

# Information and functionality in scholarly digital editions



ERC-AdG-2019 PAGES (882588)

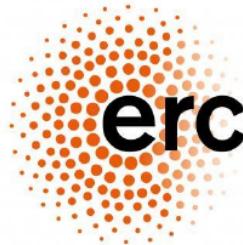


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SAPIENZA  
UNIVERSITÀ DI ROMA

*Digital Papyrology 3.0*  
University of Parma, 30 May 2022



European Research Council

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## *ERC PAGES (AdG 2019 n° 882588)*

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# **Information and functionality: the added value**

# Information and functionality: the added value

- Conceptual framework
- P. Sahle: a *digital* (not *digitized*) scholarly edition “cannot be given in print without a significant loss of **information** or **functionality**”
- D. Kiss: with enough pages, every quantity of **information** can be given in print too
  - ...how about **functionality**?
- Question: what is the **added value** of a scholarly *digital* edition (over print)? → **information / functionality**

# Outline

- Markup / annotation
- Added values of a scholarly digital edition
  - 1) Relations
  - 2) Isotopies
  - 3) The social dimension

# Markup / annotation

# Raw character data → Markup / annotation



Paradigmatic

Syntagmatic

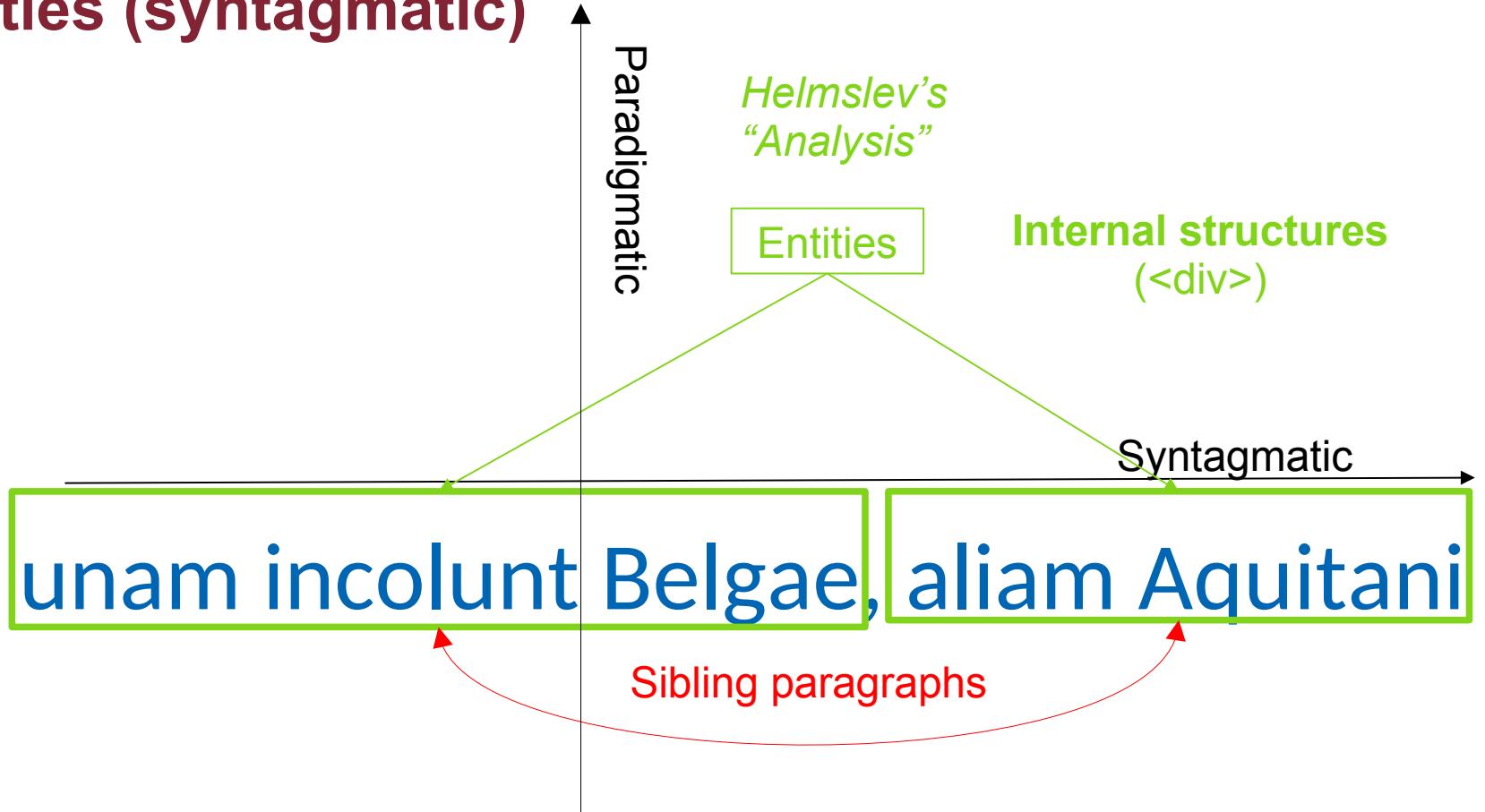
*Helmslev's  
“Analysis”*



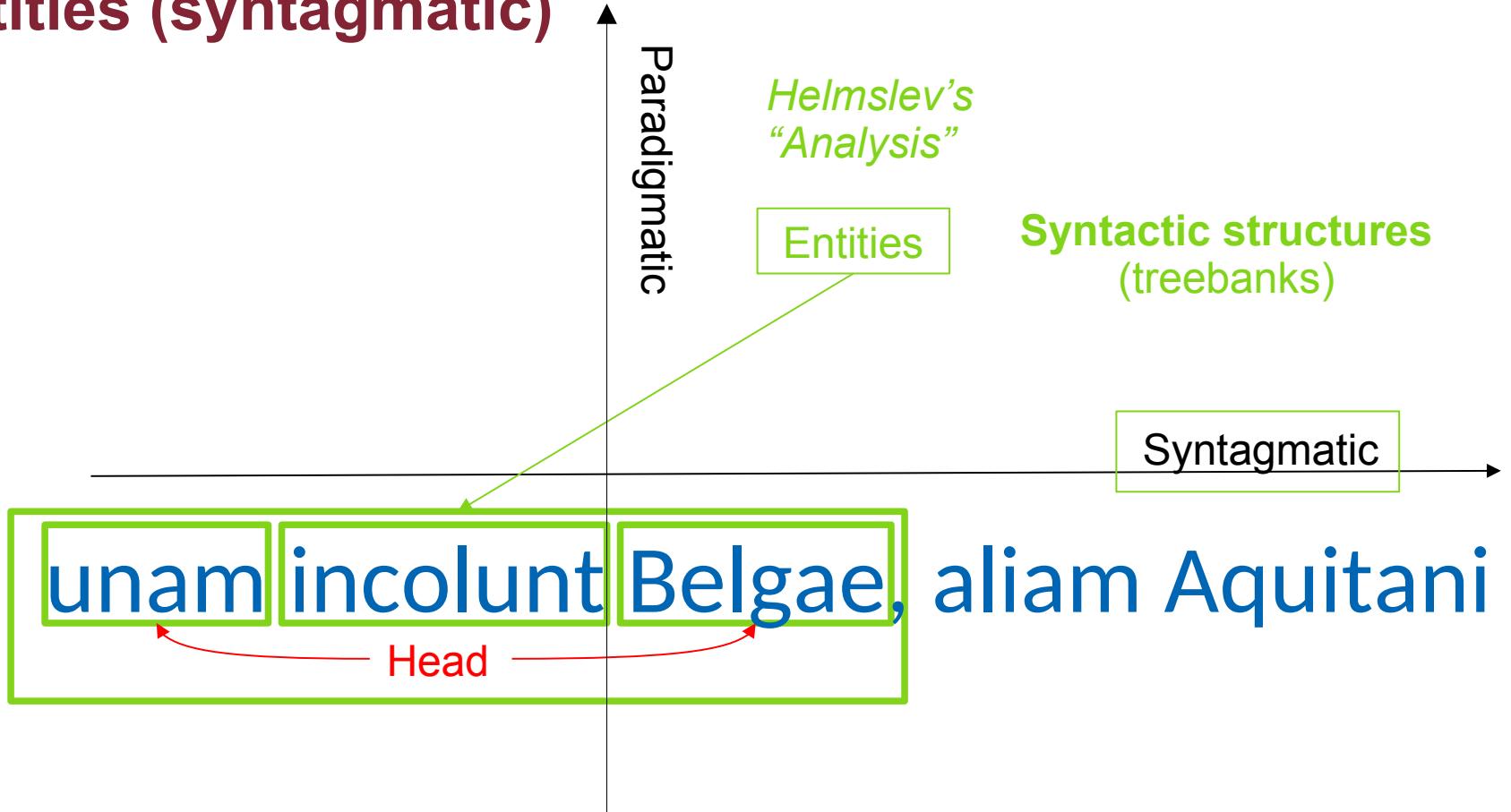
unam incolunt Belgae, aliam Aquitani

**Entities on the syntagmatic axis**

# Entities (syntagmatic)



# Entities (syntagmatic)



# Entities (syntagmatic)



Virgilius in VIII: «et licito tandem sermone fruuntur»

Prisc. Ars 11.20.2  
→ Verg. Aen. 8.469

↑  
Paradigmatic

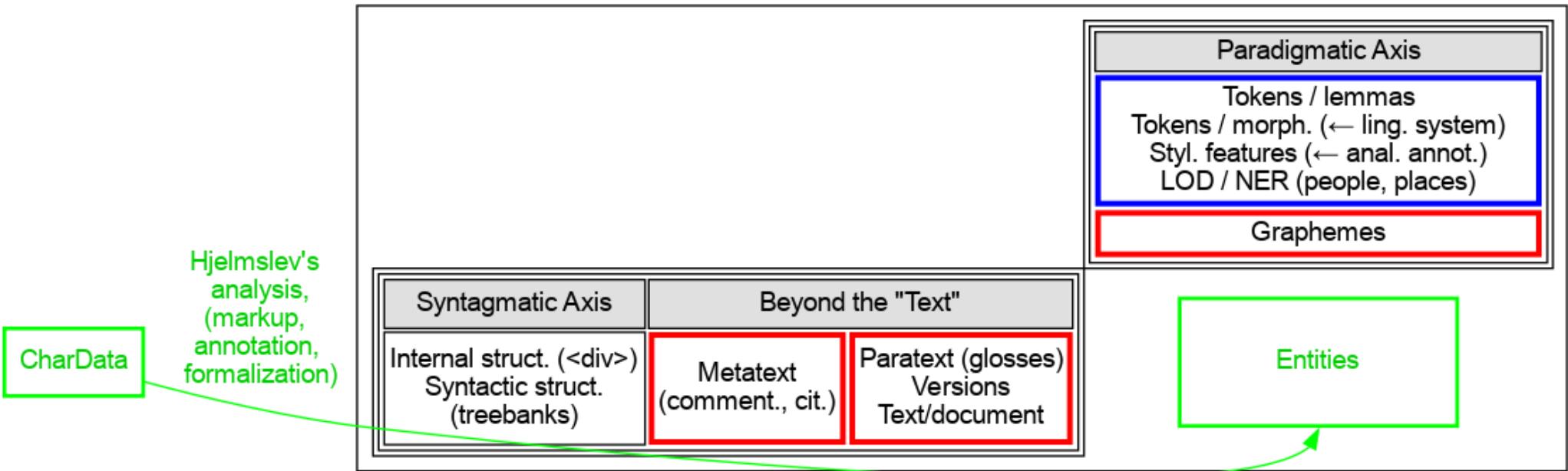
Helmslev's  
“Analysis”

