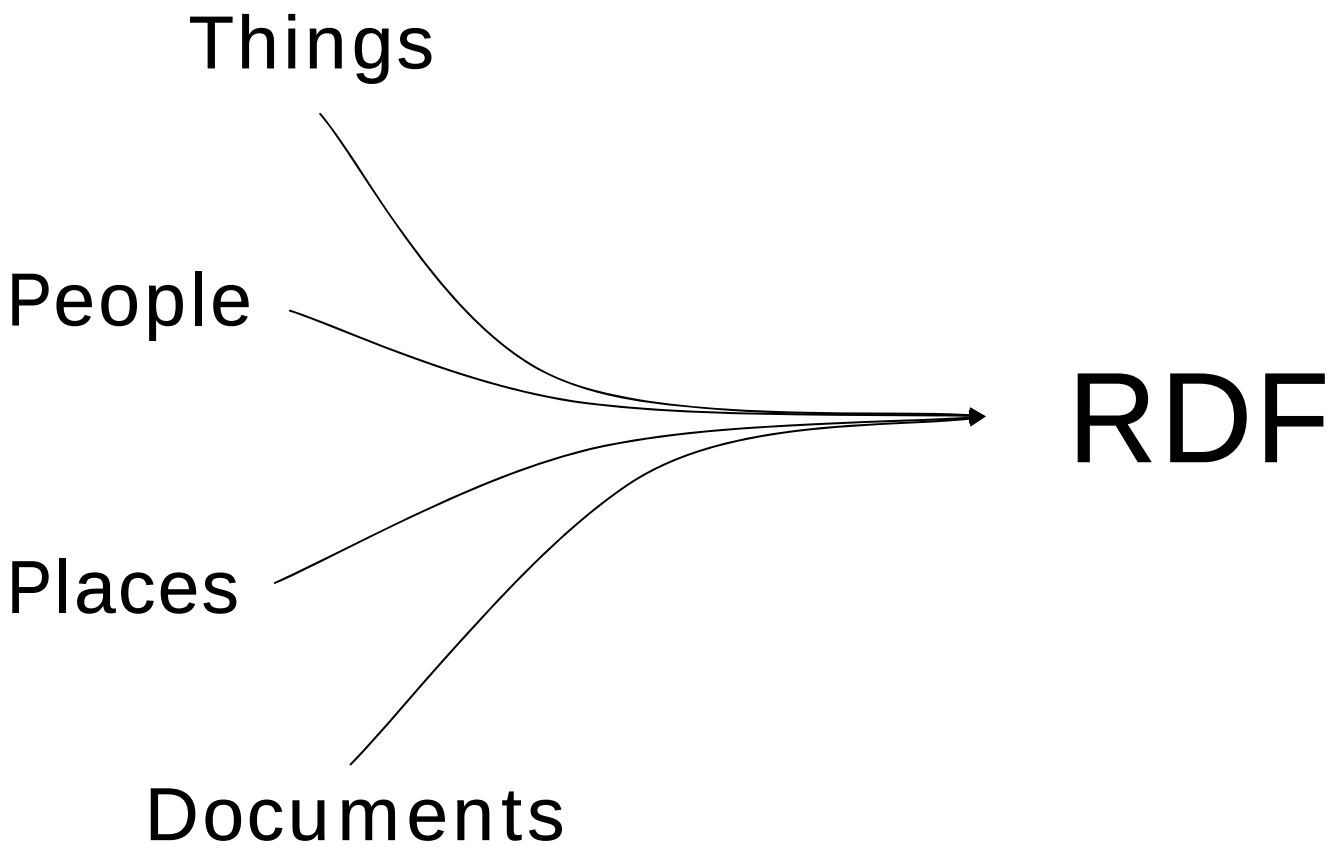
We used the CrissCross mappings to search DDC and SWD simultanesously



