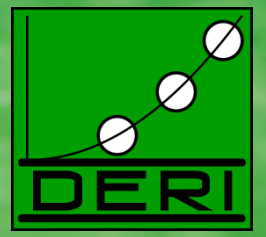

Enrichment of Affiliation Networks in SKOS-based Datasets

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Outline

- Motivation
- Our Approach
  - Tripartite model + SKOS
  - Graph representations
  - Broader pattern relations
  - Extended graph
- A concrete case
  - Actors graph
- Perspectives and Conclusions

Motivation

Users can benefit from **LOD** by annotating existing content with semantic-rich data

However, two users tagging content with different tags are not connected even if the tags are related

Our approach: tripartite model + SKOS

The tripartite model of tagging or **Actors-Concepts-Instance** model represent *users* (**actors**) annotating *resources* (**instances**) with *tags* (**concepts**) (P.Mika, 2005)

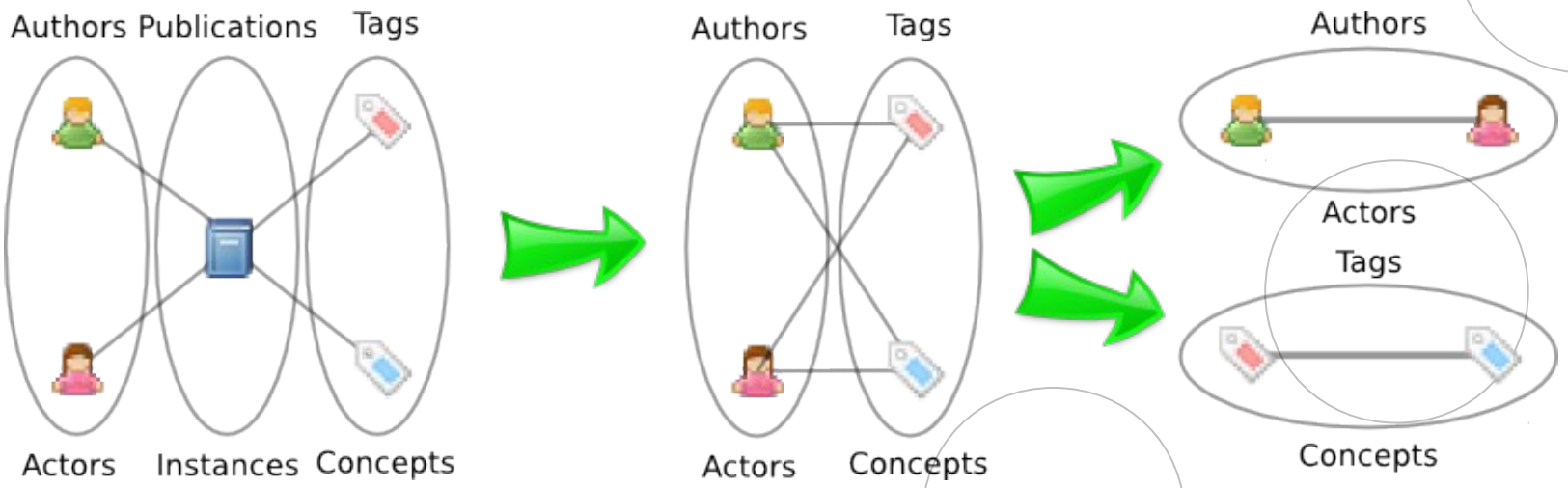
We extend this model by using **SKOS broader/narrower** properties, that provide generic relation between concepts and available on the LOD cloud

Our approach: graph representations

The tripartite model can be represented as a tripartite graph: G=<V,E>, V=A U C U I

This graph can be projected into a bipartite **Actor-Concepts** graph (AC)

AC can be folded into 2 unipartite graphs: **Actors** graph and **Concepts** graph

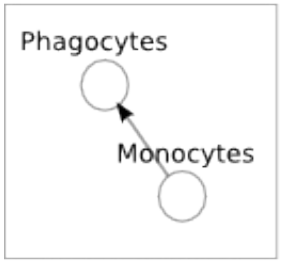


Our approach: broader pattern relations

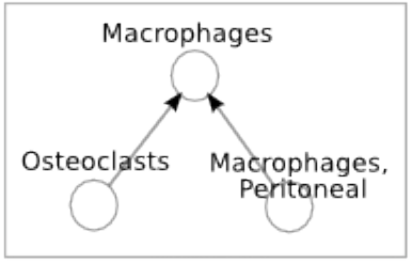
Broader/narrower relations between concepts can also be represented as a unipartite directed graph