Entities

Metatext  
(commentaries, citations)

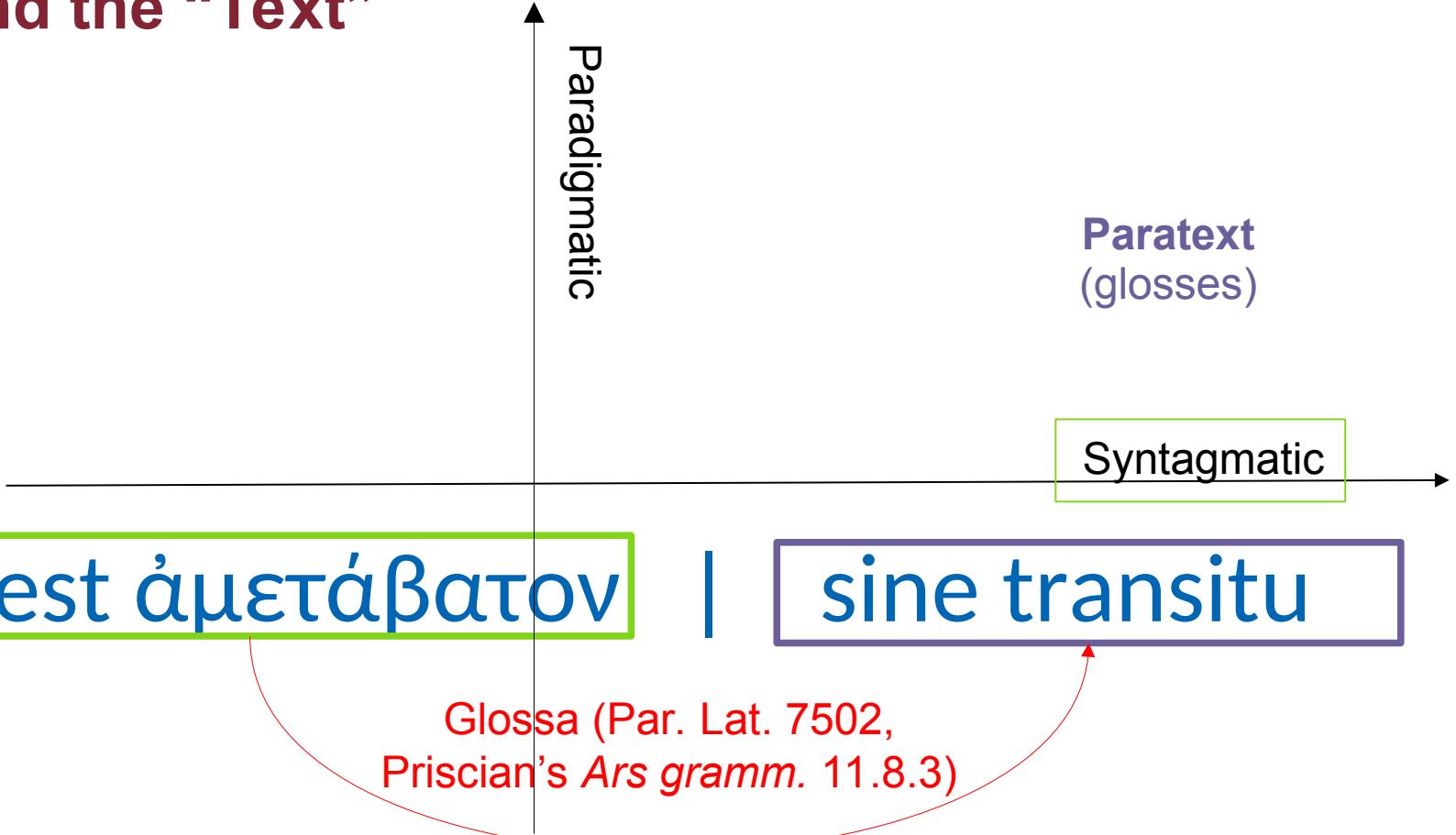
Syntagmatic

# Entities



# Beyond the “Text”

# Beyond the “Text”



# Beyond the “Text”



↑  
Paradigmatic

Intertextual  
references

Syntagmatic

Fert animus causas

In nova fert animus

Luc. Phars. 1.67 → Ov. Met. 1.1

# Beyond the “Text”



Paradigmatic

Versions  
(philology)

Syntagmatic

et ius comitium

et ius comitum

Caes. BC 1.3.3:  $\mu$  vs  $\nu$

# Beyond the “Text”



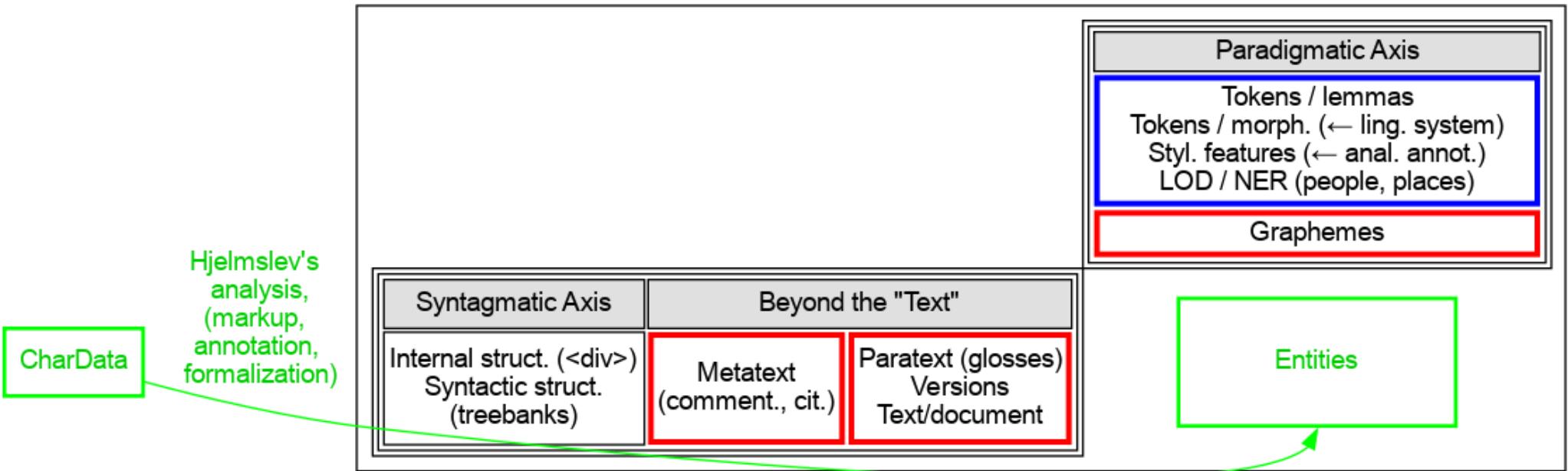
Paradigmatic

Text / document  
(2D space)

