



The Open
University

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Ontologies and Description Logics - use and usability[†]

† a.k.a. comprehensibility

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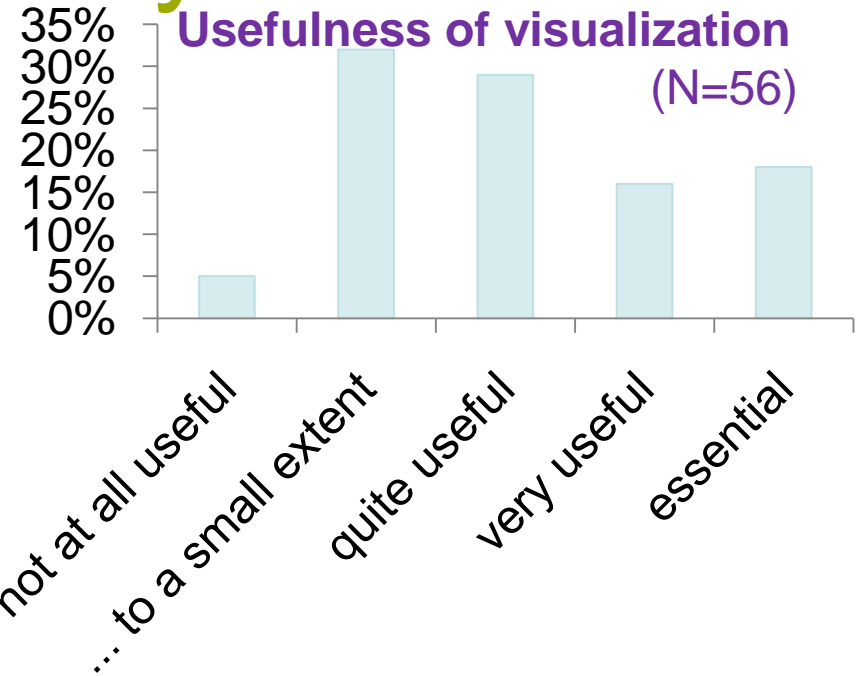
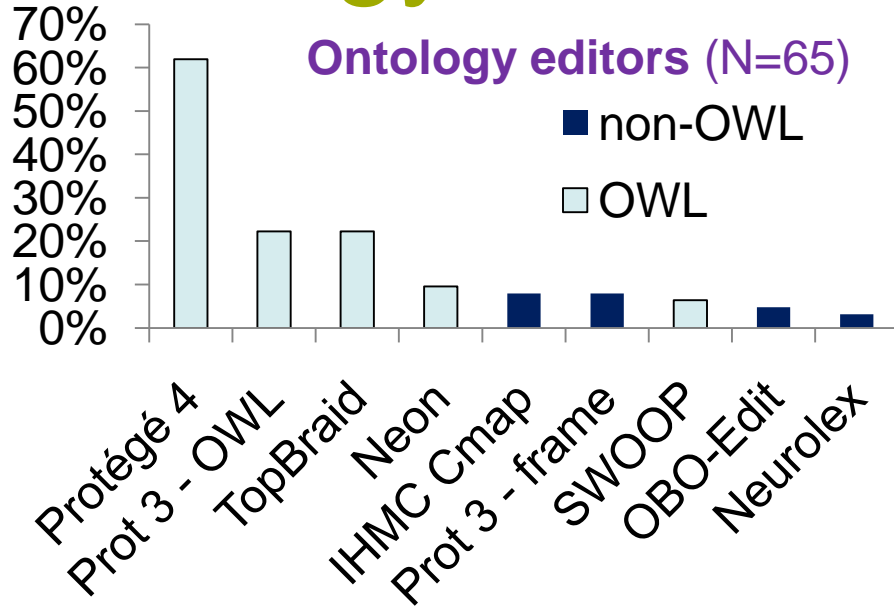
<http://kmi.open.ac.uk/people/member/paul-warren>

Work based on ...

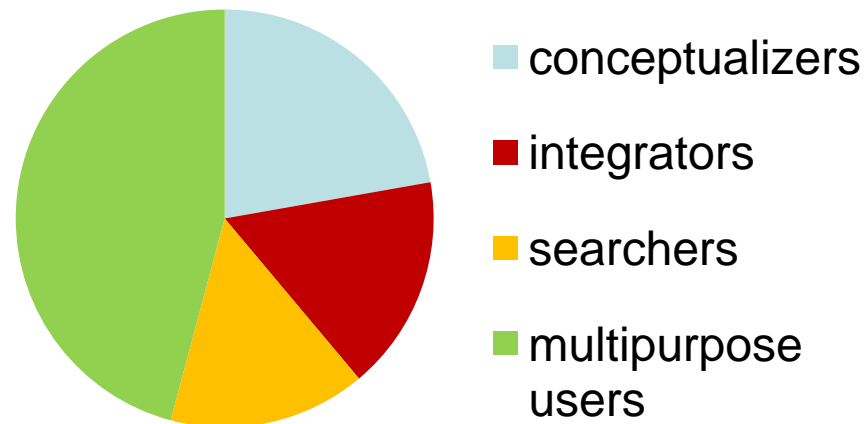
- I. Studies of how people use ontologies
 - in real-life applications

- II. Application of insights from cognitive psychology
 - *here* aimed at comprehension and reasoning with OWL

Ontology users' survey



Categories of ontology users
- based on purpose for use (N=72)



KMi technical reports
available via my webpage

Using ontologies: understanding

the user experience – Warren, P., Mulholland P., Collins, T., Motta, E. EKAW2014

OWL study

Goal

1. to identify where OWL features cause particular difficulties
2. and where possible relate to theories of cognition

Participants

- computer scientists

Questions

- based on commonly used OWL features and on common ontology patterns

	accuracy
negated conjunction [not (A and B)]	25%
non-inheritance of transitivity	33%
functional characteristics of properties	50%
existential quantifier	67%

The usability of Description Logics: Understanding the cognitive difficulties presented by Description Logics – Warren, P., Mulholland P., Collins, T., Motta, E. ESWC2014

Present and future work

Now

- more detailed study of OWL difficulties
- building on and extending previous study

Next

- language to achieve a better cognitive fit ...
... to help human reasoning

N.B.

- concern is with structures of thought and language
- complements work on tools