We identify three broader pattern relations:

- **Parent-child**
- **Sibling**
- **Co-ancestors**



CHILD-PARENT



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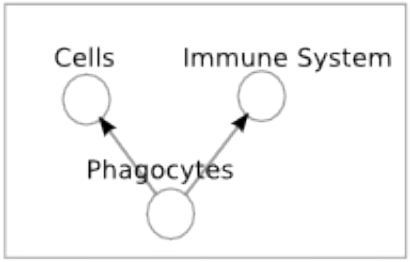
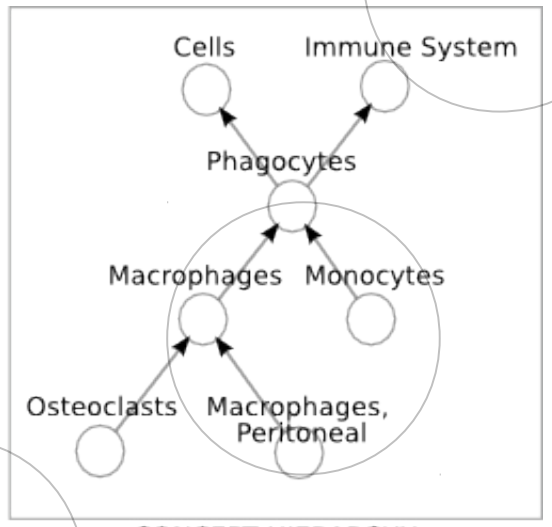
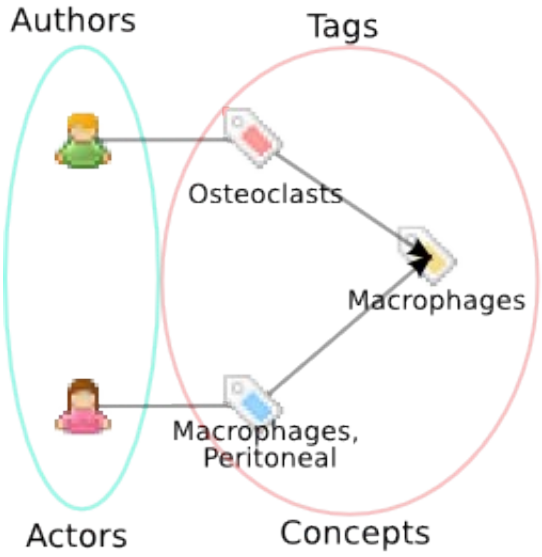