et ius comitium

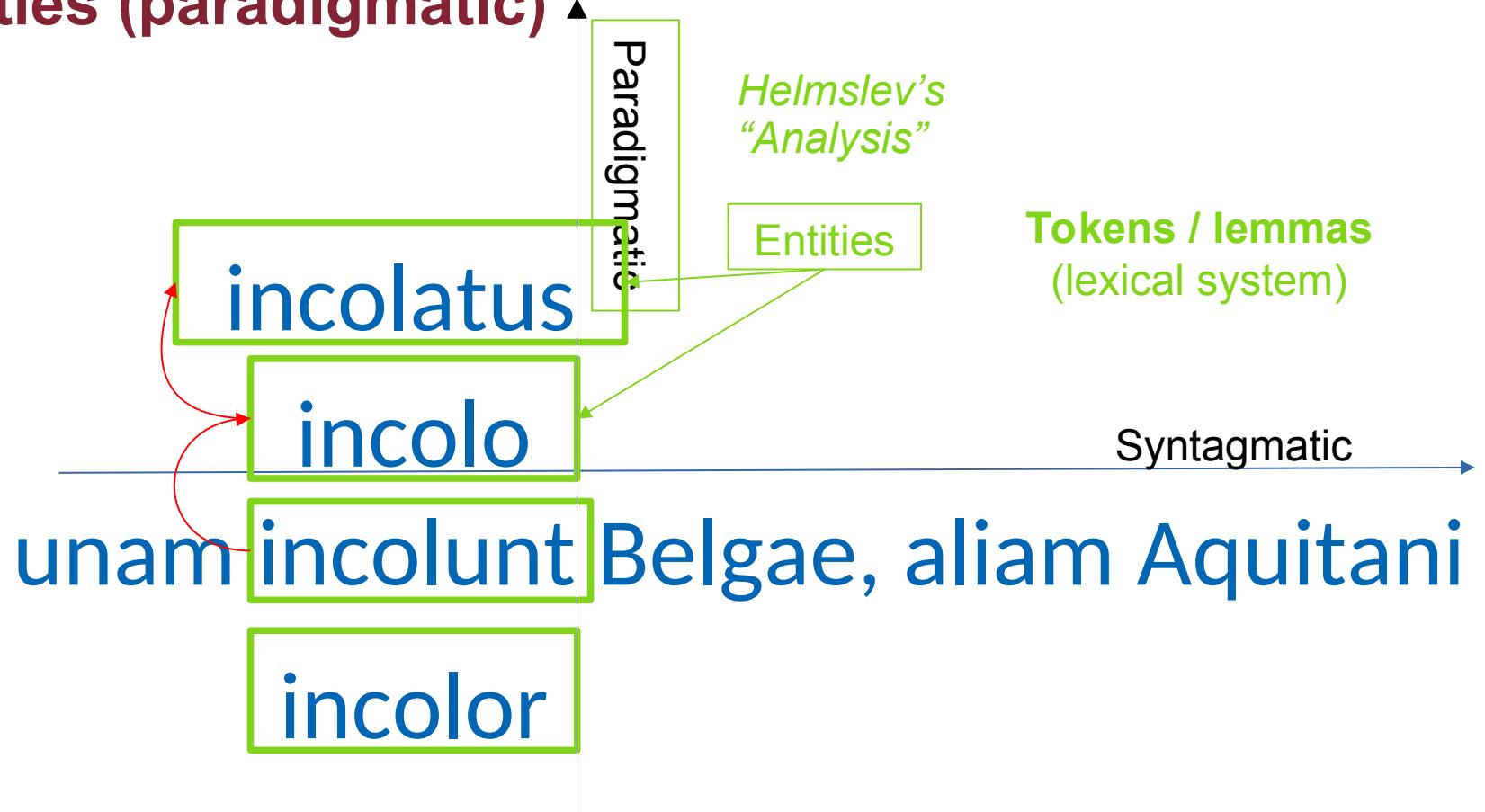
Syntagmatic

# Entities



# **Entities on the paradigmatic axis**

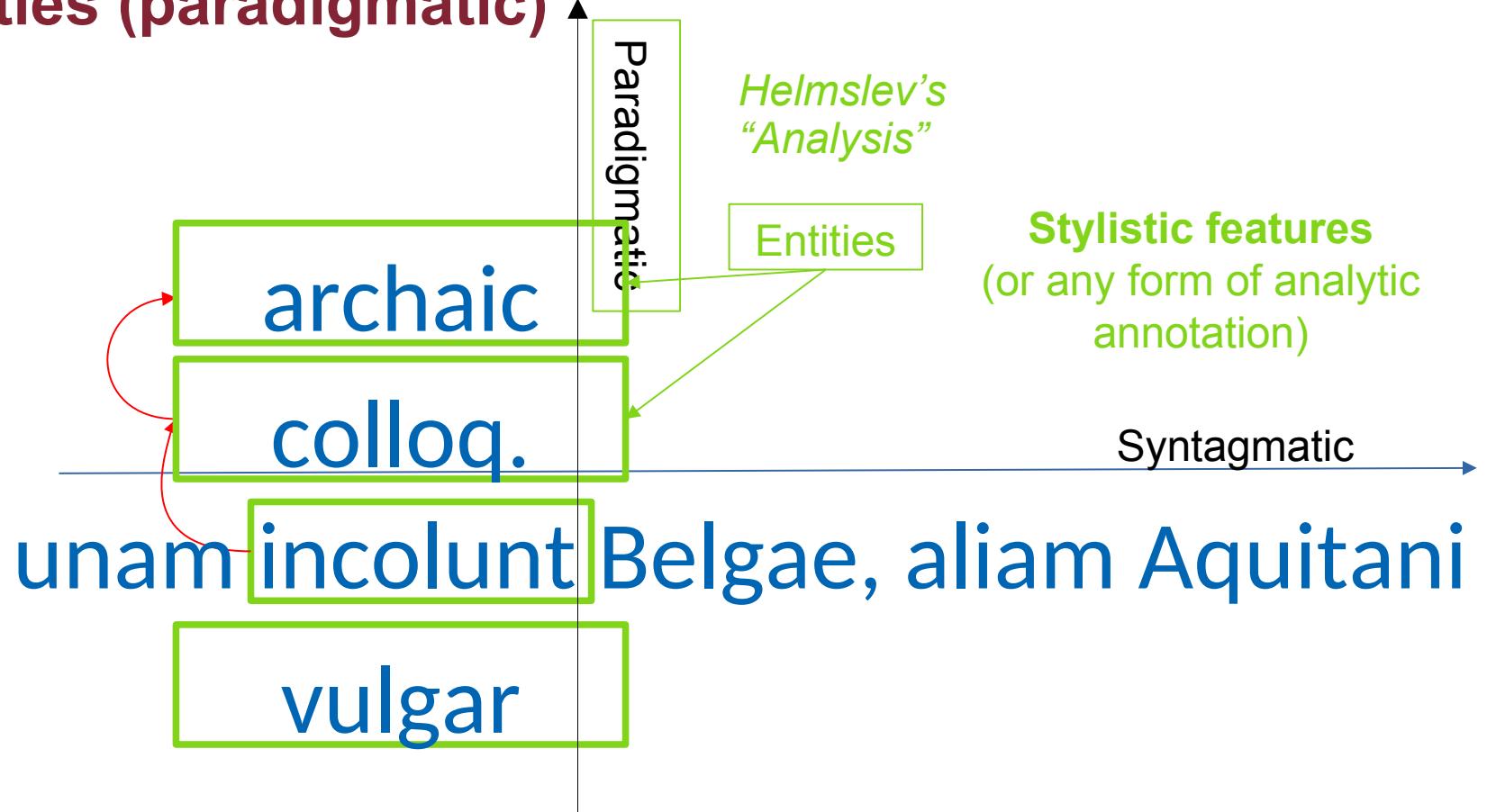
# Entities (paradigmatic)



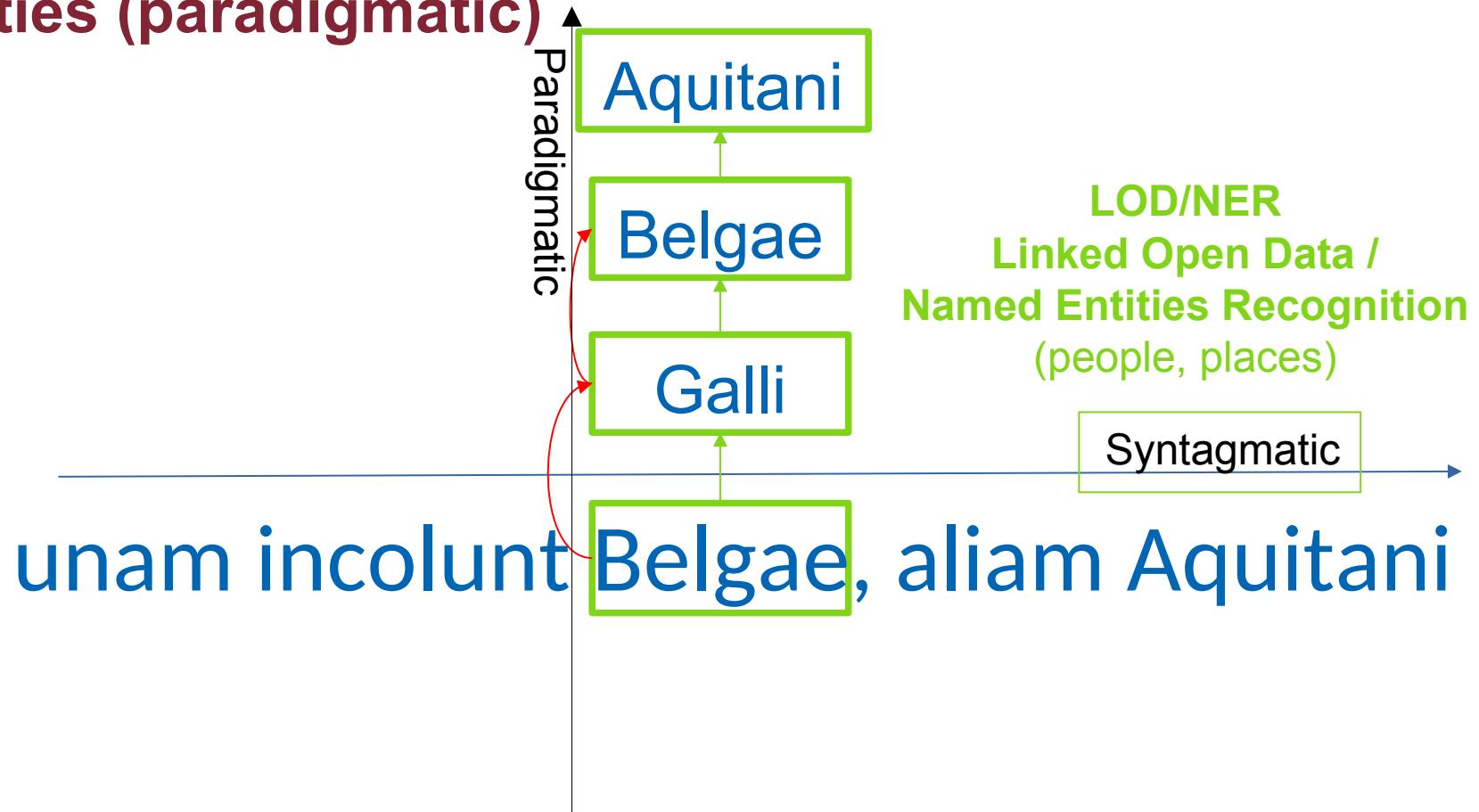
# Entities (paradigmatic)



