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The LiLa Knowledge Base of Interlinked Linguistic Resources for Latin

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Conference *Digital Humanities and Neo-Latin Studies*
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Overview

Introduction and fundamentals

- LiLa: mission and architecture

LiLa now!

- LiLa Lemma Bank and Lexical Resources
- Textual Resources
- Text Linker
- To sum up

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Research question
State of affairs

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- NLP Tools

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Scattered and unconnected

ERC Consolidator Grant 2018-2023

A collection of multifarious, interoperable linguistic resources described with the same vocabulary for knowledge description (by using common data categories and ontologies)

Interlinking as a Form of Interaction

CLARIN
Common Language Resources and Technology Infrastructure

Infrastructure

Interoperability

The Linked Data Principles

…just to be FAIR

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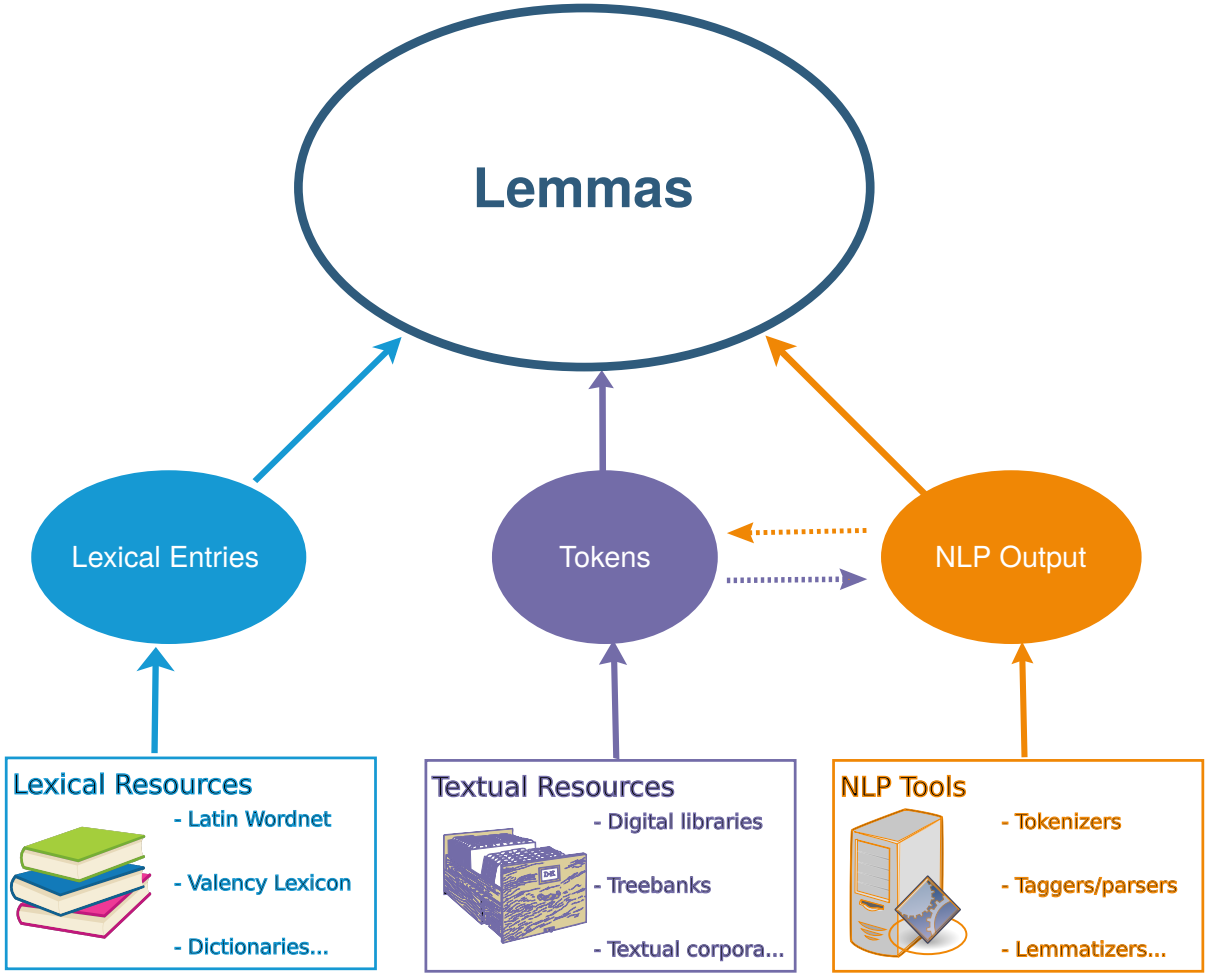
- Use HTTP URIs to allow people (and machines) to look up things
- Use web standards to represent/query (meta)data, such as RDF and SPARQL
- Include links to other URIs