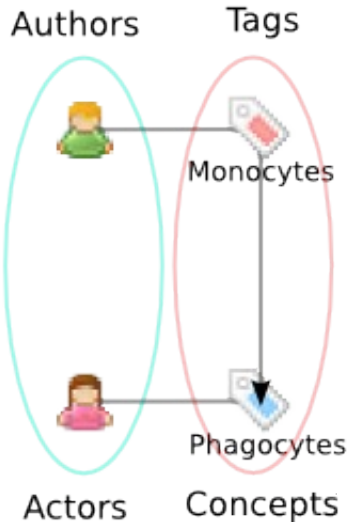
CO-ANCESTORS

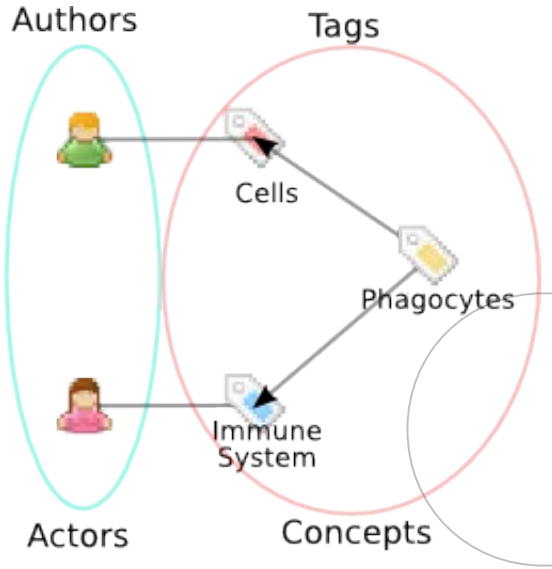


CONCEPT HIERARCHY

Our approach: extended graph





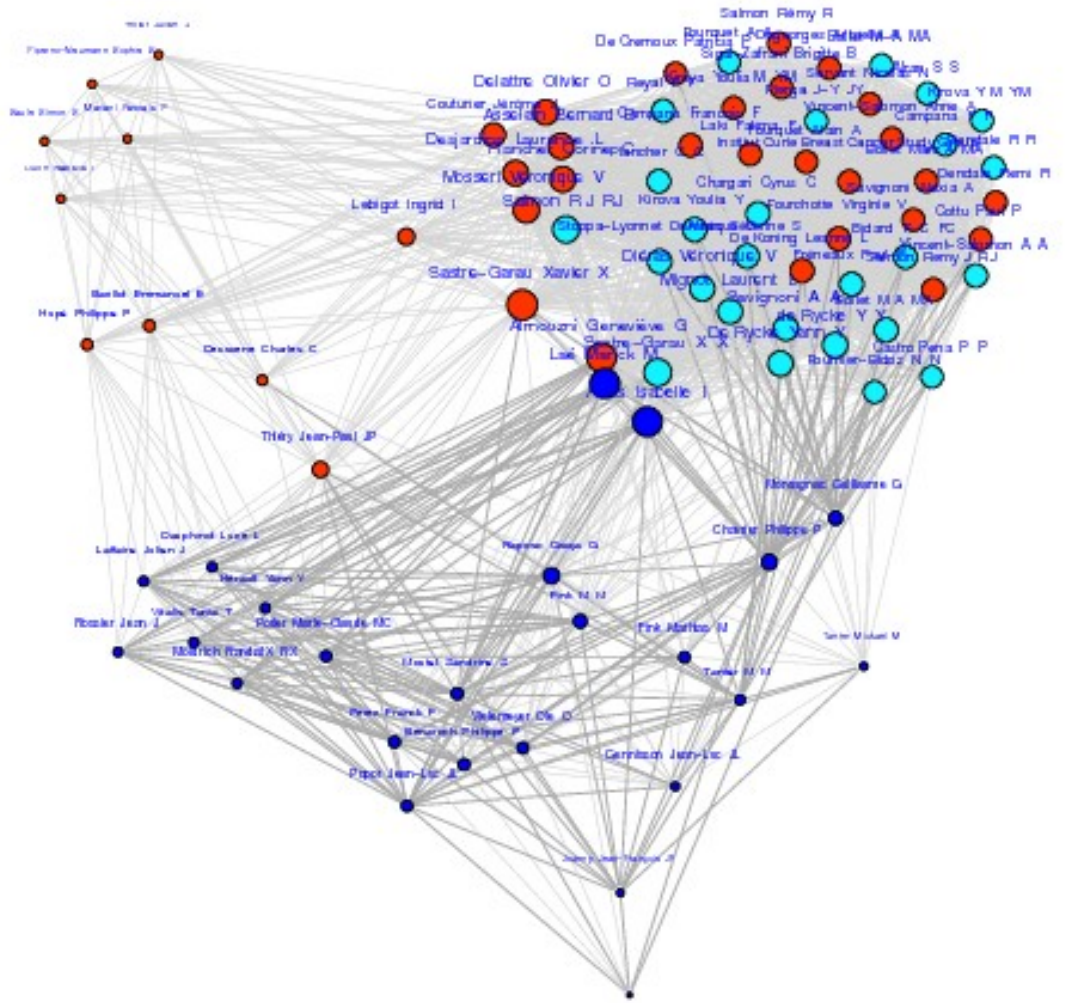


A concrete case: Actors graph

Actors graph obtained from FPGG social networking site

Dataset contains:

- 14000 authors
- 5000 publications
- 6000 MeSH concepts



Perspectives and conclusions

Implementing an application

- To enhance people and documents identification
- To visualize the information in the network
- To validate preliminary results with the users

Enhance information discovery

Identifying emerging relations between users based on semantic relation between topics

Helping people to connect together

Bringing a Social aspect to Semantic Web technologies.

Thank you

Questions?