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Poetry Standardization and Linked Open Data

Poetry and Digital Humanities making interoperability possible in a divided world of digital poetry: POSTDATA project

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UNED

LINHD
LABORATORIO DE INNOVACIÓN EN HUMANIDADES DIGITALES

erc
European Research Council
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The “digital gap”

POSTDATA Vision is to ease humanists research through its digital tranformation

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Traditional Research		Digital Humanities
Counting syllables with fingers	→	Automatic syllable counter
Comparing 2-3 poems at the same time	→	Comparing thousands of poems in parallel
Looking for similar evidences by reading all papers and books	→	Finding multiple evidences through one search engine
Individual research	→	Collaborative, interdisciplinary research

The three POSTDATA Axes

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Semantic Infrastructure

Linked open data

Virtual Research Environment

Digital Scholarly Editing

Poetry Lab

Natural language processing

Postdata Prototype

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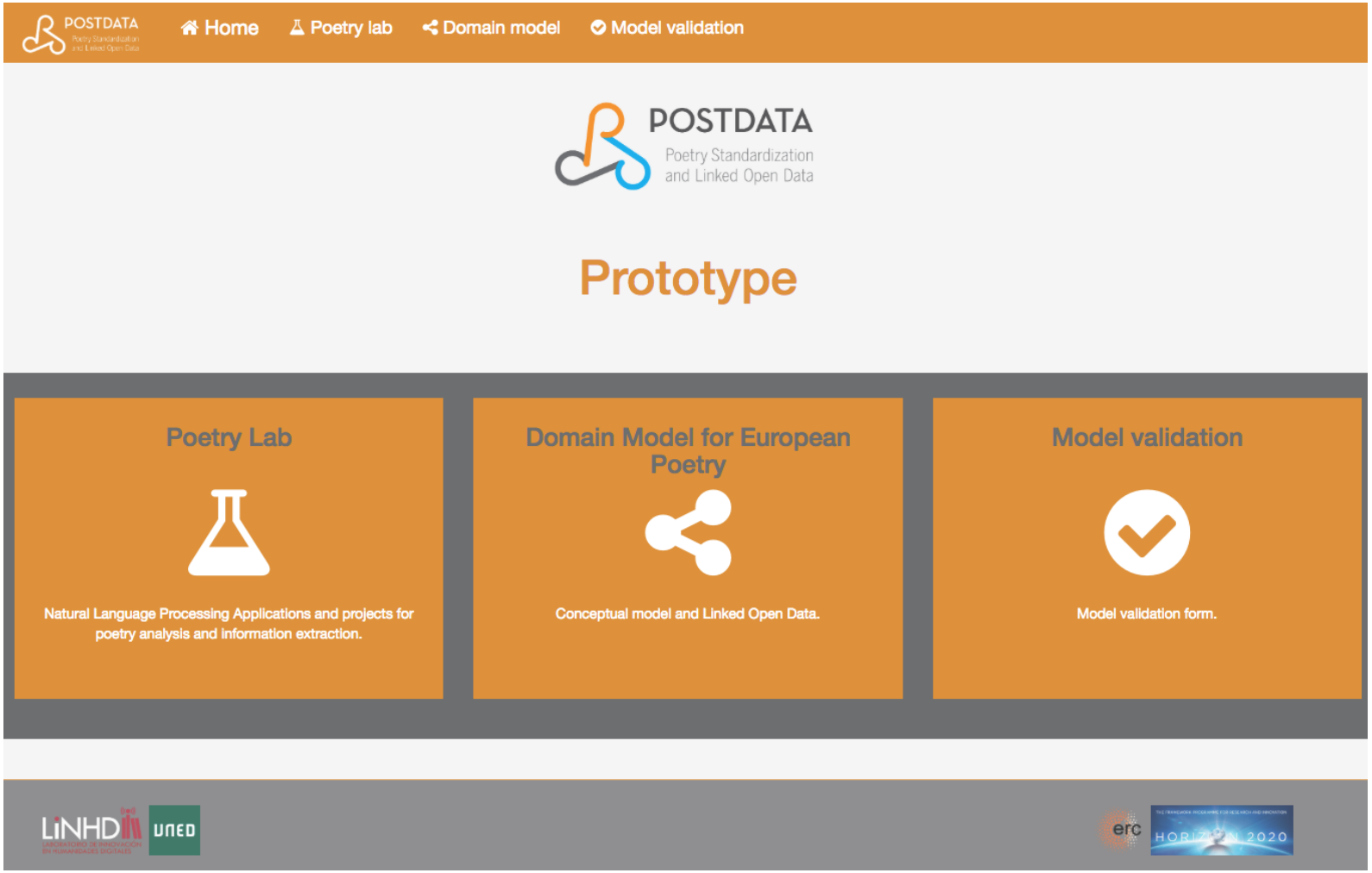