LiLa Knowledge Base

Lexically-based architecture and (meta)data sources



LiLa: Structure

LiLa as mere reflection

LiLa reflects the annotation granularity of the resources it connects

No data enrichment or further analysis is performed
…but we can help you to enrich your (meta)data

LiLa: Requirements

Connecting resources in the Knowledge Base

To enter the LiLa Knowledge Base, a textual/lexical resource must be:

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Connecting resources in the Knowledge Base

To enter the LiLa Knowledge Base, a textual/lexical resource must be:

- Lemmatised
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- Online!

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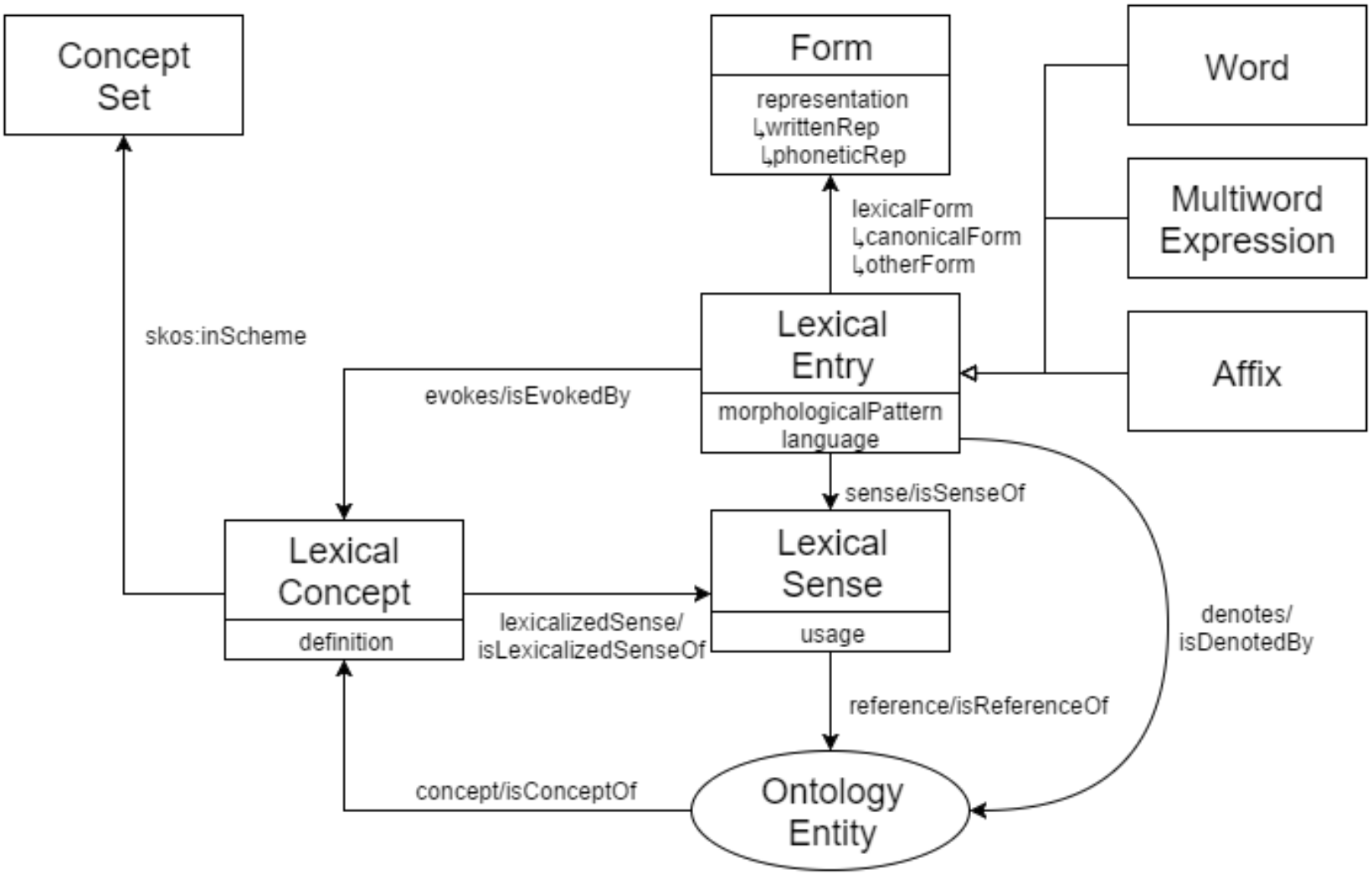
LiLa and Ontolex Lemon