We queried the graph with SPARQL and inferencing



This model can be extended to convey generic library data



SemanticMarc and DDC Identifiers are a good start

```
01041cam 2200265 a 4500
001 ###89048230
003 DLC
005 19911106082810.9
008 891101s1990 maua j 001 0 eng
010 ##   $a ###89048230
020 ##   $a 0316107514 :
         $c $12.95
020 ##   $a 0316107506 (pbk.) :
         $c $5.95 ($6.95 Can.)
040 ##   $a DLC
         $c DLC
         $d DLC
050 00   $a GV943.25
         $b .B74 1990
082 00   $a 796.334/2
         $2 20
100 1#   $a Brenner, Richard J.,
         $d 1941-
245 10   $a Make the team.
         $p Soccer :
         $b a heads up guide to super soccer! /
         $c Richard J. Brenner.
246 30   $a Heads up guide to super soccer
250 ##   $a 1st ed.
260 ##   $a Boston :
         $b Little, Brown,
         $c c1990.
300 ##   $a 127 p. :
         $b ill. ;
         $c 19 cm.
500 ##   $a "A Sports illustrated for kids book."
520 ##   $a Instructions for improving soccer skills. Discusses dribbling, heading,
         playmaking, defense, conditioning, mental attitude, how to handle problems with
         coaches, parents, and other players, and the history of soccer.
650 #0   $a Soccer
         $v Juvenile literature.
650 #1   $a Soccer.
```

Can libraries compete with general-purpose search engines?

