A STUDY ABOUT THE USE OF OWL 2 SEMANTICS IN RDF-BASED KNOWLEDGE GRAPHS

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MOTIVATION SOURCES Confirming LOD Cloud: • Well-established graphs Previous studies have or invalidating Metadata shown that OWL 2 • Field(s) of graphs previous results semantics is not always in a new used in KGs. But, is this LOD Laundromat: study. still the case today? Has • A lot of data • Ease of use progress been made?

- Limited number of graphs

- Graphs distinguishable from each other
- Metadata

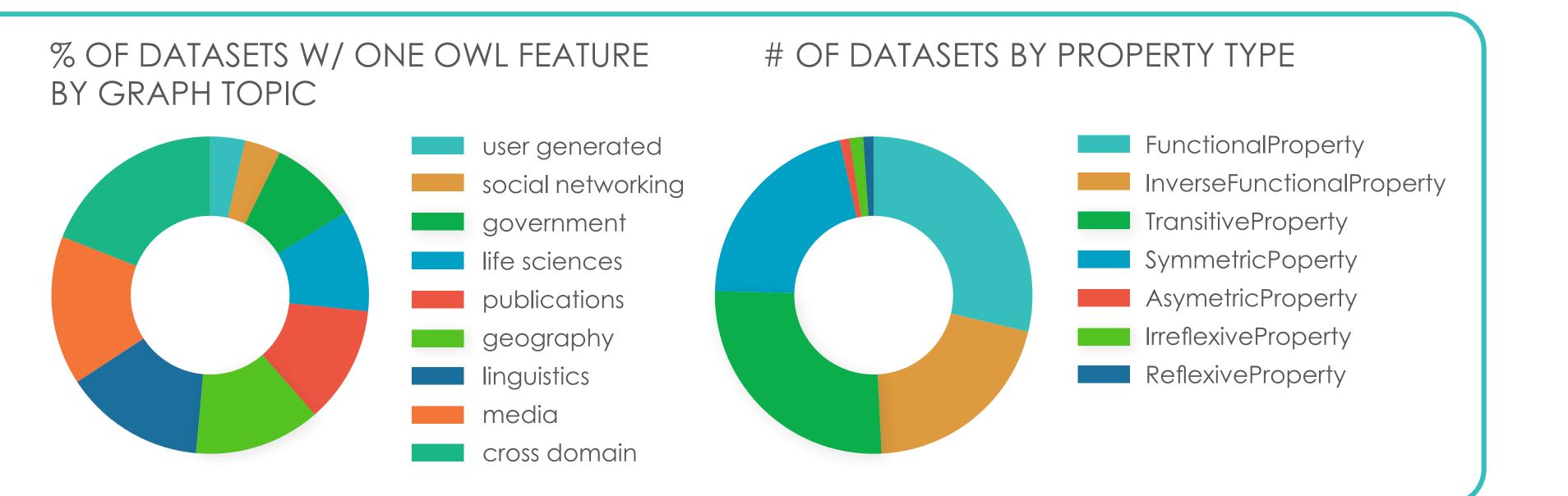
3 RESULT HIGHLIGHTS

• Only 34% of large graphs use at least one semantic feature of OWL 2!

• Properties like propertyDisjointWith are almost not used.

 Cross domain graphs are among the top users of OWL 2 semantics.

More at https://github.com/PHParis/sem_web_stats



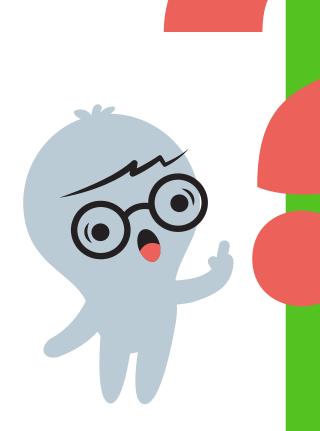




How to choose between two knowledge graphs (KGs) covering the same domain but modeled differently? For example, the first KG could use complex OWL constructs, and the second one only very simple definitions.

Or

How to choose the appropriate tool for a given task, depending on (i) the techniques they use and (ii) the semantics contained in the knowledge graph(s)?



ANSWER:

You need to explore the knowledge graph(s) to find out which classes or properties are defined with the desired semantic features! But this task is time-consuming and is difficult to perform automatically. We have the solution!

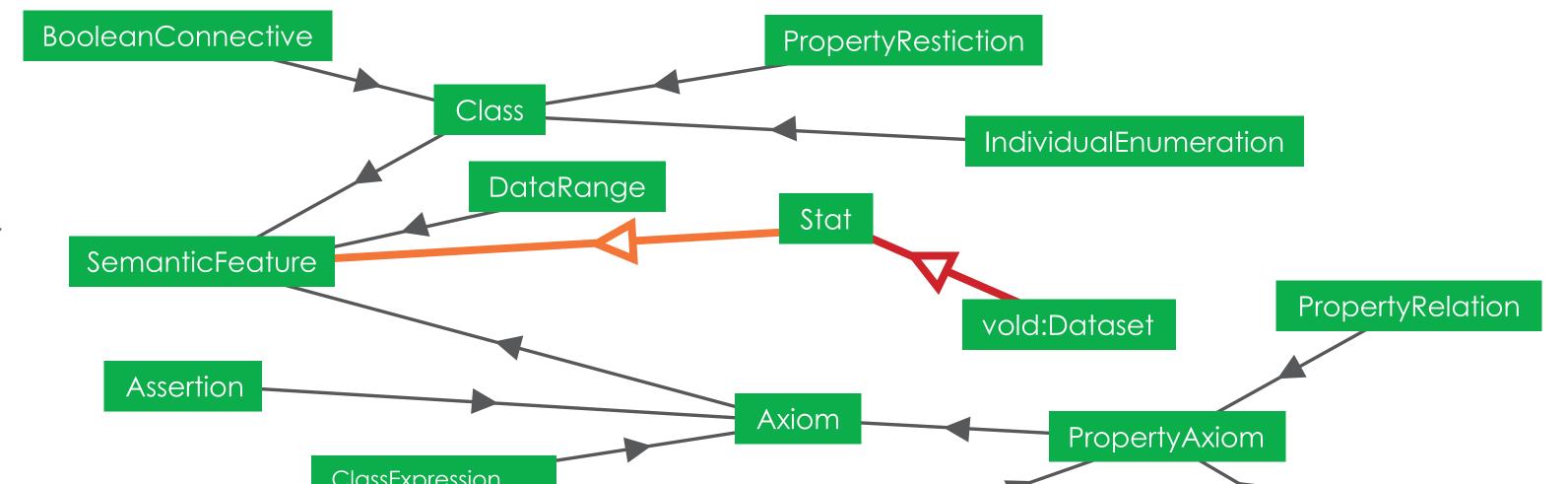
ONTOLOGY

An ontology to capture the semantics used in a knowledge graph: http://cedric.cnam.fr/isid/ontologies/OntoSemStats.owl

Both users and data publishers will be delighted: the former will find their work easier and the latter will see their data used more often.



: has statistic





3)

PropertySignature

PropertyType

CHECKLIS

TOOLS



provide several tools! They are available on GitHub under GPL open-source license

https://github.com/PHParis/OntoSemStatsWeb

To instantiate the

ONLINE LIVE DEMONSTRATOR **COMMAND-LINE**

WEB API

Used technologies:



