



# Poetic Rhyme in Greek: insights from a pilot database

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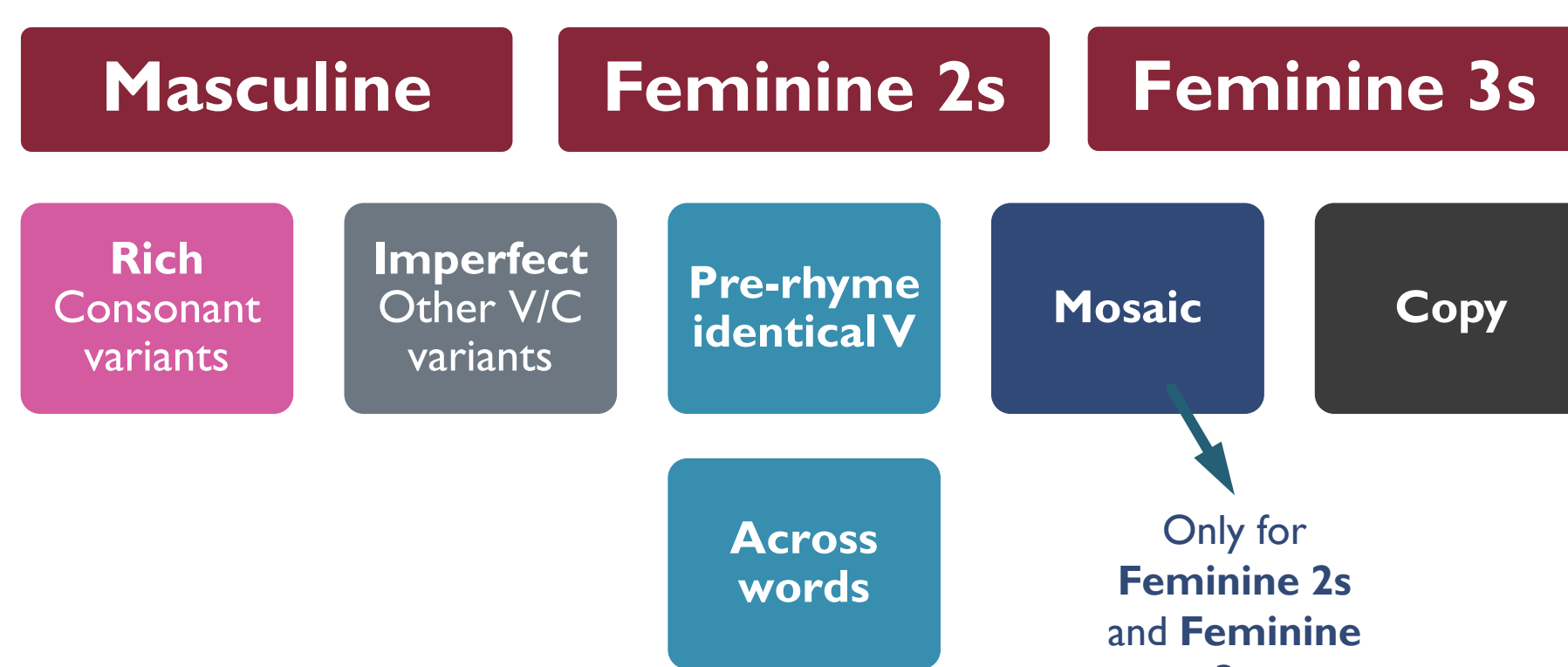
## Introduction & Aims

- **Rhyme**: sound correspondence between one or more syllables at – usually – the ends of poetic lines, e.g. *krína - elafína*
- Relatively understudied (Köhnlein & van Oostendorp 2014)
- Rhyme in Greek: almost unexplored (but see Kokolis 1993)
- This project: Construction of a pilot **database** with a sample of rhymes as they appear in the poetry of diverse Greek poets
  - <http://greek-rhyme.web.uth.gr/index.php/home>
- **Descriptive aim**: rhyme patterns in Greek and their frequency
- **Theoretical and/or typological aim**
  - e.g. Holtman (1996: 32), based on Middle English: languages with rich inflectional morphology prefer feminine over masculine rhymes. Does Greek confirm this claim?

## Website & Database

- Website and database components
  - Online repository of rhymes (Library of poems)
  - Analyst expert knowledge integration productivity GUI (graphical user interface)
  - Rhyme detection/classification algorithm
  - Basic Statistics
  - Provision for expandability
- Rhyme Classification Chart