DOMAIN MODEL FOR EUROPEAN POETRY

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Western Literature

- There is not an ontological model for poetry
- It is necessary to standardize specific fields (rhyme, metrical scheme)
- It is necessary to map controlled vocabularies across different languages

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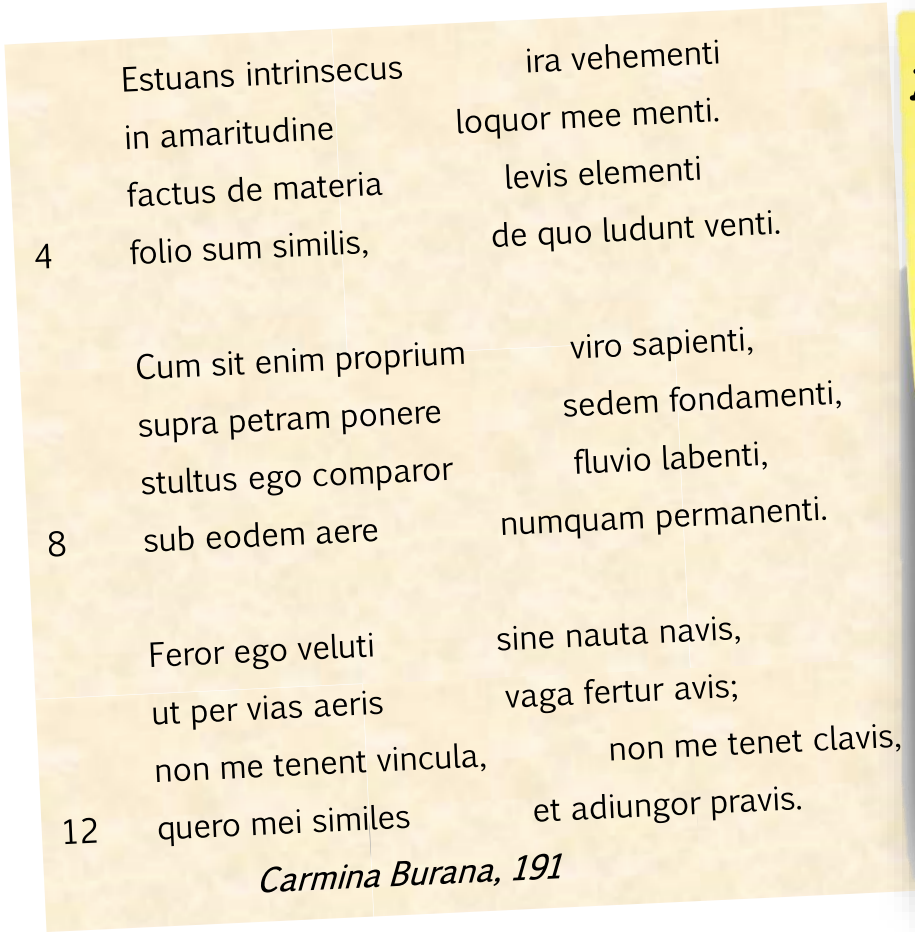
But, what does define a POEM?



Estuans intrinsecus ira vehementi
in amaritudine loquor mee menti.
factus de materia levis elementi
4 folio sum similis, de quo ludunt venti.

Cum sit enim proprium viro sapienti,
supra petram ponere sedem fondamenti,
stultus ego comparor fluvio labenti,
8 sub eodem aere numquam permanenti.

Feror ego veluti sine nauta navis,
ut per vias aeris vaga fertur avis;
non me tenent vincula, non me tenet clavis,
12 quero mei similes et adiungor pravis.

Carmina Burana, 191

- Author
- Title
- Incipit
- Manuscript
- Post quem
- Ante quem
- Language
- Topics
- Edition
- Online edition
- Work
- Isometrism
- Isostrophism
- Metrical scheme
- Rhyme scheme
- Rhyme
- Musical notation
- Number of stanzas
- Number of lines
- Poetic form

