

# How to Represent Knowledge Diversity

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## Motivation:

- Information on the Web includes a **huge diversity** of opinions, viewpoints, sentiments, emotions, and biases.
- The number of tools and techniques to **extract** diversity-related **semantics** from text is increasing.
- Existing ontologies and metadata specifications **do not** consider diversity-related concepts and properties.

## Knowledge Diversity Ontology (KDO):

- Considers **different angles** on knowledge diversity (RENDER use cases):



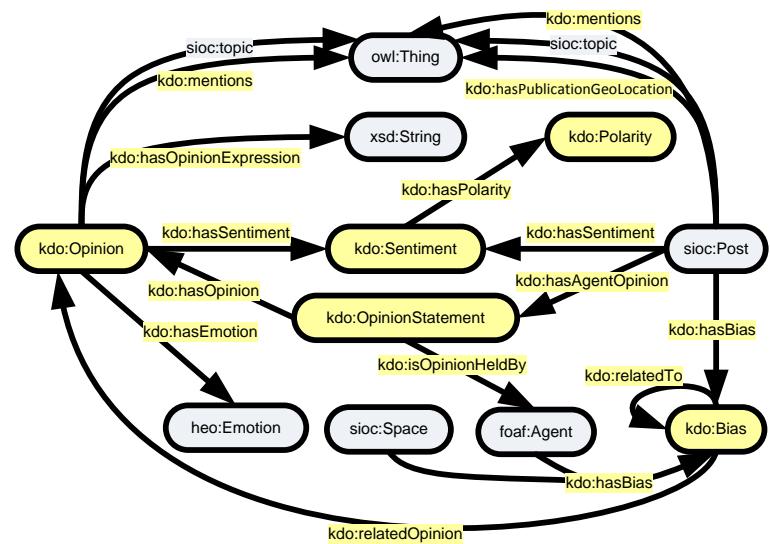
- Follows a **light-weight** approach to ontology engineering, reusing concepts and properties from:



PRO HEO

- Introduces and relates the core concepts:
  - **Opinion**
  - **Sentiment**
  - **Polarity**
  - **Bias**
- Is being **deployed** and **evaluated** in context with the RENDER project.

## KDO core concepts:



## Usage example (Turtle syntax):

```

<#FerdinandMaier> a foaf:Person ;
  foaf:firstName "Ferdinand" ;
  foaf:lastName "Maier" .
<#JamesMcDonald> a foaf:Person ;
  foaf:firstName "James" ;
  foaf:lastName "McDonald" .

<#BBC> a foaf:Organization ;
  foaf:name "BBC" .
<#FMW> a foaf:Organization ;
  foaf:name "FMW" .
<#Bigat> a foaf:Organization ;
  foaf:name "Bigat" .

<#Opinion1> a kdo:Opinion ;
  kdo:hasOpinionExpression "the takeover will happen and benefits both parties" .

<http://www.bloomberg.com/article/c2lj3h3j4j4> a kdo:NewsArticle ;
  pro:isRelatedToRoleInTime [ a pro:RoleInTime ;
    pro:withRole pro:author ; pro:isRoleHeldBy <#JamesMcDonald> ] ;
  pro:isRelatedToRoleInTime [ a pro:RoleInTime ;
    pro:withRole pro:publisher ; pro:isRoleHeldBy <#BBC> ] ;
  kdo:hasSentiment [ a kdo:Sentiment ;
    kdo:hasPolarity kdo:positivePolarity] ;
  kdo:hasAgentOpinion [ a kdo:OpinionStatement ;
    kdo:isOpinionHeldBy <#JamesMcDonald> ;
    kdo:hasOpinion <#Opinion1> ] ;
  sioc:hasContainer [ a kdo:NewsWebsite ;
    sioc:has_space <http://www.bloomberg.com/> ] ;
  dcterms:created "2011-03-23" ;
  kdo:hasPublicationGeoLocation <http://sws.geonames.org/2635167/> ;
  dcterms:language "en-UK" ;
  kdo:mentions <http://sws.geonames.org/3165524/> ;
  kdo:mentions <#FerdinandMaier> ;
  kdo:mentions <#FMW> ;
  kdo:mentions <#Bigat> .
  
```

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