### Line Rhyme

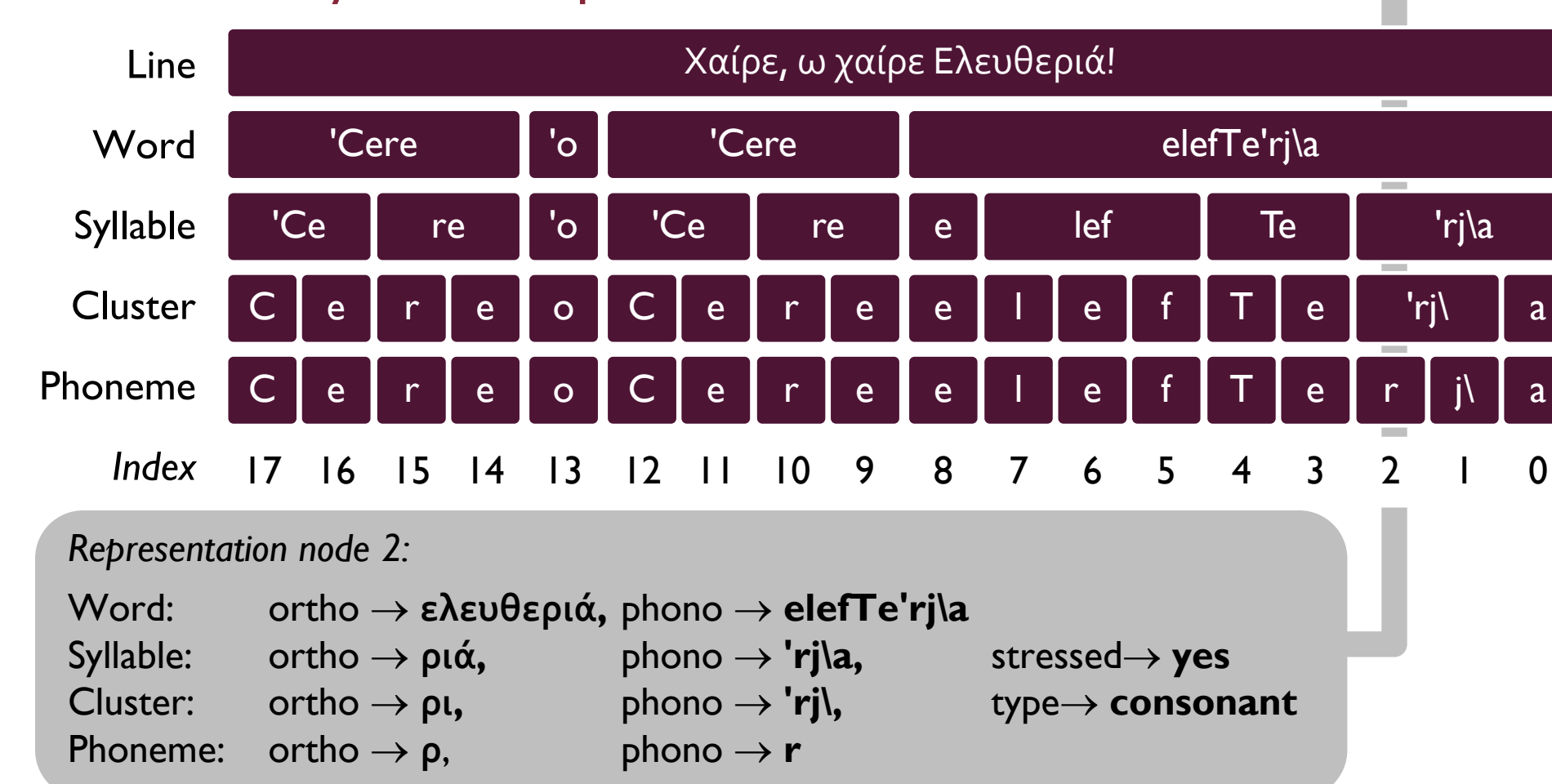


## Algorithms

- Poem pre-processing: Rule-based syllabification & orthographic to phonetic transcription (SAMPA) / Perl-line Synchronous multi-layered representation (Wd, σ, cluster, phoneme)
- Line analysis:
  - Standardized syntax of hierarchical rhyme detection rules
  - Rule-based detection of rhyme pairs (RPs)

- Rhyme post-processing
  - Database wide statistics
  - Meta-information

### Multi-layered representation



### Rhyme detection rules

- Successive comparison steps of respective line representation nodes in reverse order
- Operator condition syntax
- Suitable repertoire of comparison operators
- Hierarchy support by rules inheritance
- Match if all queue comparison steps are true

## Patterns

### Rhyme Type

- M = masculine (final) / F2 = feminine penultimate / F3 = feminine antepenultimate

### Rich Rhyme: onsets of stressed σ match in RP

- total rich rhyme with singleton or complex onsets, i.e. TR-S (*alisoméno* – *Graméno*) and TR-CC (*avj\i* – *na vj\i*)
- partial rich rhyme with singleton & complex onset, i.e. PR-C1 (*stómata* – *sómata*) or PR-C2 (*trízun* – *foverízun*)
- partial rich rhyme with complex onsets, i.e. PR-CC1 (*pixtá* – *vraxná*) or PR-CC2

### Pre-rhyme Identical V: vowel in prestressed σ is identical across RPs (shown in capitals)

- IDV: *Anáfti* – *Astráfti*
- IDV-2W (across words): *to vól*í** – *ecítOd ól*i**

### Mosaic rhyme: rhyme stretches across words

- MOS: *Dóz mu* – *fóz mu*

### Imperfect rhyme: V or C within rhyme alternates

- IMP-V: stressed V differs across RPs (*xónete* – *j\inete*)
- IMP-C: one or more Cs after stressed V differ across RPs (*ksafn*i*zi* – *texn*i*i*)