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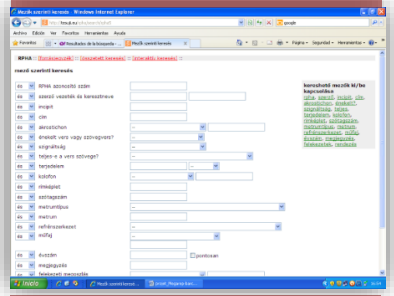
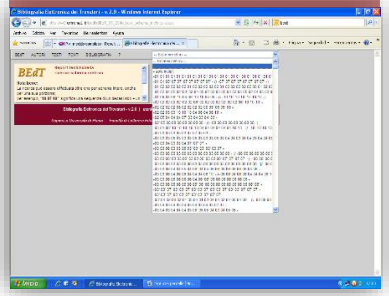
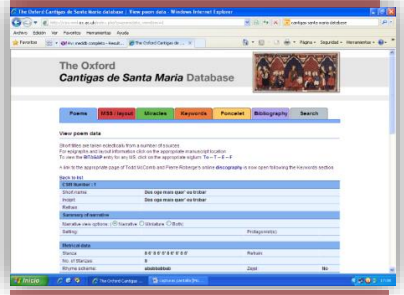
RPHA - Hungary



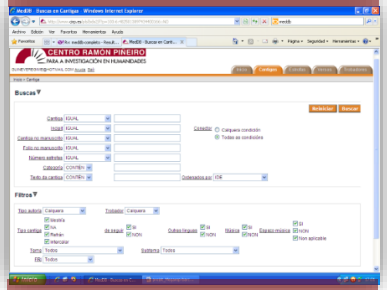
BedT - Italy



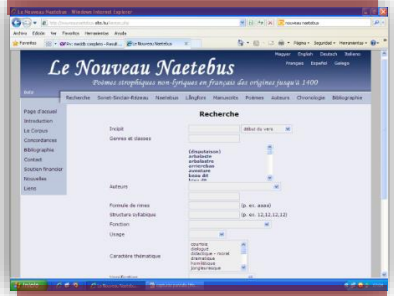
Cantigas Oxford



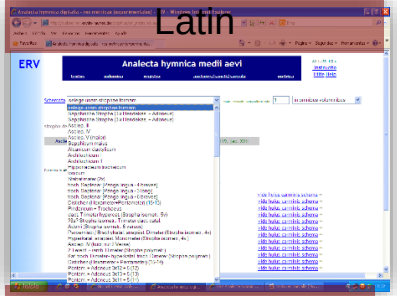
MedDB2 – Galicia



Naetebus - France



Analecta Hymnica Latin



ReMetCa - Spain

Skaldic - Scandinavia

Mirabile - Italy

The puzzle of digital poetic repertoires

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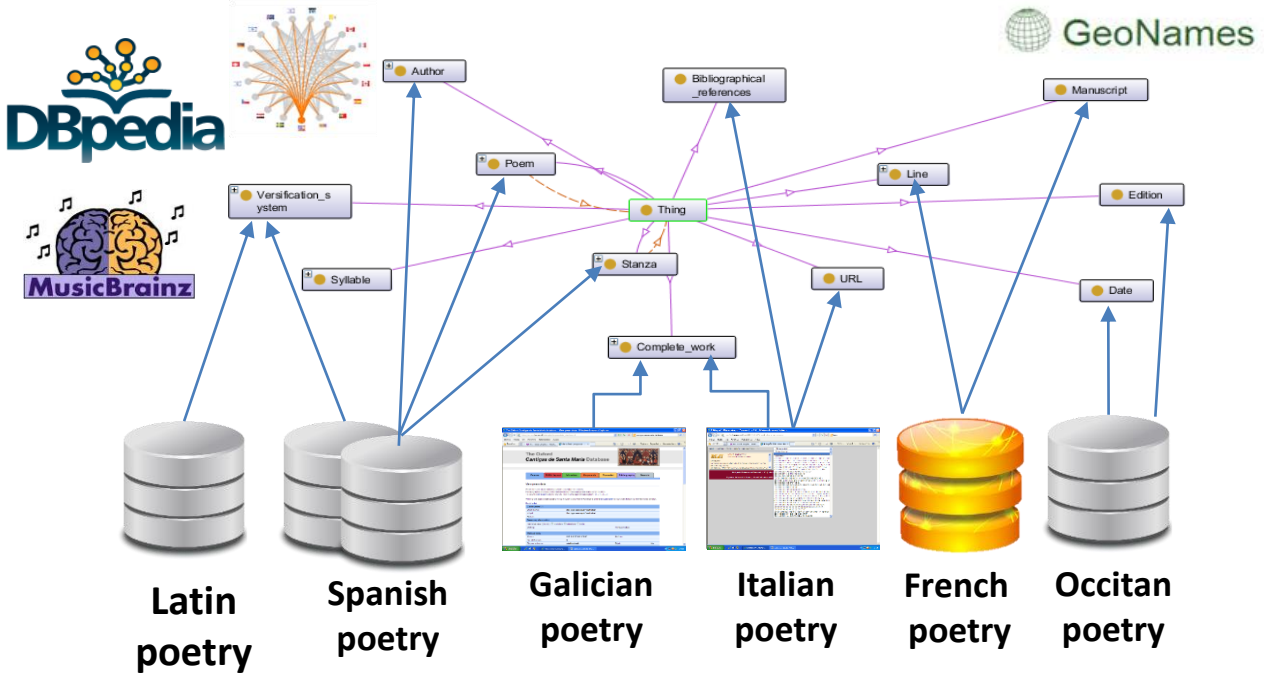
POSTDATA looks for an abstract model with common elements across the different poetic systems