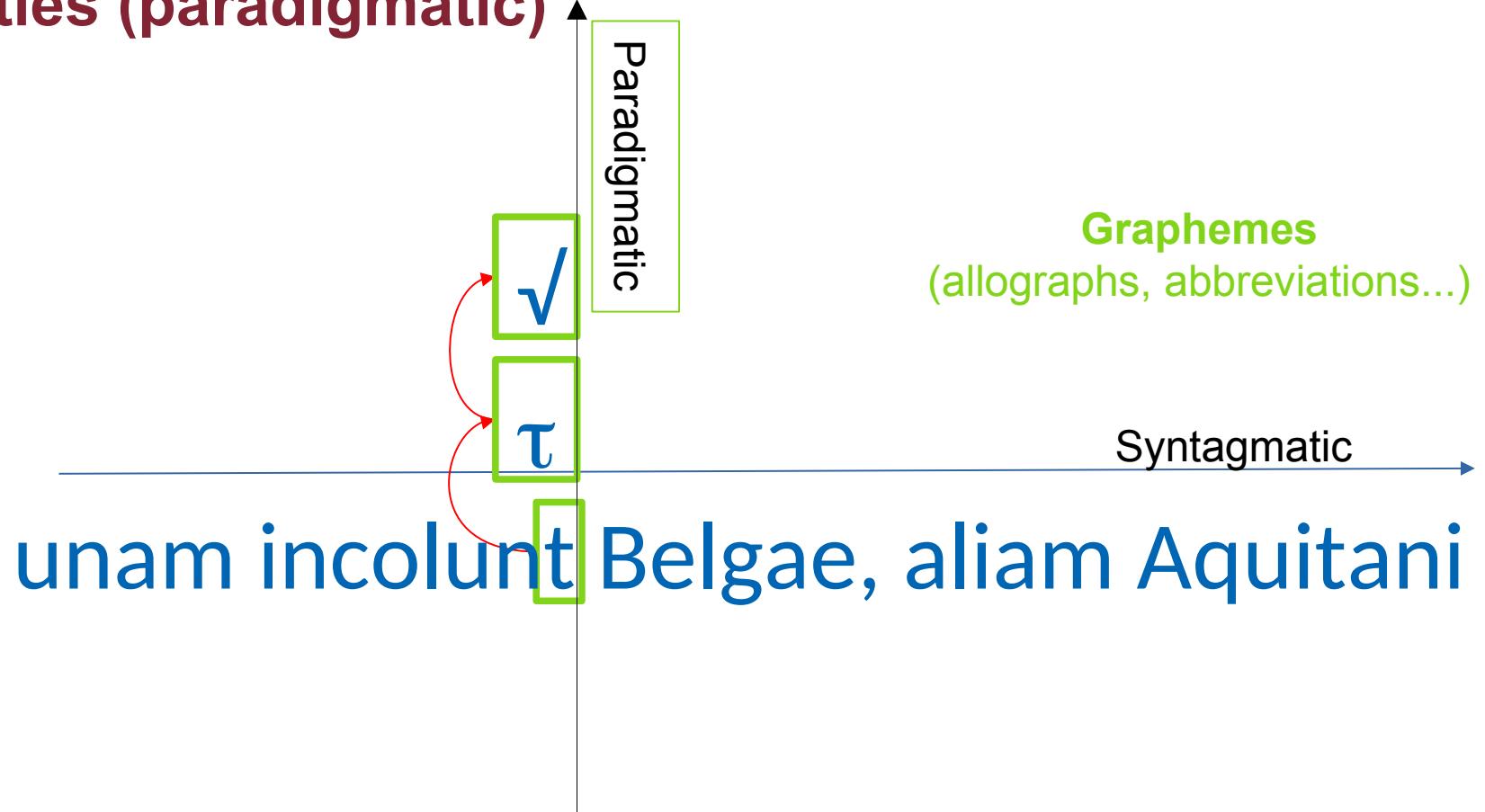
# Entities (paradigmatic)



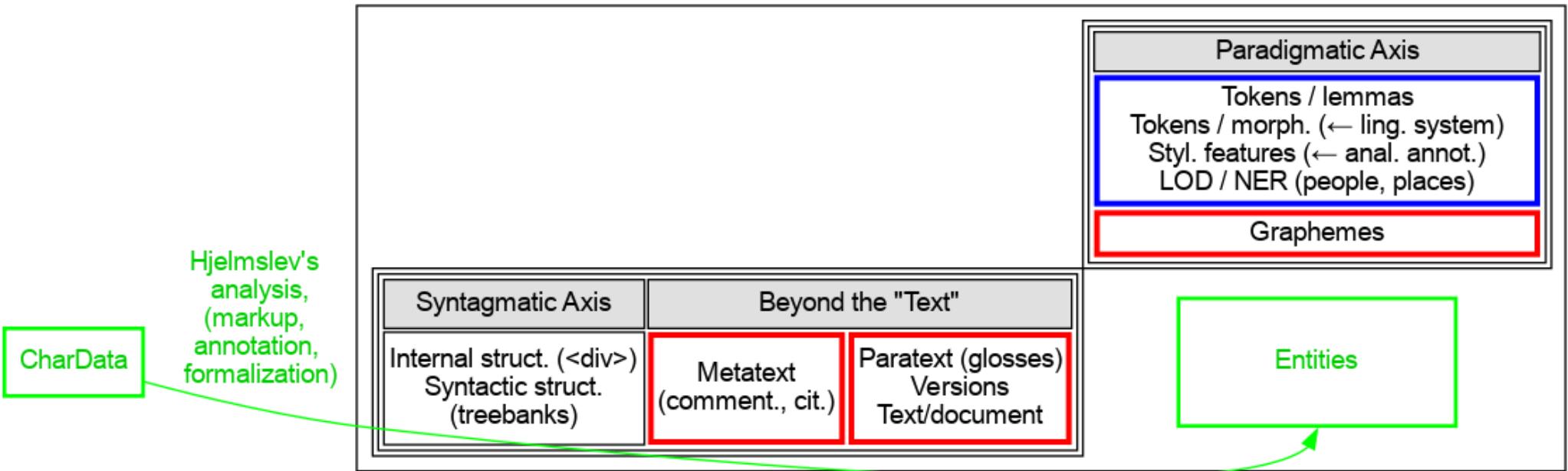
# Entities (paradigmatic)



# Entities (paradigmatic)

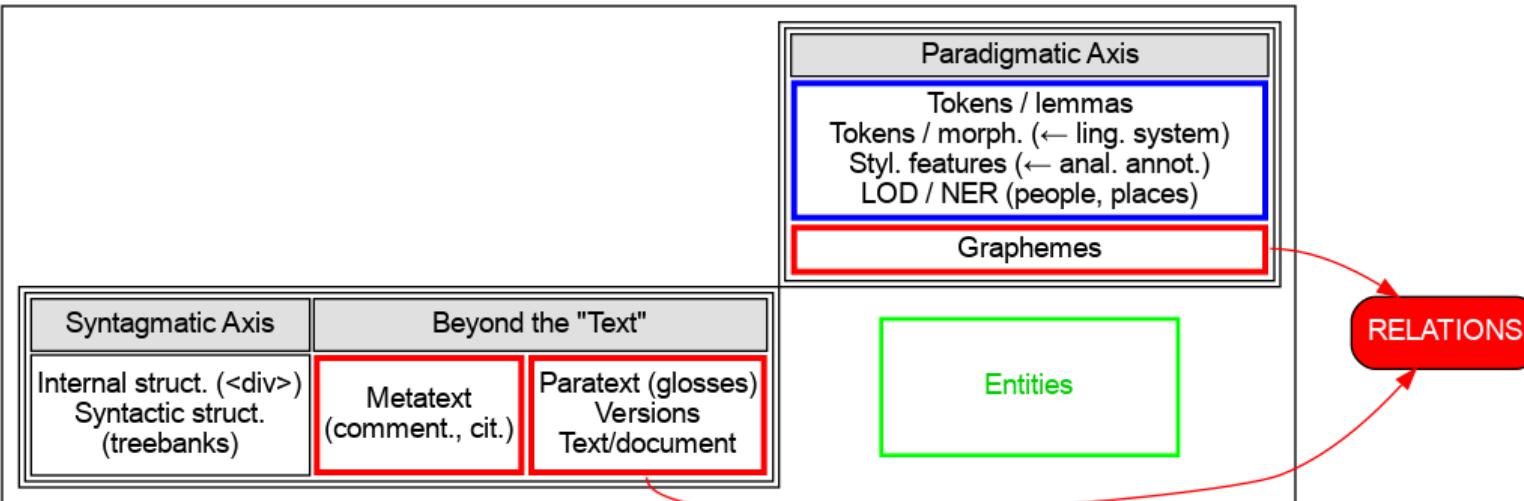


# Entities

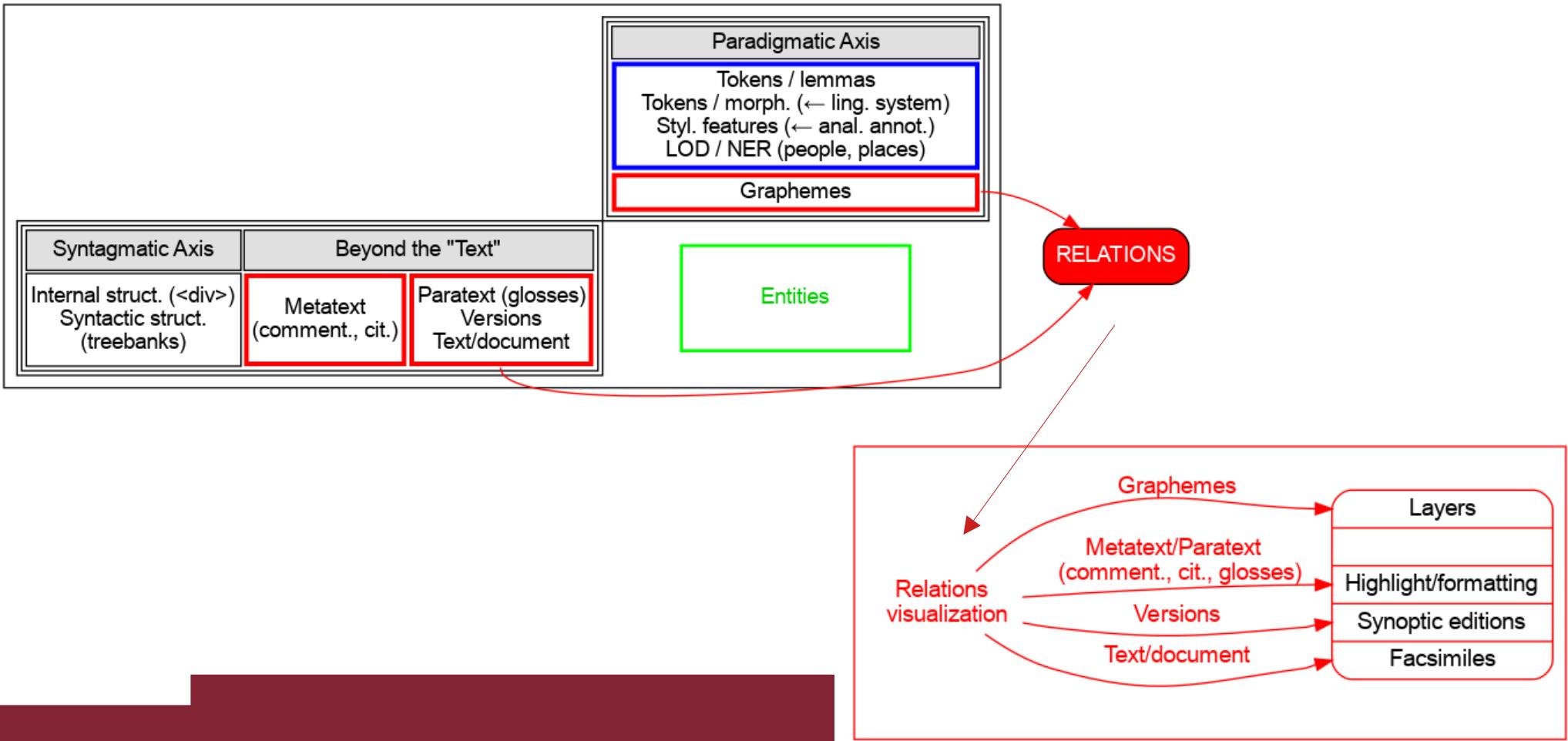


# **Relations**

# 1<sup>st</sup> added value: Relations



# Relations: what do we do with them? → Visualization



# Relations visualization → Layers

Li livres du Graunt Caam

218e local MS Desc

[Local image]