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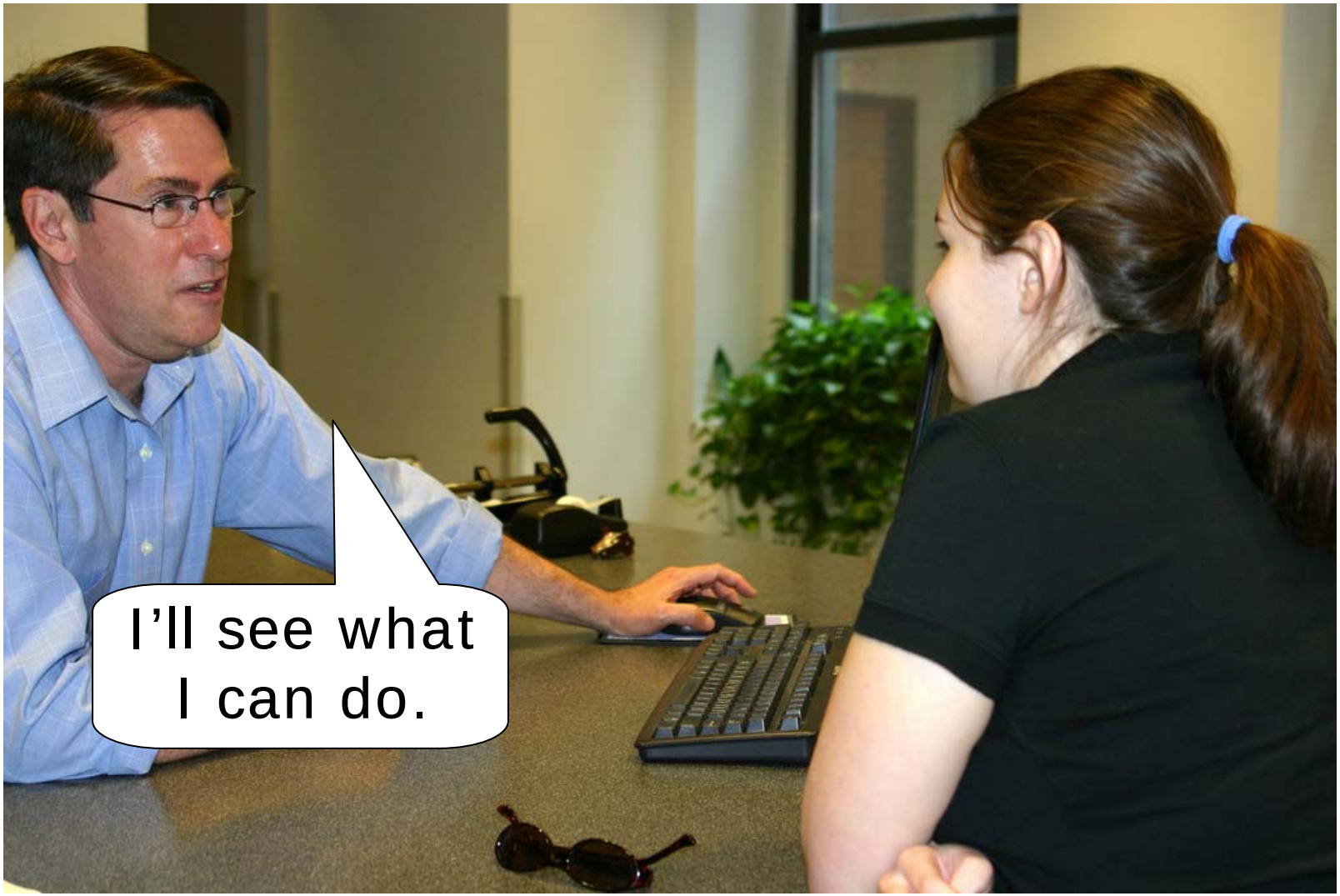
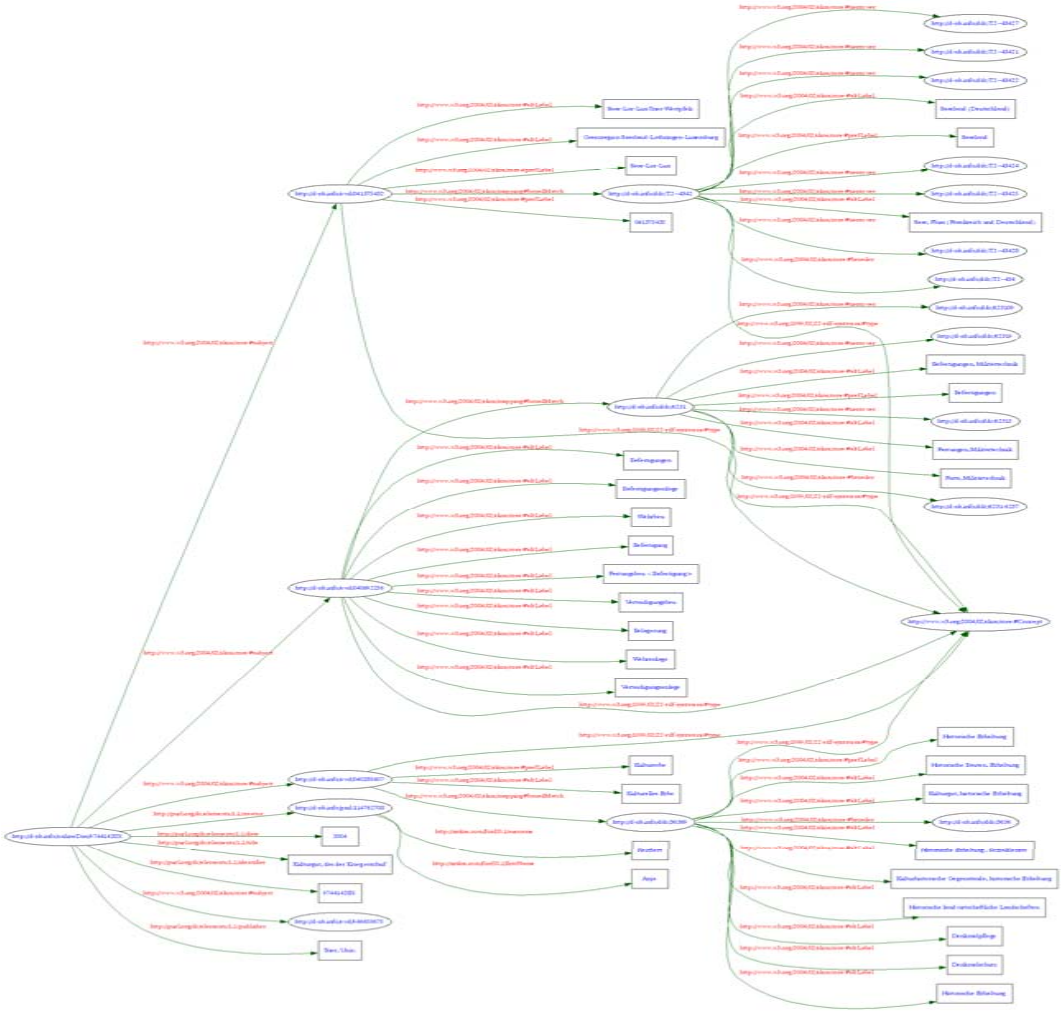
It’s still difficult to perform subject search in heterogeneous repositories