A *de facto* W3C standard for publishing lexical data as LLOD



Lemma Bank and Lexical Resources

The core of LiLa. Source: LEMLAT (extended)

Lemma *admiror* ‘to admire, to respect’

`https://lila-erc.eu/data/id/lemma/87541`

- Lemma Bank
- A derivational lexicon (Word Formation Latin)
- A polarity lexicon (LatinAffectus)
- An etymological dictionary (De Vaan)
- A Valency Lexicon (Latin Vallex)
- A manually checked subset of the Latin WordNet

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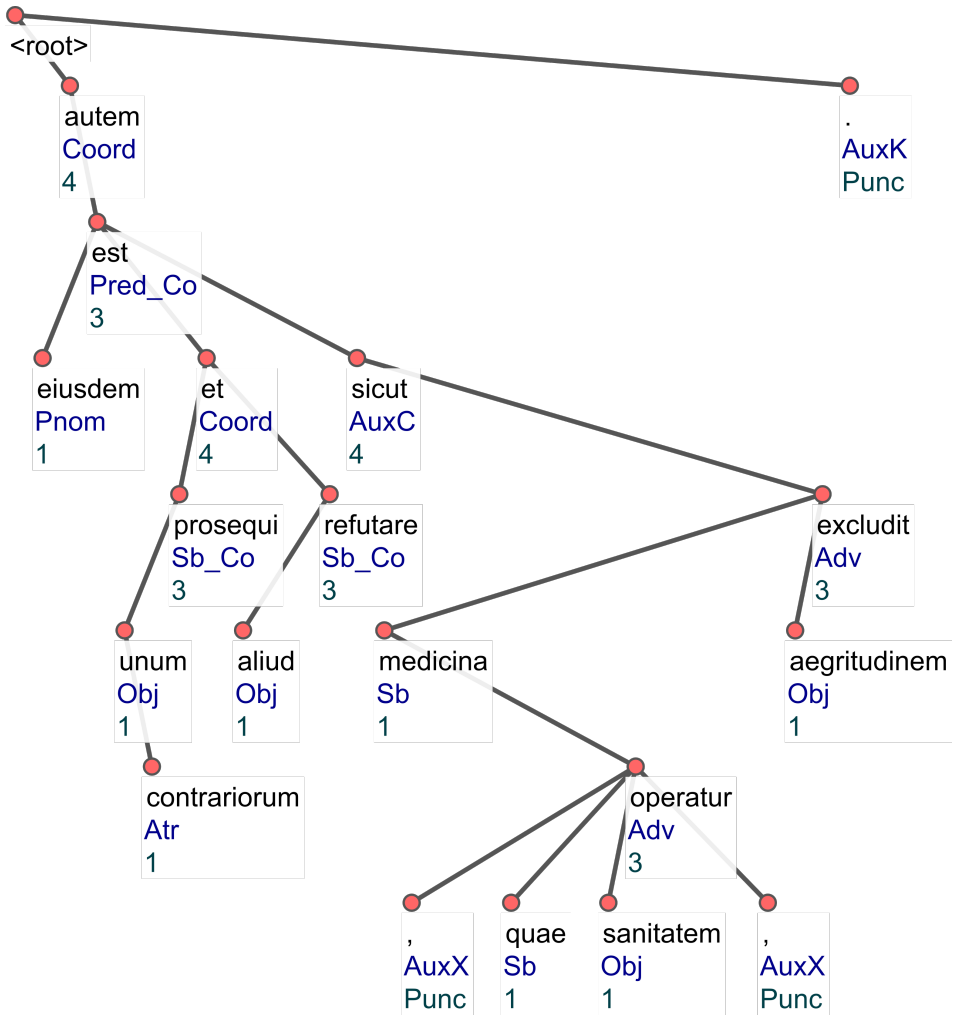
(Annotated) Corpora in LiLa