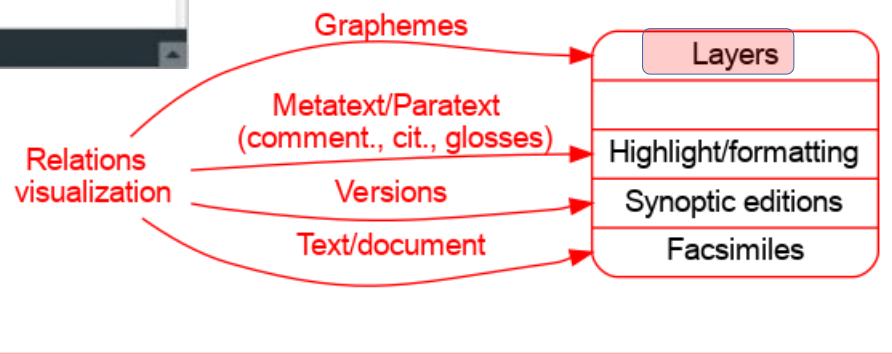
1 Ci commence li liures du graunt Caam qui parle de la graunt Ermenie de perse .  
2 et des tartars et d'Inde . Et des grant meruelle qui per le monde sont .  
POur sainoir la pure verite des diverses regions du monde . Ci pernez cest liure si trouverez  
les grandes mœs meruelles qui sont escriptes en la grant hermenie et de perse . Et des  
tartars , et dynde et de maintes autres gourouines . Si comme nostre liures vous conterez tout  
par oedre des que me sires marc pol saies et nobles citoyens de venice raconte pour ce que il  
les uit , mais auques il ya choses .

13 Qsil ne vit pas . Mais il estendi d'om  
14 mes certains par verite . Et par ce  
15 metrons nous les choses seues pour  
16 seues . Et l'entendue pour entendue  
17 a ce que nostre liure soit urais et uerria  
18 bles sans nule mencunge . Et chascuns qui ce liure oura  
19 ou lira le doit croire . Pour ce que toutes sont choses ve  
20 ritables . Car le vous fais a sainoir que pais que nostre  
21 sire dieux fist adam le premier pere ne fu ou ques de  
22 nul homme generation qui tant seust ne cherast  
23 des diverses parties du monde comme cestui mesme marc

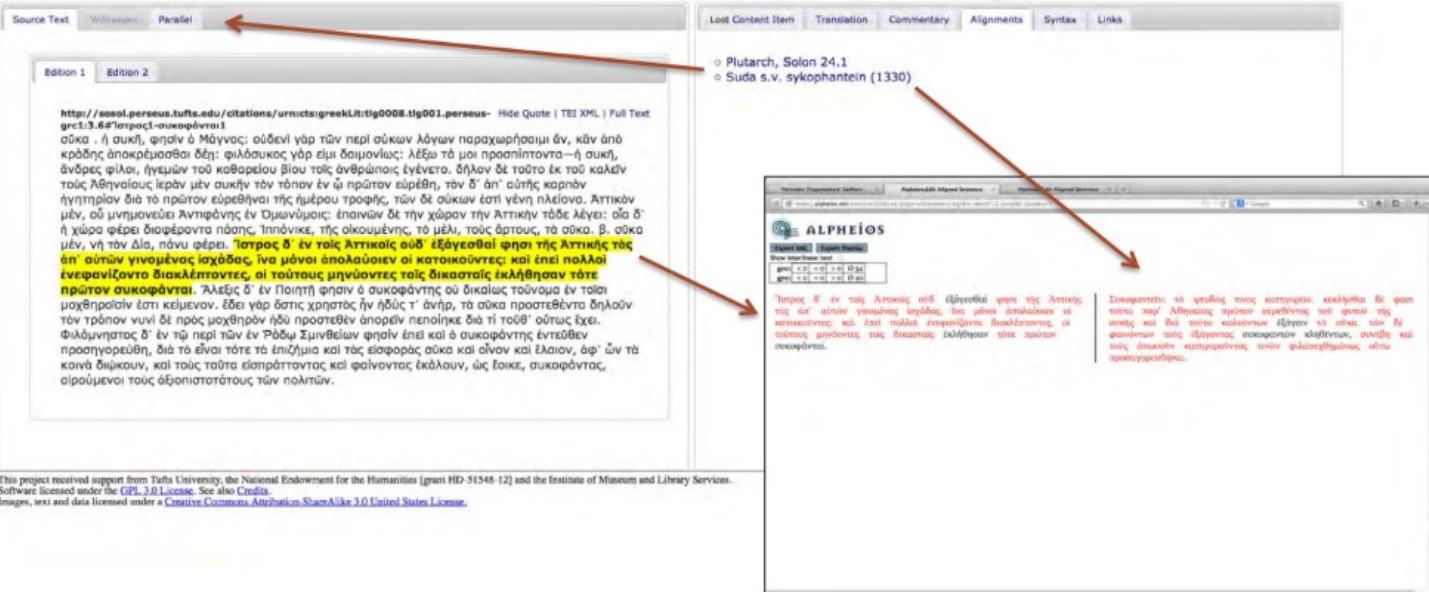
Nosma Selection + Search Q Create index

EVT

Diplomatic transcription  
Interpretative transcription



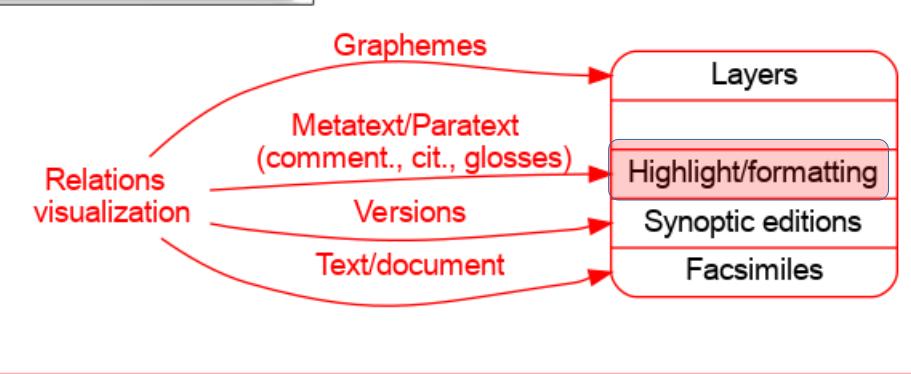
# Relations visualization → Metatext



Perseids

Source:

<http://www.cs.unibo.it/dh-case/pdf/Berti.pdf>, slide 19



# Relations visualization → Paratext

II 548,1

liber undecimus de participio

II 548,2

qui tertio loco participium posuerunt, rectius fecisse uidetur. cum

187b24 548,2 [book 11 4142](#) re[ctius]: " → (187b25=548,3) enim: "

187b25 p 548,2 [book 11 4228 541](#) [re]ctius: .i. quam qui pronomen posuerunt

II 548,3

enim nomen et uerbum primum et secundum tenuerunt locum,

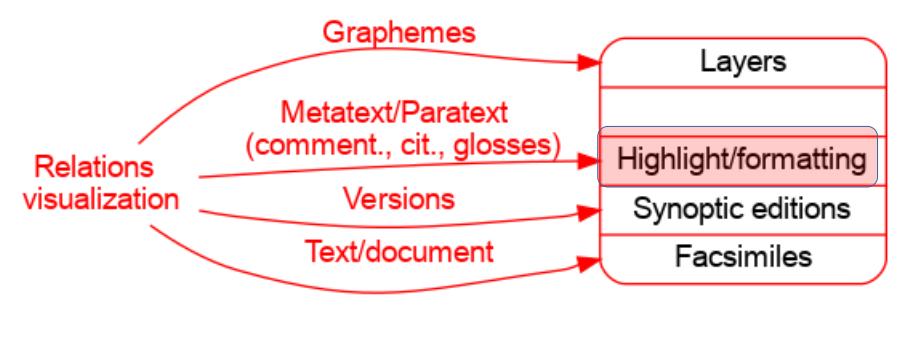
187b25 548,3 [book 11 4141](#) enim: " → (187b26=548,3) partici[pium]: " → (187b27=548,4) exigit: "

187b26 548,3 [book 11 4111](#) primum: , → (ibid.) secundum: , → (ibid.) locum: ,

St Gall Priscian Glosses v2.0

Source:

<http://www.stgallpriscian.ie/index.php?bb=11>



# Relations visualization → Synoptic editions

EVT Critical Viewer TEST

Doc I Critical

**Liber I**

**CAPUT 1**

Magnus es, domine, et laudabilis valde: magna  
**magna A** laudabilis **C** laudabilis **D**

Critical Note Orthographic Variants More Info XML  
**magna B**  
**magna E**

virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creature tuae, et homo circumferens mortalitem \* suam, circumferens testimonium peccati sui et testimonium, quia superbus resistis: et tamen laudare te vult homo, aliquando portio creature tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor nostrum, donec requiescat in te. Da mihi \* domine, scire et intelligere, utrum sit prius invocare te an laudare te, et scire te prius sit an invocare te. sed quis te invocat nesciens te? Aliud enim pro alio \* potest invocare nesciens. An potius invocaris \* ut scias? In Quomodo autem invocabunt, in quem non crediderunt? Aut quomodo credunt sine predicatione? Et laudabunt dominum qui requirunt eum. Querentes enim inveniunt eum et invenientes laudabunt \* eum. Querant te, domine, invocans te, et inveniente laudabunt \* eum. Queram te, domine, invocans te, et inveniente te credens in te: praedictus enim es nobis. Invocat te, domine, fides mea, quam dediti mihi, quam inspirasti mihi per humanitatem \* filii tui, per ministerium \* praedicatoris tui . \*