With SemanticWeb technologies we can query large datasets for semantically interlinked data



We can offer our patrons a high-quality library search

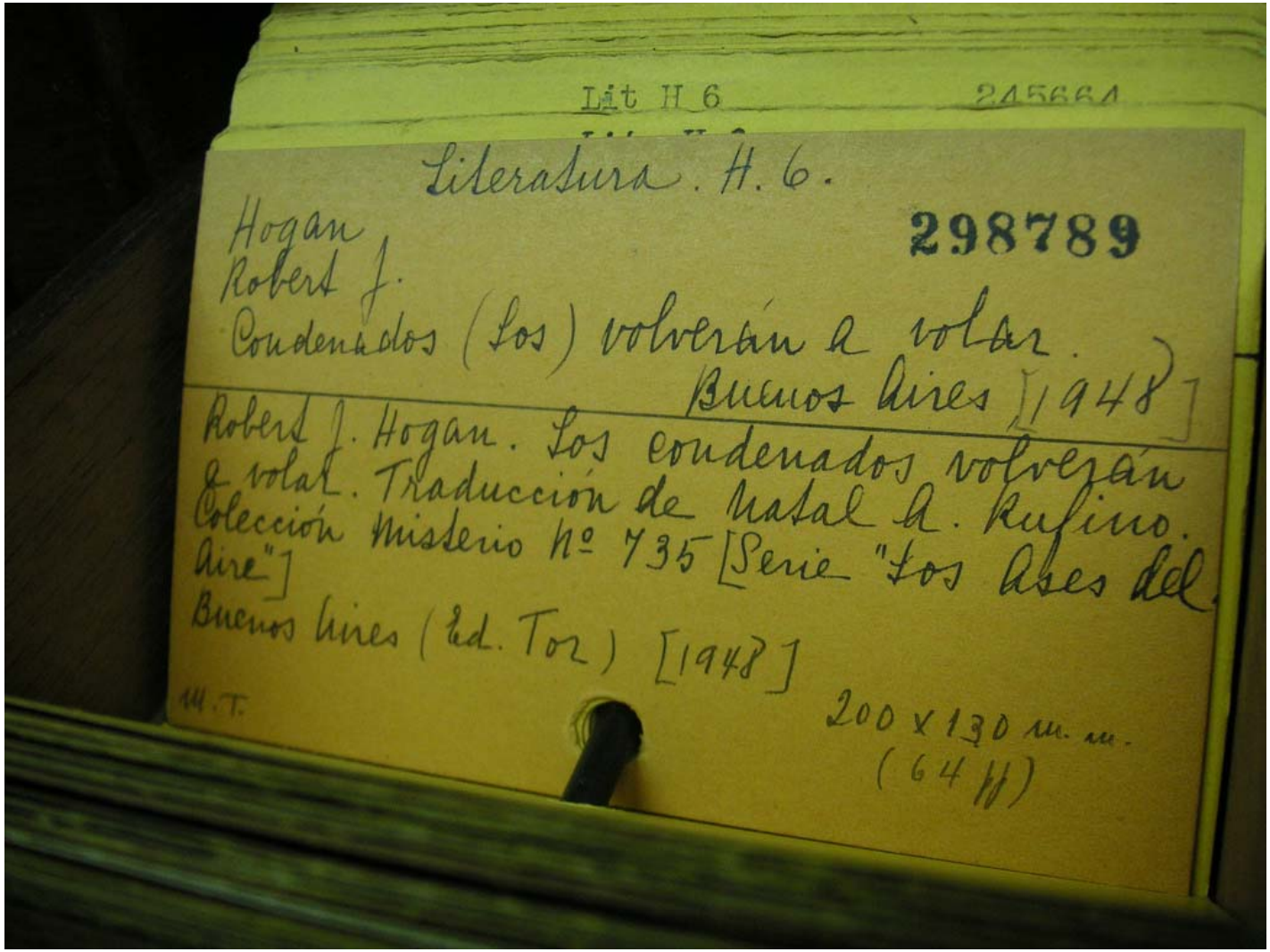


Photo by Beatrice Murch: http://flickr.com/photos/blmurch/4656239 33/

After all: Information is worthless without people

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Source: **Michael Porter** (http://www.flickr.com/photos/libraryman/390354895)