Extensibility: a little bit of reasoning goes a long way...

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Why build ontologies with extensibility in mind?

**Makes sharing easier**
- Class hierarchies → OO modeling
  - others can extend
- Property hierarchies
  - better extensibility

**Helps with data integration**
- Polymorphism and shared classes are better than disjoint concepts
  - “Partial shared understanding”

(You won’t get everything right anyway)
Simple reasoning makes extensibility easier

Expands class and property hierarchies

Hides model details \(\rightarrow\) makes writing queries easier
  - less domain knowledge needed when writing queries
  - same queries work even after model has been extended or modified

Beyond RDF(S), what else is useful?
  - transitive properties
  - inverse functional properties \(\rightarrow\) primary keys
  - owl:sameAs, owl:equivalentClass

Validation? \(\rightarrow\) use SHACL