DOMAIN MODEL FOR EUROPEAN POETRY

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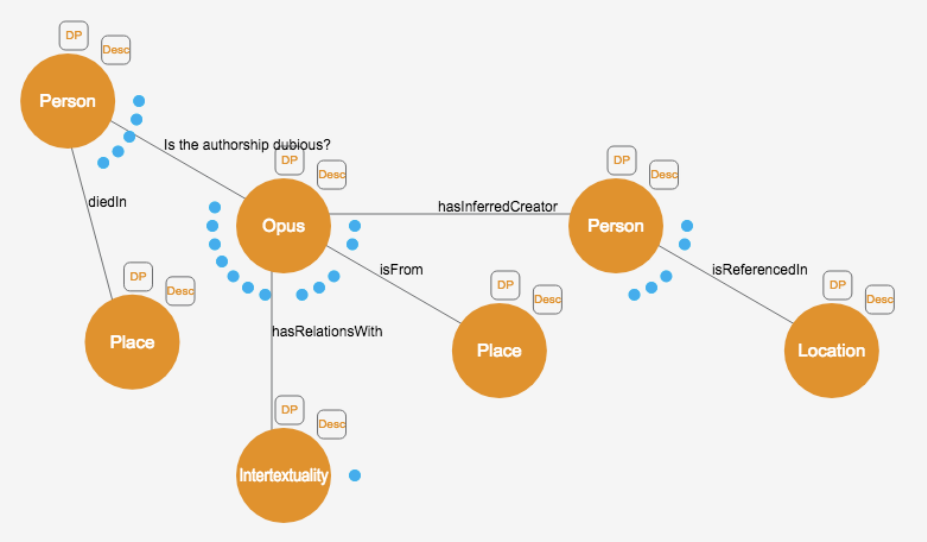
- DOMAIN MODEL FOR EUROPEAN POETRY
- key concepts:
  - standardisation and
  - interoperability
- The most advantageous paradigm
  - Linked Open Data



Poetry Lab : NLP tools

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- Tools for (automatic) poetry analysis
- Largely based on Natural Language Processing
- Insofar as literary phenomena in domain model rely on linguistic traits, NLP can help automate their annotation

Poetry Lab: Work done

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Content analysis:

- Medieval Spanish Named Entity Recognition (Díez Platas et al., 2017)

Phonetics and metrics:

- Lexical Syllabification (prereq for scansion)

Other stylistic traits:

- Enjambment detection (Ruiz, Martínez et al., 2017)

Poetry Lab: Syllabification

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- • A prerequisite for scansion
- • Syllable boundary detection + pos-tagging to determine stressability (weak vs. strong categories)

#	Text	1	2	3	4	5	6	7	8	9	10	11
1	Ya se doran las hojas, ya las tardes	**Ya**	se	**do**	ran	las	**ho**	jas	**ya**	las	**tar**	des
2	Son lo mejor del día	**Son**	lo	me	**jor**	del	**dí**	a				
3	Bajo su luz madura de sosiego,	Ba	jo	su	**luz**	ma	**du**	ra	de	so	**sie**	go

Poetry Lab: Enjambment

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- Mismatch between metrical and syntactic units
- Defined in syntactic terms
- Can be detected based on pos-tagging / parsing
- Definition/detection not trivial
- Previously unanalyzed with automatic means

Poetry Lab: Enjambment

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- Enjambment takes place when particularly cohesive syntactic units are broken up by a metrical pause (across lines or hemistichs)

- Example

1. Prefiero
2. quedarme desnuda //
3. de amigo insincero

1. I'd rather
2. be naked //
3. of fake friend

INTERPRETATIONS

- a) naked (no clothes)
- b) naked of fake friend (without such a person)

Poetry Lab: NERC

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- Hispanic Medieval Tagger (Díez Platas et al., 2017)
- Medieval Spanish NERC
- Person, location, organization, role names
- Normalization of historical spellings
- Geolocalization
- TEI output

Poetry Lab: NERC

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