

A Polyvocal and Contextualised Semantic Web

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What's a Knowledge Graph?

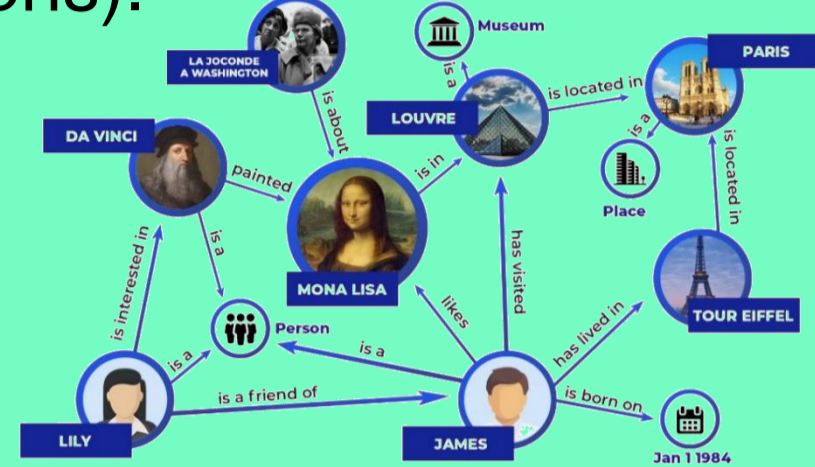
Set of principles and technologies to represent *data, information and knowledge*...

...using Semantic Web standards (RDF, OWL)...

...in the form of networks (graphs).

Popular on the Web in many domains.

Including Cultural Heritage



What's the problem?

Most knowledge graphs reflect the popular or majority vote

Most knowledge graphs are mined from contemporary sources

Most knowledge graphs represent a single perspective

This poses the danger of perpetuating certain views (e.g. gender-biased, colonial-view...)

Why should I care?

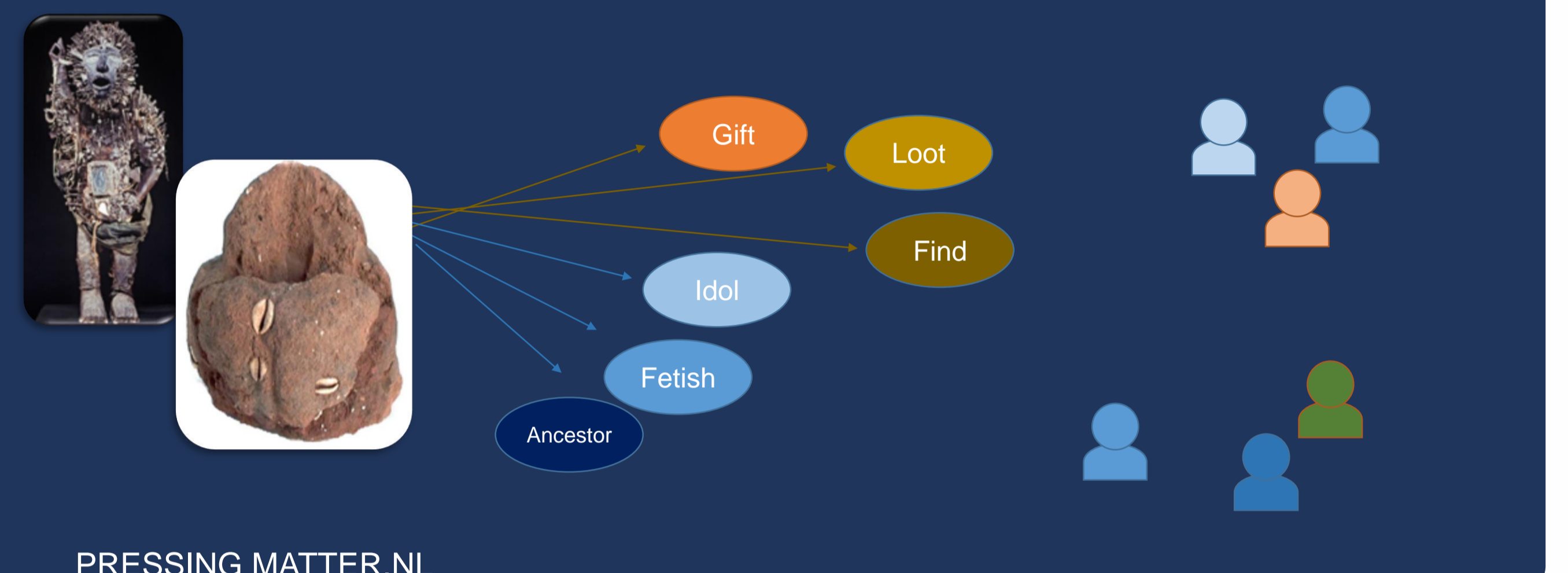
Applications using single-perspective, contemporary knowledge graphs cannot adequately deal with other perspectives and/or diachronic knowledge