Source: The *Index Thomisticus* Treebank (original scheme)

eiusdem autem est unum contrariorum prosequi et aliud refutare sicut ***medicina*** *, quae sanitatem operatur , aegritudinem excludit .* (IT-TB: SCG, lib. 1, cap. 1, n. 6)

Now it belongs to the same thing to pursue one contrary and to remove the other: thus ***medicine****, which effects health, removes sickness.* (Trans. Laurence Shapcote)



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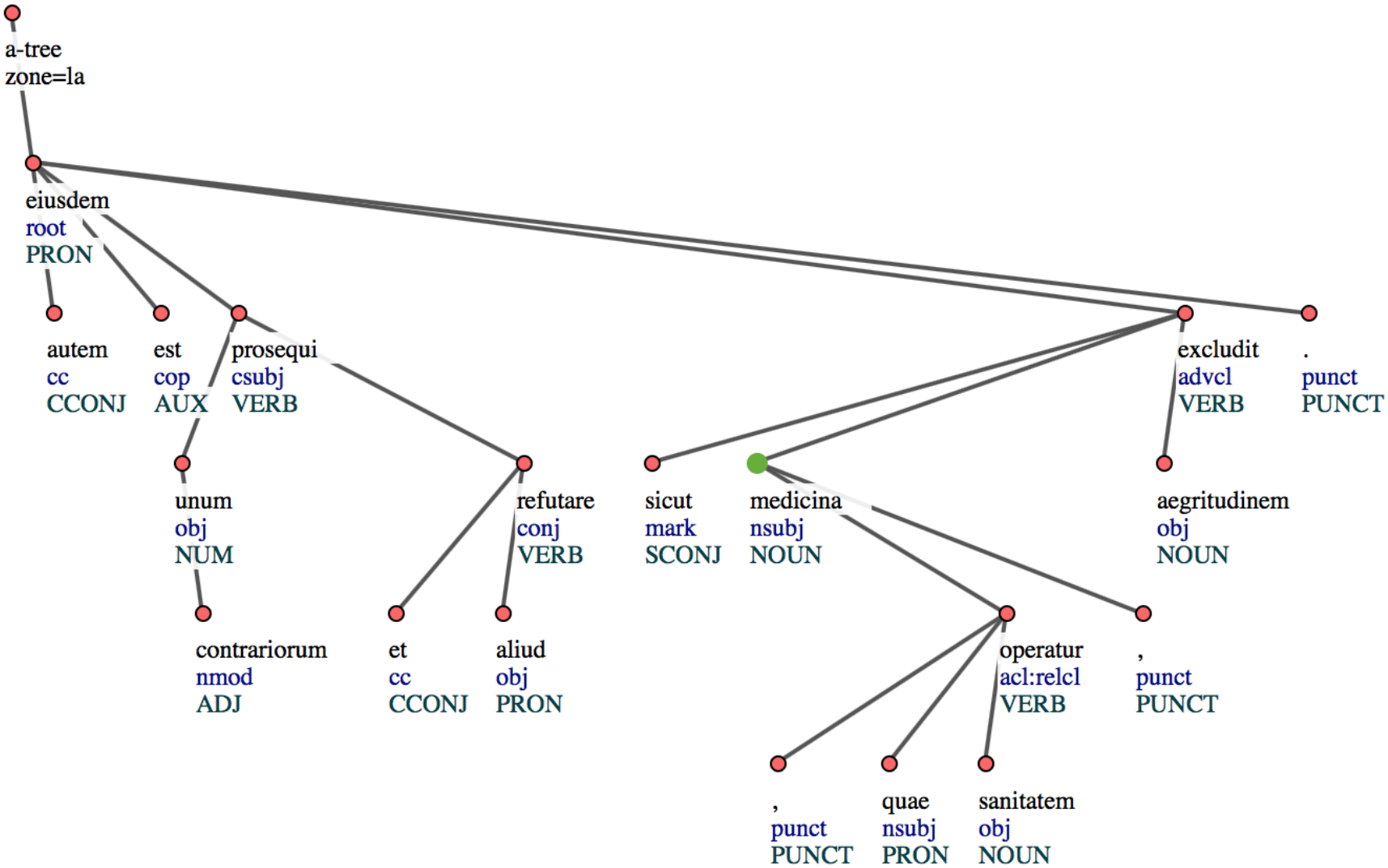
Source: The *Index Thomisticus* Treebank (UD scheme)