**CAPUT 2**

Non enim — 253v —  
 ego iam in inferis , \* et tamen etiam ibi es. Nam etsi

Filters Heat Map

CADENCE

— 254r —

**Liber I**

**CAPUT 1**

Magnus es, domine, et laudabilis valde: **laudabilis**  
 virtus tua, et sapientiae tuae non est numerus et laudare te vult homo, aliqua portio creaturorum tuarum , et homo circumferens **mortalitem** \* suam, circumferens testimonium peccati sui et testimonium, quia superbus resistis: et tamen laudare te vult homo, aliqua portio creature tuae. Tu excitas, ut laudare te delectet, quia fecisti nos ad te et inquietum est cor

+ — 254v —

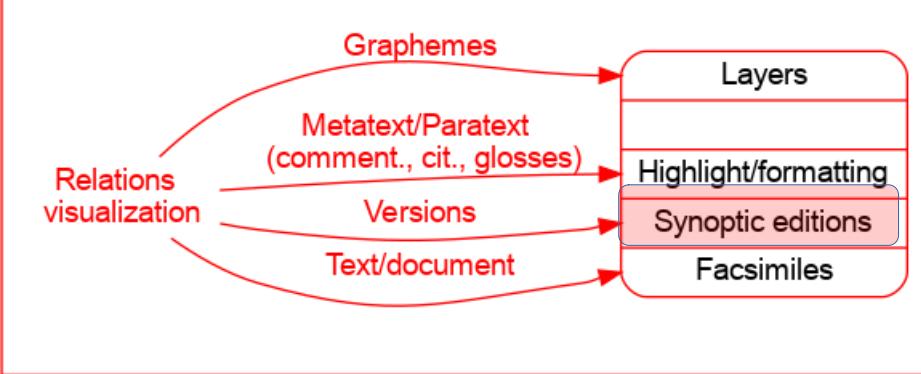
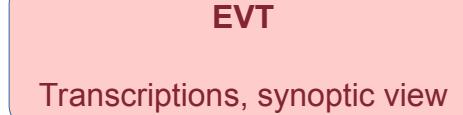
in te. Da **nobis** \* domine, scire et intelligere, utrum sit prius invocare te laudare te, et scire te prius sit an invocare te. sed quis te invocat nesciens te? Aliud enim pro alio \* potest invocare nesciens. An potius invocatis \* ut scias? In Quia autem invocabunt, in quem non crediderunt? Aut quomodo credunt sine predicatione? Et laudabunt dominum qui requirunt eum. Querentes enim inveniunt eum et invenientes laudabunt \* eum. Querant te, domine, invocans te, et inveniente te credens in te: praedictus enim es nobis. Invocat te, domine, fides mea, quam dediti mihi, quam inspirasti mihi per humanitatem \* filii tui, per mysterium \* praedicatorum tuorum . \*

**CAPUT 2**

\* Et quomodo invoco deum meum, deum et dominum meum, quoniam utique immem ipsum eum invoco, cum invoco eum? Et quis locus est in me, quo uenient in deum meus? quo deus ueniat in me, deus, qui fecit caelum et terram? itane, domine deus meus, est quicquam in me, quod capiat te? An

Filters

[LACUNA]



# Relations visualization → Facsimiles

Li livres du Graunt Caam ↗

[Local image]

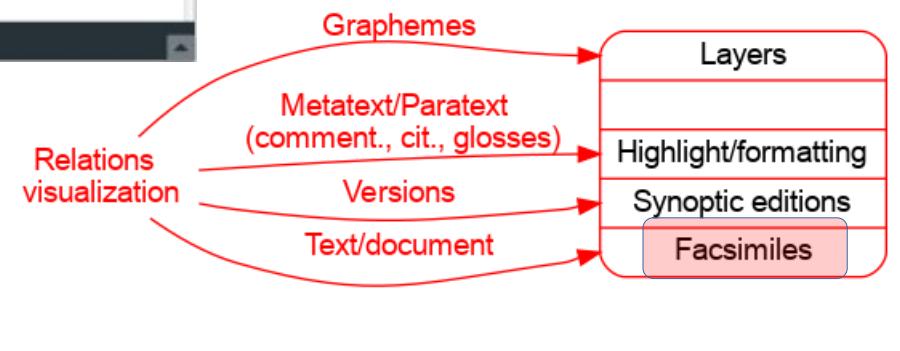
1 Ci commence li liures du graunt Caam qui parole de la graunt Ermenie de perse .  
2 et des tartars et d'Ynde . Et des grant meruelle qui per le monde sont .

POur sainz la pure verite des diverses regions du monde . Ci prenez est liure si trouvez  
les grandes mœs meruelles qui sont escriptes en la grant hermetie et de perse . Et des  
tartars . et dynde et de maines autres provinces . Si comme nostre liures nous contera tout  
par oedre des que me sires marc pol saies et nobles citoyens de venuce raconte pour ce que il  
les uit . mais auques il ya thoses

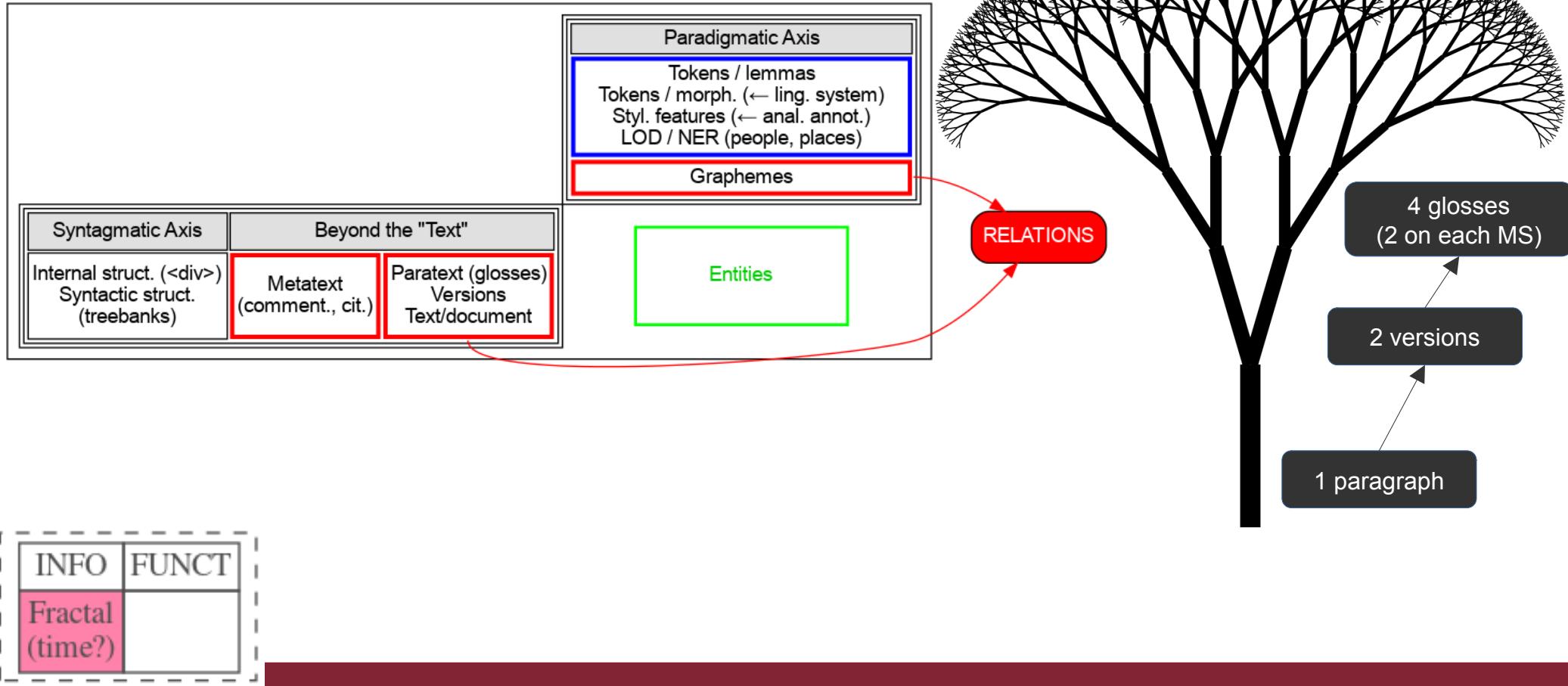
33 Q'il ne vit pas . Mais il estendi d'om  
34 mes certains par verite . Et par ce  
35 metrons nous les choses veues pour  
36 veues . Et l'entendre pour entendre  
37 a ce que nostre liure sole urals et urria  
38 bles sans nule menconge . Et chascuns qui ce liure ora  
39 ou lira le doit croire . Pour ce que toutes sont choses ve  
40 ritables . Car ic vous fais a sainz que puis que nostre  
41 sire dieux fist adam le premier pere ne fu ou ques de  
42 nul homme generation qui tant seust ne cherast  
43 des diverses parties du monde comme cestui mesme marc

EVT

Transcriptions / facsimiles



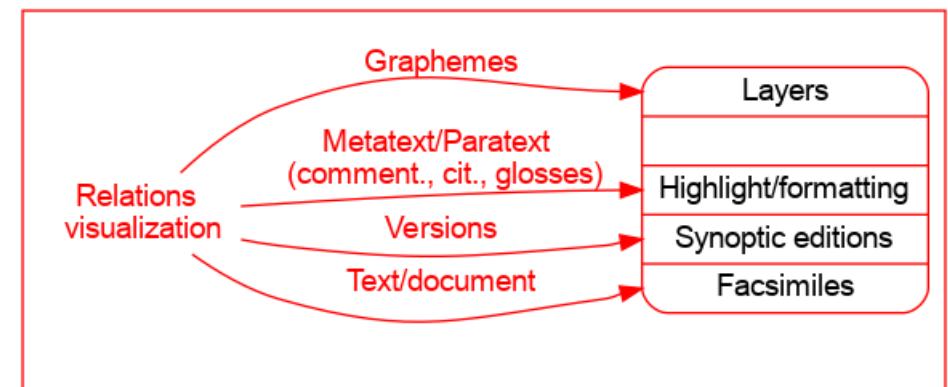
# Relations: text “explosion”