### COPY: rhyme as full reduplication (Den *ine* – pan *ine*)

## Some Examples

- From K. Varnalis' "Portreto se rimes"

13	4/1	πάει στην Κάζα, πάει στο Ωδείο	(1) 'pa-i 'stin 'ka-za 'pa-i 'sto o-'Di-o
14	4/2	η ώρα οχτώ κι η ώρα δύο	F2
14	4/2	η ώρα οχτώ κι η ώρα δύο	(0) i 'o-ra o-'xto ci i 'o-ra 'Di-o
15	4/3	όλο γέλιο κι αρεσιά	(1) 'o-lo 'jle-Lo ci a-re-'sCa
16	4/4	με καινούρια φορεσιά.	M
16	4/4	με καινούρια φορεσιά.	(0) me ce-'nu-rj'a fo-re-'sCa

- From A. Valaoritis' "I kyra Frosyni"

8	2/3	και πινάχτε τα φτερά σας	(1) ce ti-'na-xte ta fte-'ra sas
9	2/4	για να πέση η ομορφιά σας,	F2
9	2/4	για να πέση η ομορφιά σας,	(0) j'a na 'pe-si i o-mor-'fCa sas
10	2/5	και γιομίστε μαξιλάρες	(1) ce j'lo-'mi-ste ma-ksi-'la-res
11	2/6	να πλαγιάσουν οι κυράδες	F2
11	2/6	να πλαγιάσουν οι κυράδες	(0) na pla-'j'a-sun i ci-'ra-Des

- From D. Solomos' "Imnos eis tin eleftheria"

149	38/1	λίγα μάτια, λίγα στόματα	(1) 'li-Ga 'ma-tCa 'li-Ga 'sto-ma-ta
151	38/3	για να κλαύσετε τα σώματα	F3
150	38/2	θα σας μείνουν ανοιχτά	(1) Ta sas 'mi-nu-ne a-ni-'xta
152	38/4	που θε νά 'βρει η συμφορά.	M
151	38/3	για να κλαύσετε τα σώματα	(0) j'a na 'klaf-se-le ta 'so-ma-ta
152	38/4	που θε νά 'βρει η συμφορά.	(0) pu 'Te 'na-vri i sim-fo-'ra

## Statistics & Typology

- Current corpus has 89 poems; variety of types: long poems (Solomos' "Imnos": 632 lines), many sonnets of 14 lines each (Mavilis, Karyotakis), freer verse with some rhyme (Palamas)
- Basic, preliminary generalizations and stats
  - Of 5749 lines (corpus), 2457 lines (42.74%) presented some rhyme
  - Rhyme types: M≈45%, F2≈54%, F3≈1%
    - F2 > M, but only slightly → no clear support for Holtman's claim (see intro)
    - F3: extremely rare, although Greek has a lot of long words with antepenultimate stress!
  - IMP rhymes (≈12%); of those ≈30% are IMP-C and ≈70% are IMP-V
  - Rich rhymes (≈9%) with TR-S (≈4.9%) > PR-C2 (≈2.1%) > all others(0.07-0.7%); rarest=PR-CC1
  - Rich rhyme is almost twice as frequent in F2 compared to M
    - IDV is quite common (≈7%), esp. IDV-2W (≈5%)
    - MOS (≈2%) and COPY (≈1%) are very rare
- **Beware**: Corpus size/poet/period affects stats!
- Meta-data addition is in progress (alternating V/Cs in IMP, or preferred segments in rich rhymes)

## Phonological Implications

### Poetry may put phonological proposals to the test!

- Solomos' poem above is structured in 4-line-verses that alternate between 8-7<sub>as</sub> → [8-7-8-7]
- Line 580 has: *εισέ δάκρυα θλιβερά* = 7σ-long
- Implies that "δάκρυα" should be ['ða.kri.a]; but Soultatis (2013: 276) only allows for ['ða.kri.a]!
- In fact \*[Crj] for him is a basic argument against underlying glides in Greek (cf. Topintzi 2011)
- Poetic evidence challenges Soultatis' claim

### Poetry may help determine which phonetic details are phonologically relevant!

- In Greek, palatals are a product of velar palatalization (PAL) before front /i,e/ or /j/
- Baltazani & Topintzi (2012) distinguish between two PAL processes of the latter type, depending on the morphological environment (derived/DP vs. underived/UP)
- Preliminary phonetic evidence justifies this, e.g. differences in transition duration from pal.C to V
- But, identification of UP:[isci] and DP:[neanisc-i] in Solomos (ln. 189 + 191) as rhymes, suggests that such distinction is – at least – metrically irrelevant

## Future Work

- Expand database
- Optimize GUI
- Integration of metric scheme attributes according to poem type (e.g. sonnets) or syllabification issues (recognition of synaloepha)
- Extend to other phenomena such as alliteration
- Improve accessibility to philology/poetry scholars and school teachers. How? Ideas?

## References & Acknowledgements

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