Token *medicina*

'the healing art, medicine, surgery'

`https://lila-erc.eu/lodview/data/corpora/ITTB/id/token/005.SCG*LB1.CP--++1.N.-6.1-1.4-1W11`

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TextLinker

Welcome screen

Figure: LiLa's Text Linker

TextLinker
Processed output

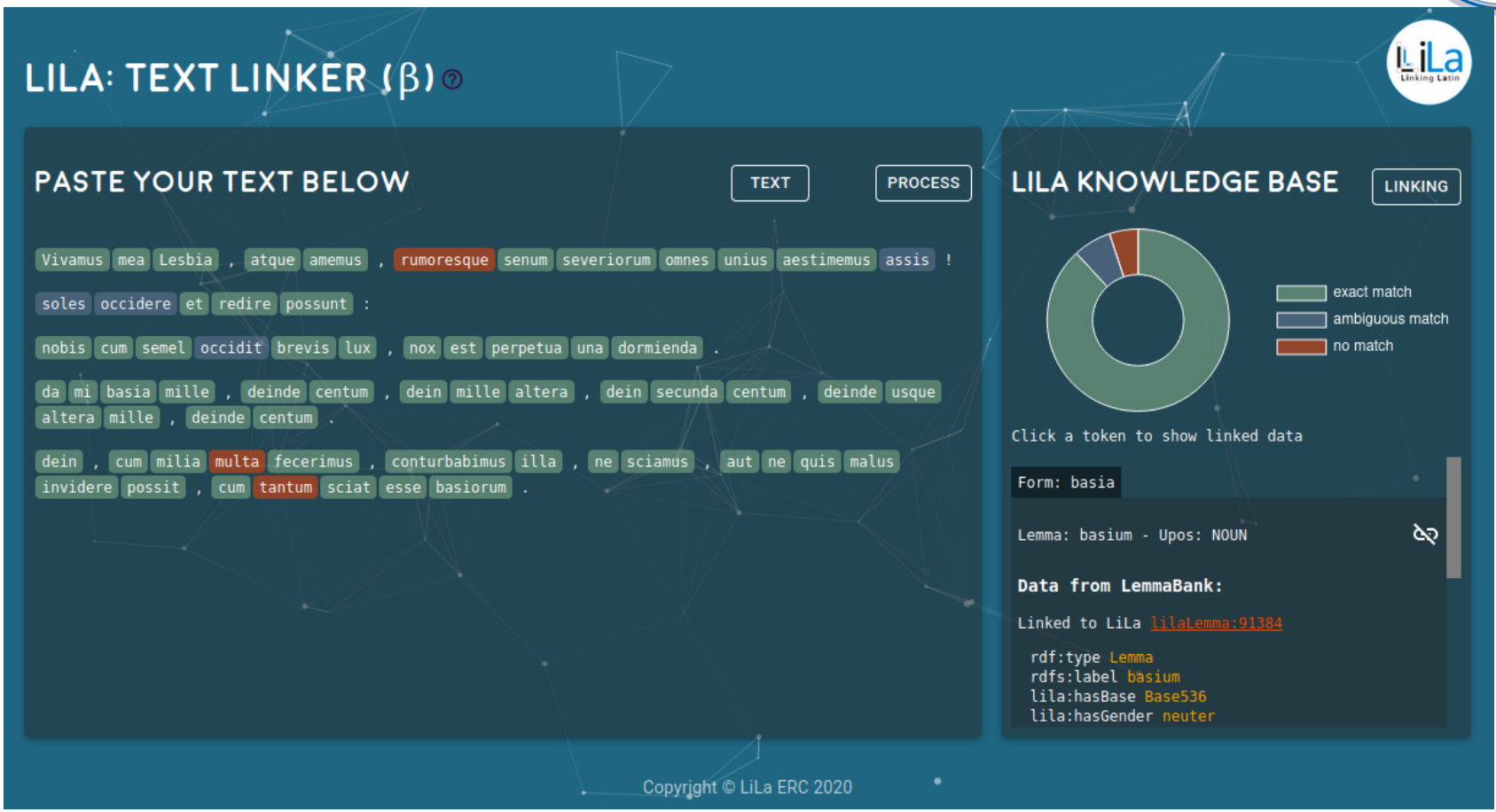

Figure: Text processed against the LiLa Knowledge Base

http://lila-erc.eu:8080/LiLaTextLinker/

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LiLa: Overview

Resources connected and upcoming connections

- **Corpora**
  - [x] Index Thomisticus Treebank (*Summa contra Gentiles*): ca. 450,000 nodes
  - [x] Dante Search (700th death anniversary): ca. 46,000 tokens
  - [x] *Querolus sive Aulularia*: ca. 17,000 tokens
  - [ ] PROIEL and LLCT treebanks
  - [ ] Computational Historical Semantics, LASLA and CroALa Corpora
- **Lexica**
  - [x] Word Formation Latin: ca. 46,000 lemmas (Classical Latin)
  - [x] Etymological dictionary of Latin & the other Italic Langs.: ca. 1,400 entries