# Relations visualization: Sahle / Kiss (given in print)

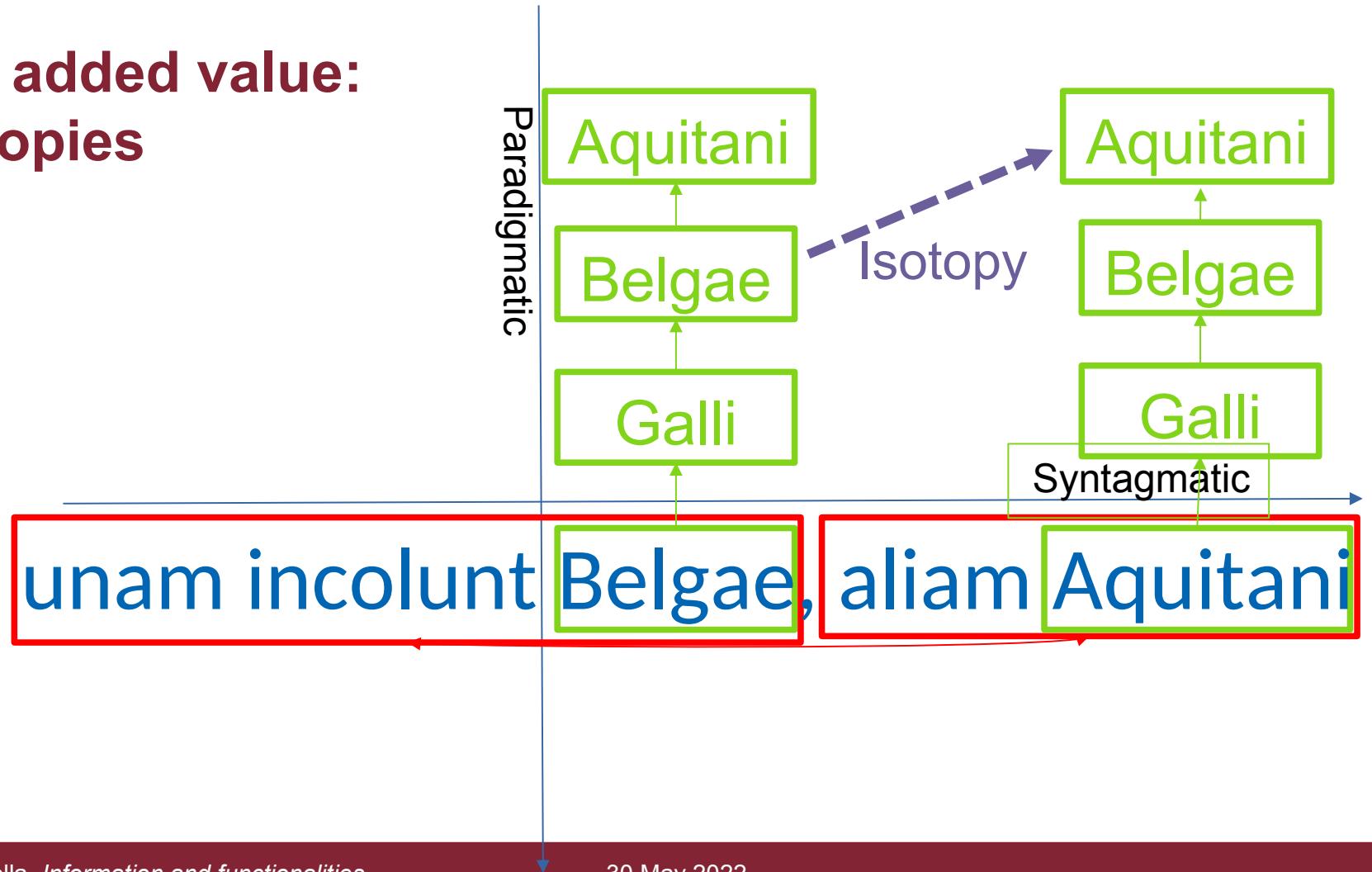
- If the main **functionality** is visualization only...
  - ...is it worth it to encode so much “fractal” **information** (time/resources)?
- It depends on how much each area of textual studies is willing to invest on
  - **Versions** (“plural” texts)
  - **Documents**
- Digital philology
  - Papyrology
  - Epigraphy
  - (Some) medieval philology
  - Genetic editions
  - Lachmannian philology

INFO	FUNCT
Fractal (time?)	Kiss?



# Isotopies

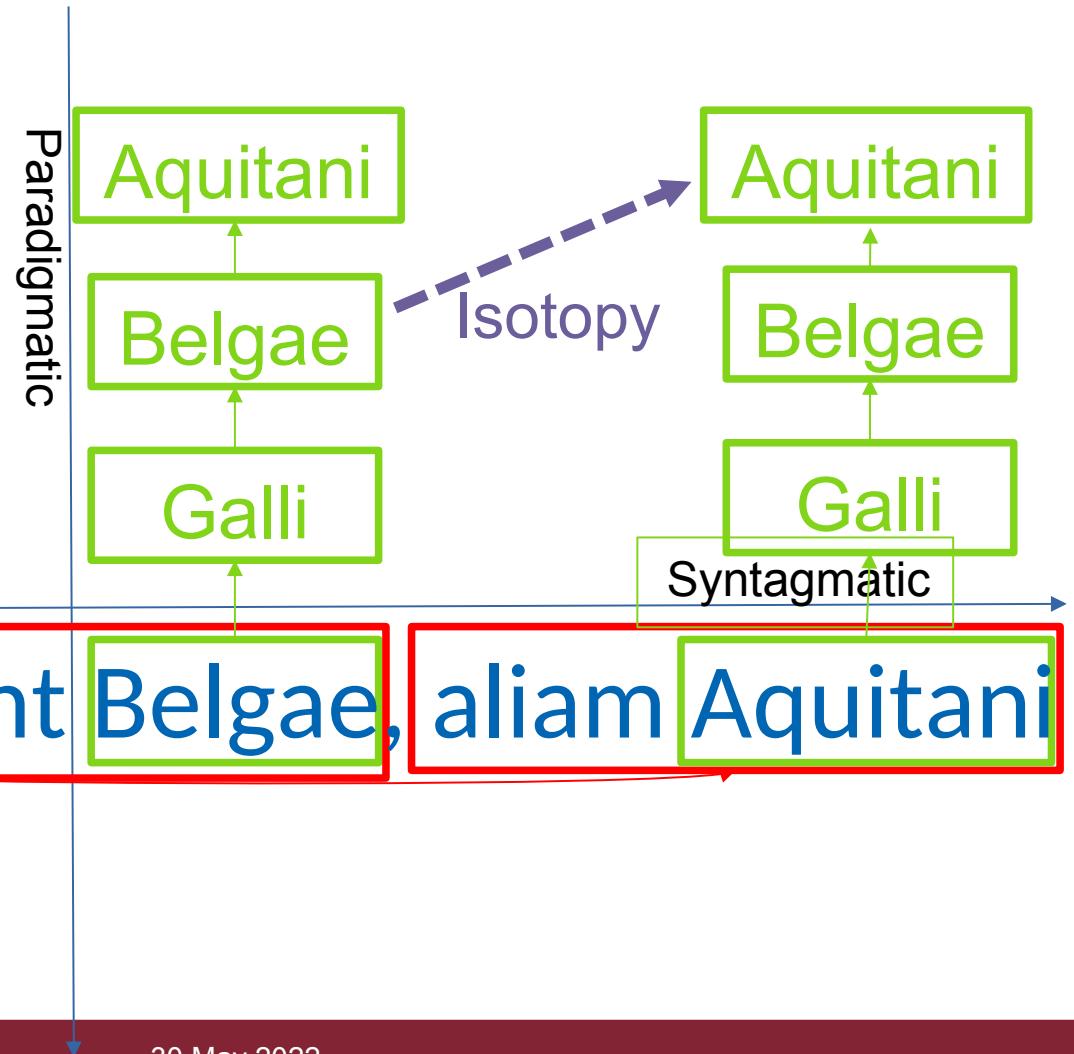
## 2nd added value: Isotopies



## 2nd added value: Isotopies

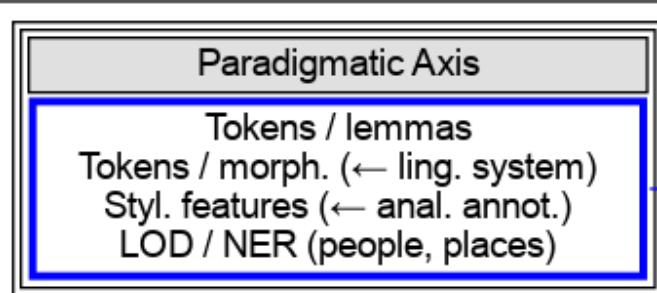
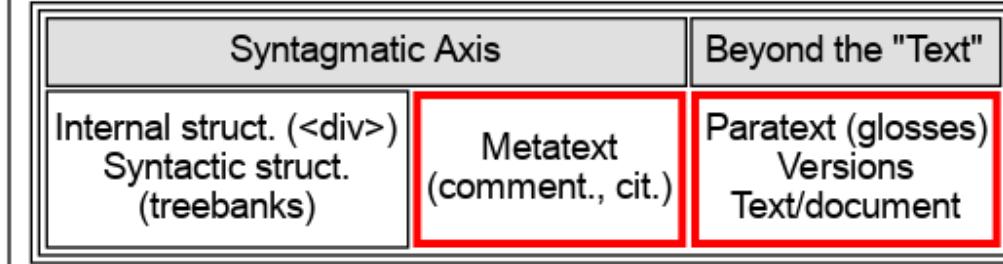
“Un ensemble redondant de catégories sémantiques”  
(A. J. Greimas, *Du sens* 1970)

