

# LODinG: Linked Open Data in the Humanities

## Background

**The Linked Open Data** (LOD) paradigm enables the linking of multidisciplinary research outcomes using a coherent ontological classification. LOD employs the interoperable formats and allows heterogeneous data to be formally modeled and linked into a common body of knowledge.

**The LODinG project aims** to explore the potential of the LOD at the intersection of qualitative and quantitative studies in the humanities and promote the transparent, interdisciplinary reasoning supported by state-of-the-art data management infrastructure and knowledge networks.

**Tools & technologies:** RDF, OWL, CIDOC-CRM, SPARQL

**Keywords:** Linked Open Data, Digital Humanities, Knowledge Graphs, Network Analyses, Multilingualism

## Central Research Focus

Effective methods of collecting, modeling, linking, releasing and analyzing machine-readable information relevant to digital humanities in the form of Linked Open Data.

## Research Area 2

(Digital Editing, German Studies & Romance Studies)

RA 2 applies the translational methods to compare standardized botanical and medical terms in a multilingual, historical perspective.

**Methods:** OCR, LLOD, translation-equivalent analyses

**Materials:** *Nomina propria* from early modern period (multilingual)

## Research Area 4 (Sinology & Computer Science)

The fourth RA focuses on Modern Standard Chinese scientific literature and converts the findings into synthetic LOD statements.

**Methods:** Entity extraction, LOD statement synthesis

**Materials:** Selected corpus of scientific texts

## Research Area 6 (Jurisprudence & Digital Humanities)

This RA analyzes legal multilingual sources and aims to identify differences in legally-binding terminology among all official languages of the EU using linguistic LOD.

**Methods:** Conceptual indexing, multilingual corpus annotation

**Materials:** Parallel corpora of legal texts

## Infrastructural Support

(Trier Center for Digital Humanities & Trier University Library)

This work area focuses on developing technical solutions to achieve the project's goals. It aims to create the interfaces for unstructured data, enabling non-standard formats to adapt to the LOD framework.

## Research Area 1 (Digital Lexicography & German Studies)

This RA emphasizes the importance of the representation of dictionary entries in the LOD framework and provides support for the integration of lexicons into the Semantic Web.

**Methods:** Semantics by reference, Semantic Web

**Materials:** Pandemic-related neologisms (diachronic perspective)

## Research Area 3 (Digital Humanities & Computer Science)

This RA focuses on content retrieval. It applies the methods of information extraction to transform, e.g., abstracts and keywords into machine-readable LOD statements.

**Methods:** OpenAlex (in part), Semantic publishing

**Materials:** Selection of works across the disciplines

## Research Area 5 (Cultural Studies & Computational Linguistics)

This RA employs multimodal data. It combines text and image analyses and indexing to build more robust knowledge networks.

**Methods:** LLMs, text and image integration, knowledge networks

**Materials:** Wine labels, postcards, maps, book illustrations

## Research Area 7 (Integration, Federation & LOD resources)

This cross-sectional RA aims to integrate the standardized entries into a modular ontology that supports federated queries.

**Methods:** Enhancement of KGs, Wikidata identifiers

**Materials:** Domain- and discipline-specific entities

## Anticipated Results

- Developing a modular cross-domain data model for the humanities using the Linked Open Data paradigm
- Publishing best practices guidelines for employing the Linked Open Data in interdisciplinary research

Funding

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**Rheinland-Pfalz**  
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Project website

<https://tcdh.uni-trier.de/en/projekt/loding>