  - [x] LatinAffectus: ca. 2,300 entries
  - [x] Index Graecorum Vocabulorum in Linguam Latinam: ca. 1,800 entries
  - [x] Latin WordNet: ca. 1,000 manually checked entries
  - [x] Latin Vallex 2.0: Valency Lexicon
  - [ ] Lewis & Short Dictionary
- **NLP tools**
  - [x] LEMLAT (lemma bank): ca. 150,000 lemmas
- **TOTAL: approximately 13 million triples**

Query Interface, Triplestore and Linker

- Query interface; Triplestore
- Linker

Linguistic Resources. Corpora

- Index Thomisticus Treebank
- Dante Search
- *Querolus sive Aulularia*

Linguistic Resources. Lexica

- Word Formation Latin
- Etymological Dictionary of Latin & the Other Italic Languages
- LatinAffectus
- Index Graecorum Vocabulorum in Linguam Latinam
- Latin WordNet
- Latin Vallex 2.0

Thanks!
Get in touch

LiLa: Linking Latin
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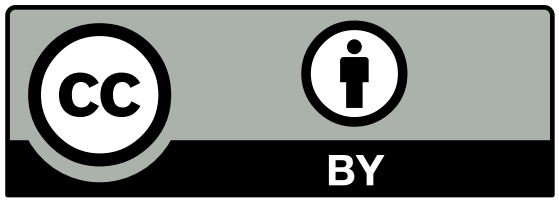
Credits

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