unam incolunt **Belgae**, aliam **Aquitani**

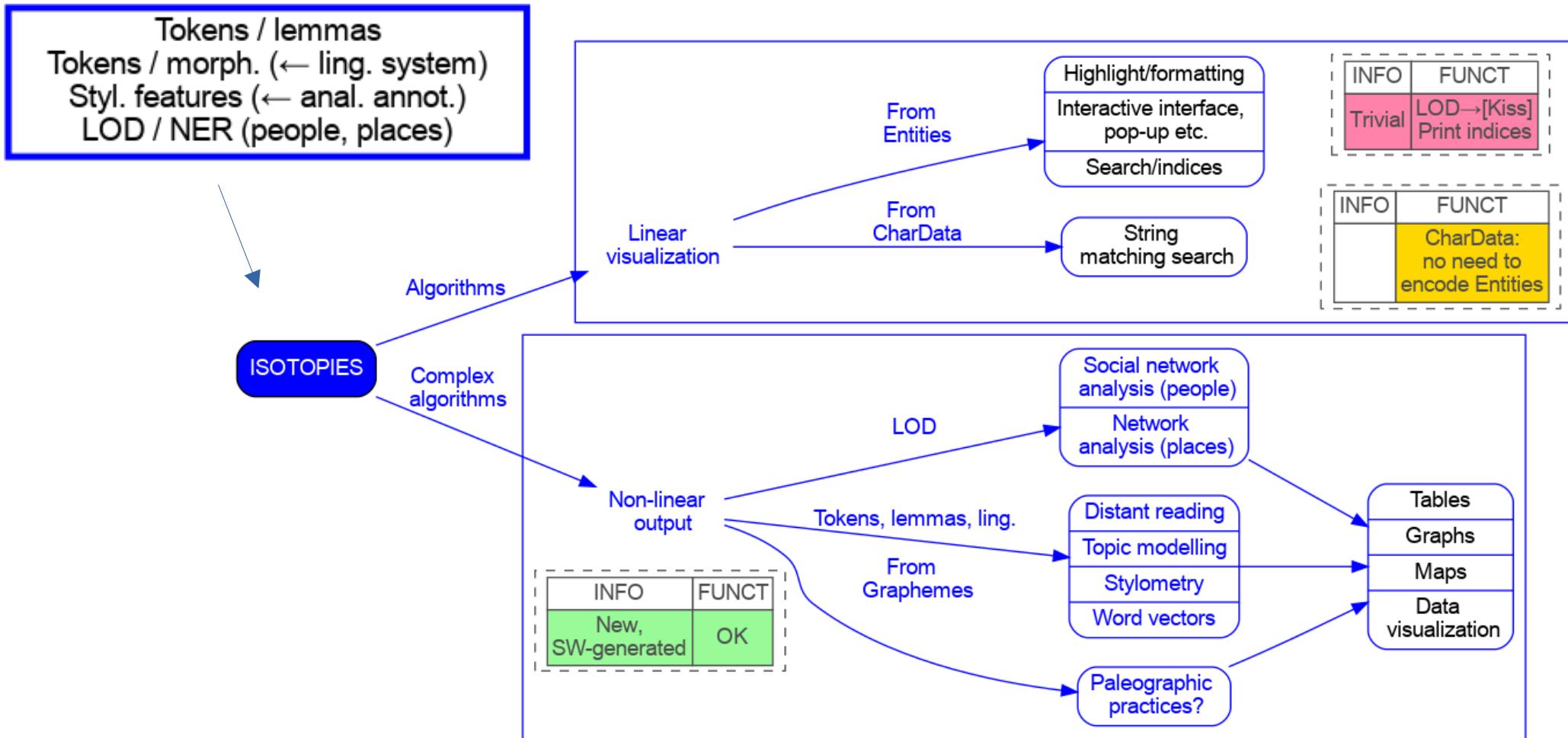


# From entities to isotopies

“Un ensemble redondant de catégories sémantiques”  
(A. J. Greimas, *Du sens* 1970)



# Isotopies: what do we do with them?



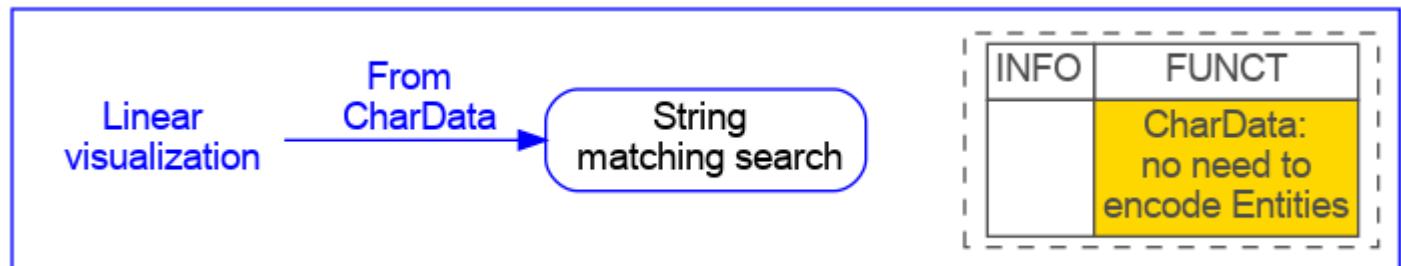
# Isotopies linear visualization: from Entities

- Sahle/Kiss: "...given in print"?
- **Trivial** information (*agere* → lemma *ago*; *Roma* → place name)
- Meaningful information
  - **Print indices** (*index nominum* etc.)



# Isotopies linear visualization: from CharData

- String matching (on plain text) search cannot be given in print
- ...but for it there is no need to annotate/mark up (identify Entities)



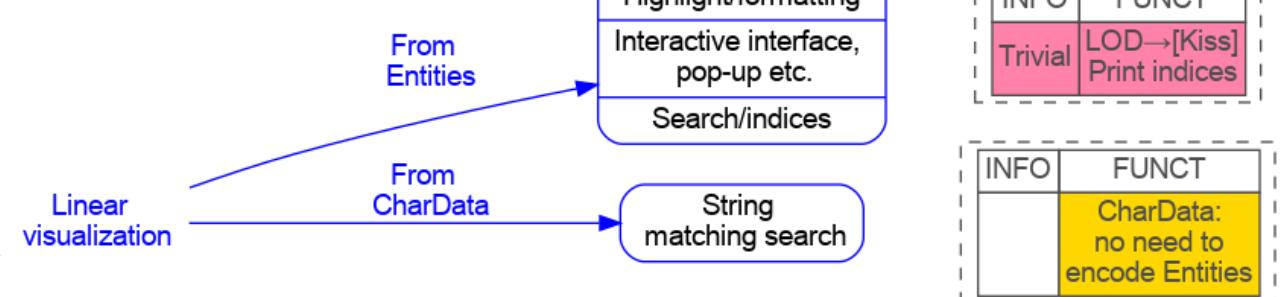
# Isotopies: the added value

Tokens / lemmas

Tokens / morph. ( $\leftarrow$  ling. system)

Styl. features ( $\leftarrow$  anal. annot.)

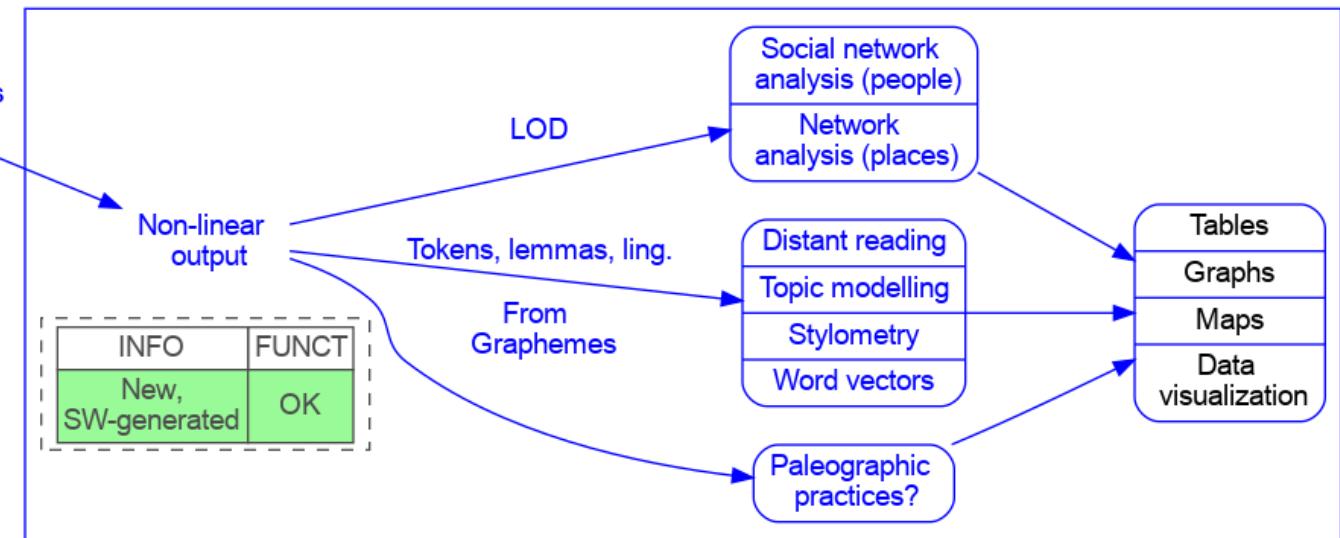
LOD / NER (people, places)



ISOTOIPIES

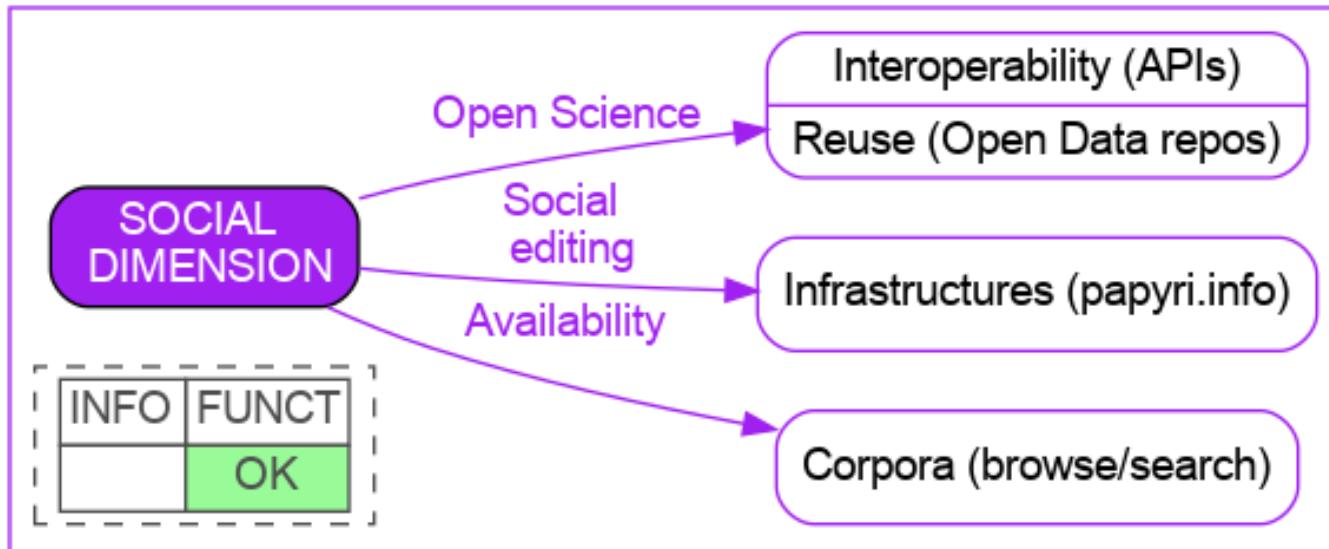
Algorithms

Complex algorithms



# **The social dimension**

# 3<sup>rd</sup> added value: The social dimension



# **Conclusion: the added value**

# Conclusion: the added value

