



*Institute of
Classical Studies*

Sunoikisis Digital Classics

KING'S
College
LONDON

Session 5: Encoding Ancient Texts

March 2, 2016

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Overview of lecture

- Text encoding and standards
- Case study: Encoding Mycenaean Greek
- Rules of XML
- The EpiDoc Guidelines
- Oxygen demo

Text Encoding and Standards

What are standards?

- Academic:
 - High standards: excellence, citation, reproducibility
- Technical:
 - Codes or formats that enable processing
- Practice:
 - Use of shared formats, tools, methods

Leiden

| siglum | explanation |
|---------------|--|
| [...] | a lacuna or gap in the original text, not restored by the editor (extent known) |
| [— — —] | a lacuna or gap in the original text, not restored by the editor (extent unknown) |
| [abc] | letters missing from the original text due to lacuna, restored by the editor |
| a(bc) | abbreviation in the text, expanded by the editor |
| (ab) | characters erroneously omitted by the ancient scribe, restored or corrected by the editor |
| {ab} | letters in the text considered erroneous and superfluous by the editor |
| ab | characters damaged or otherwise unclear in the text, ambiguous outside of their context |
| ... | traces of letters on the surface, insufficient for restoration by the editor (Greek and Papyrological usage) |
| +++ | traces of letters on the surface, insufficient for restoration by the editor (Roman epigraphic practice) |
| ABC | clear but incomprehensible letters |
| [abc] | deleted letters |
| vac. | space left empty (<i>vacat</i>) on the stone or page |

Leiden

- Academic standard
 - *minimum* information transcription should record
- Technical standard
 - Typographic sigla that everyone recognise
 - Transparency and interoperability
 - Disambiguity and reproducibility
 - Enables cross-corpus comparison

Electronic Publication

- What does encoding texts allow you to do?
 - Publish electronically
 - Capture semantic distinctions
 - Single input, multiple outputs
 - Interchange materials with other projects
 - Federated search
 - Linked data
 - Reuse for purposes we didn't imagine
 - Long-term sustainability

Encoding semantic distinctions

- Renditional markup captures appearance:
 - *mens sana in corpore sano*
 - *The Roman Stonecutter*
 - This could just belong to...

Encoding semantic distinctions

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 - <*i*>mens sana in corpore sano</*i*>
 - <*i*>The Roman Stonecutter</*i*>
 - This could <*i*>just</*i*> belong to...

Encoding semantic distinctions

- Renditional markup captures appearance:
 - <**i**>mens sana in corpore sano</**i**>
 - <**i**>The Roman Stonecutter</**i**>
 - This could <**i**>just</**i**> belong to...
- Semantic markup captures meanings:
 - <**foreign**>mens sana in corpore sano</**foreign**>
 - <**title**>The Roman Stonecutter</**title**>
 - This could <**emph**>just</**emph**> belong to...

What can we do with encoded text?

- Transformation/publication
- Indexing
- Faceted search & browse
- Interchange/interoperability
- Text mining:
 - (Topic analysis / sentiment analysis / author attribution)
- Ground truth for machine learning

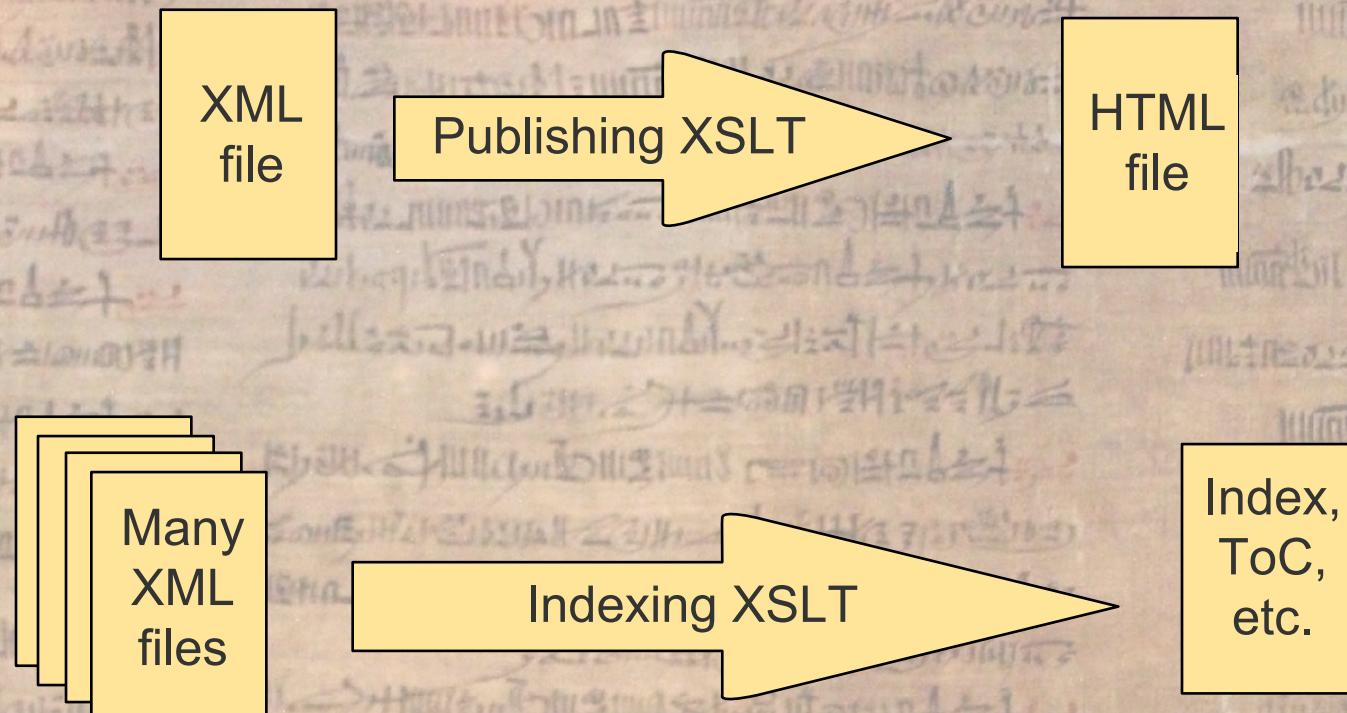
Single input, multiple output

- XML is a data format, not human-readable
- Transformed (via XSLT) to various formats
 - For publication
 - For search/discovery
 - For interchange
- Transformations act on different levels
 - Some leverage semantic distinctions
 - Some distinctions are flattened