Problematic in for example: Information retrieval and machine learning

What is a voice?

PRESSING MATTER

OWNERSHIP, VALUE AND THE QUESTION OF COLONIAL HERITAGE IN MUSEUMS

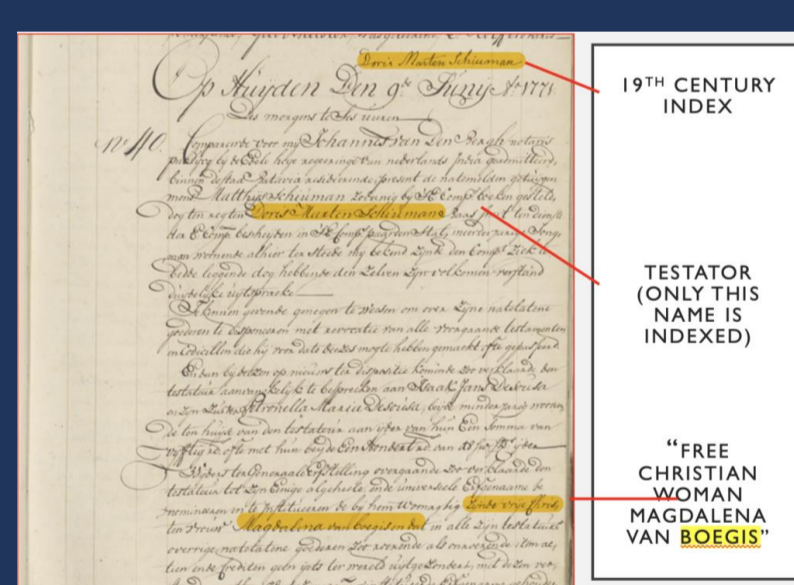


Three challenges for polyvocal knowledge graphs

Identifying and acquiring polyvocal knowledge

Identify existing voices in datasets

NLP/IE methods that are voice-aware

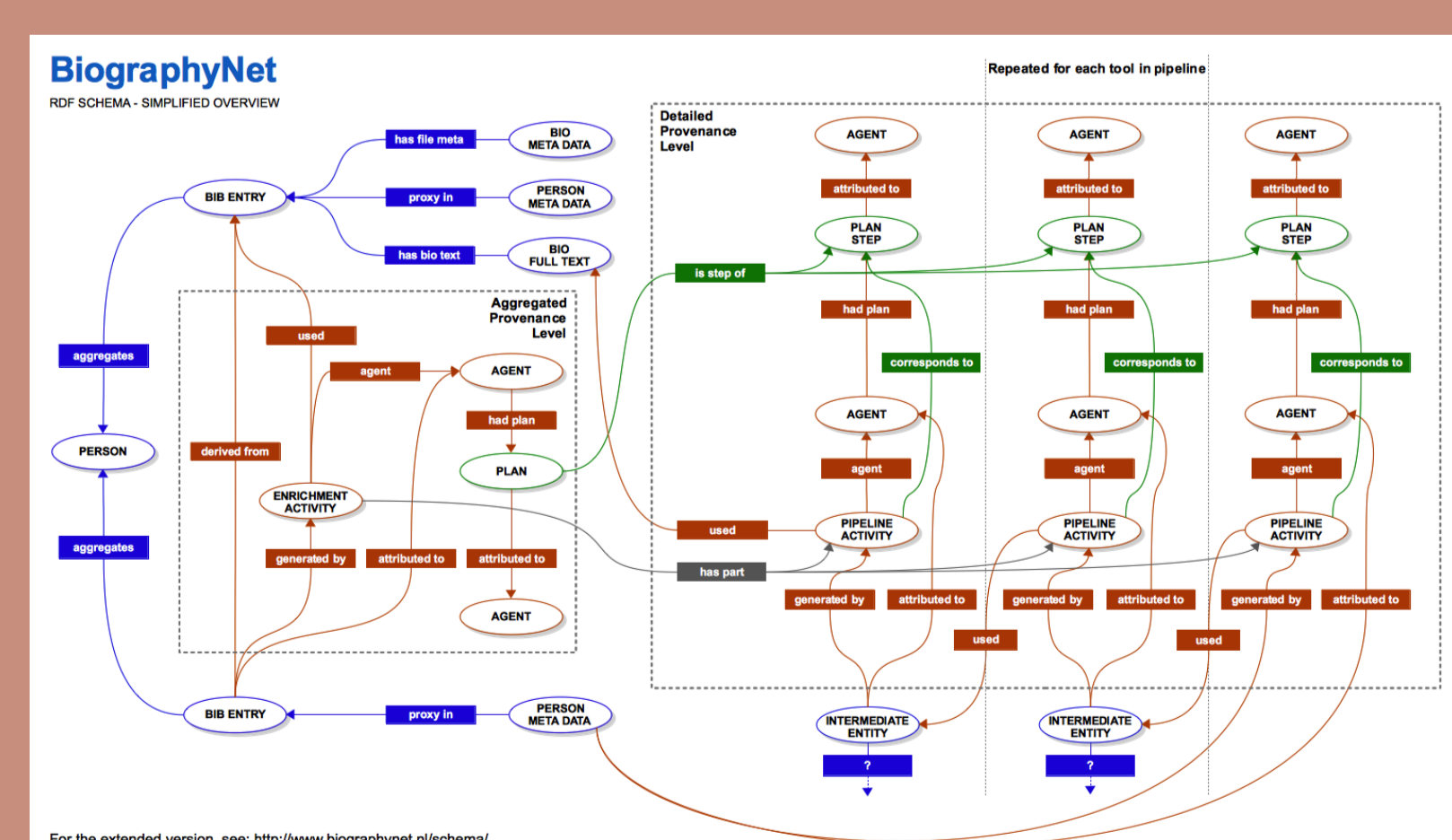


M.Luthra and C. Jeurgens. Unsilencing the VOC Testaments. DHBenelux 2021

Representation of polyvocality: datamodels and formalisms

Data models
Formalisms
Design patterns

To represent *disagreement* on categorisation, provenance, etc.

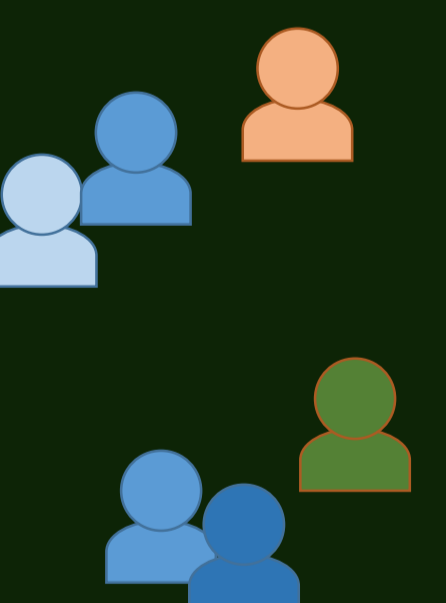


Niels Ockeloen et al. (2013). BiographyNet: Managing Provenance at Multiple Levels and from Different Perspectives.

Presentation and usage of polyvocal knowledge

How to visualise such polyvocal representations and frames to a variety of end-users and source new enrichments from these expert and non-expert users.

researchers
heritage professionals
general public
'source communities'



Elicit information from polyvocal sources
Including through crowdsourcing
Methods that retain 'disagreement'



Aroyo & Welty (2013). Crowd truth: Harnessing disagreement in crowdsourcing a relation extraction gold standard



Roz Sabir (2019). Metadata enrichment and bias detection of colonial architecture

KNAW Humanities Cluster, AFRIKA MUSEUM, MUSEUM VOLKINKUNDE, WERELD MUSEUM, TROPEN MUSEUM, SUDOX, dutch digital heritage network