Single input, multiple output

- Common outputs for EpiDoc:
 - Different media
 - Website / Mobile version / Print-ready PDF
 - Different editions
 - Interpretive
 - Diplomatic
 - Educational
 - Different filters
 - Indexes
 - Tables of content
 - Concordance

Transformations: collation



Methods and tools for encoding

- Plain text—any text editor
- XML Editor: Oxygen (oxygenxml.com)
- Excel to XML conversion
- Text to XML conversion (CHET-C)
- Papyrological Editor (SoSOL) (cf. [TIGLIO](#))
- Perseids (SoSOL + Arethusa)
- Bespoke/other

Case study: Encoding Mycenaean Greek



Mycenaean Greek: when & where

ca.1450 – 1150 BC

(earliest written evidence of Greek)

Main sites:

- Knossos (Crete) (4162)
- Pylos (1009)
- Thebes (363)
- Mycenae (86)
- Tiryns (27)
- Ag. Vasileios (ca. 100)



 Tablet
s

 Jars

 Tablets &
Jars

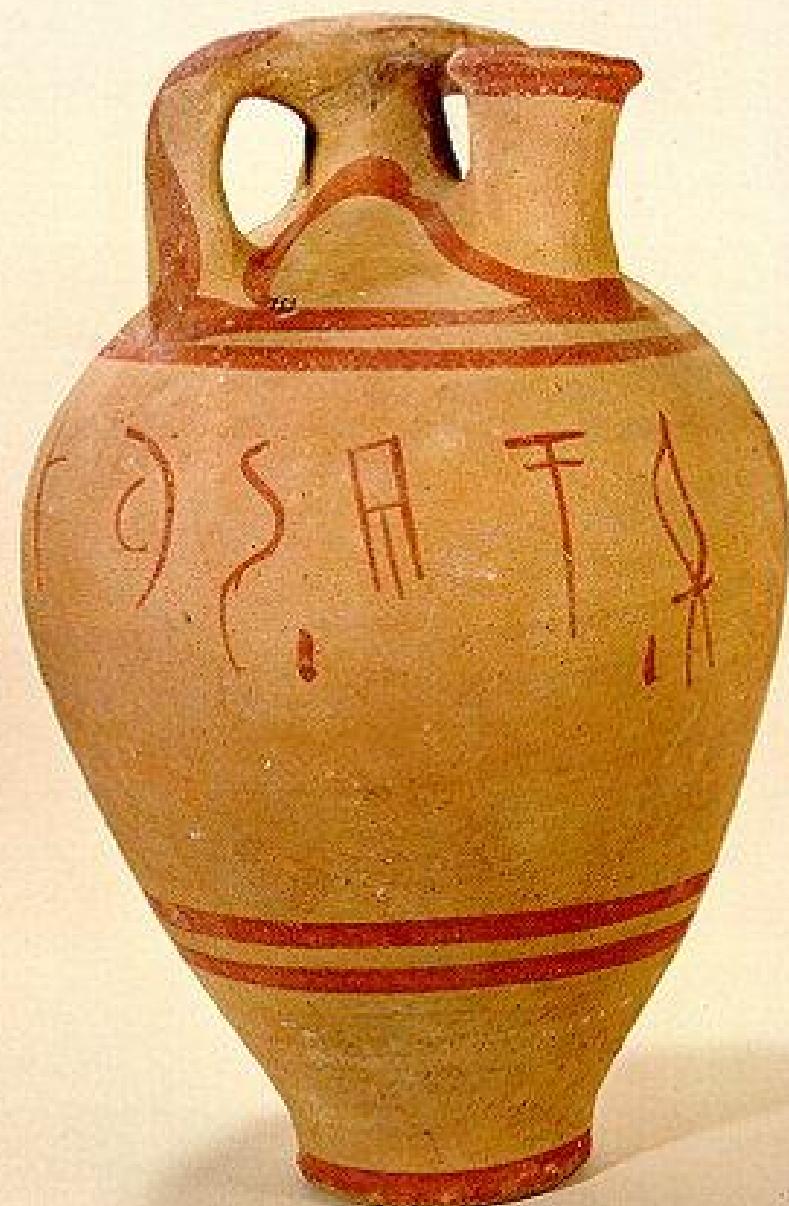


| | |
|---------------|------------------------------|
| Knossos | 4162 |
| Pylos | 1009 |
| Thebes | 363 |
| Ag. Vasileios | 5 (+ ca.100 to be published) |
| Mycenae | 86 |
| Tiryns | 27 |
| Khania | 7 |
| Midea | 4 |
| Dimini | 1 |
| Iklaina | 1 |
| Medeon | 1 |
| Volos | 2 |

Inscribed Jars 198
 (from various places)

Almost 6000 clay tablets





Linear B basic signs

| | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | |
| e | | | | | | | | | | | | |
| i | | | | | | | | | | | | |
| o | | | | | | | | | | | | |
| u | | | | | | | | | | | | |

Some Linear B logograms

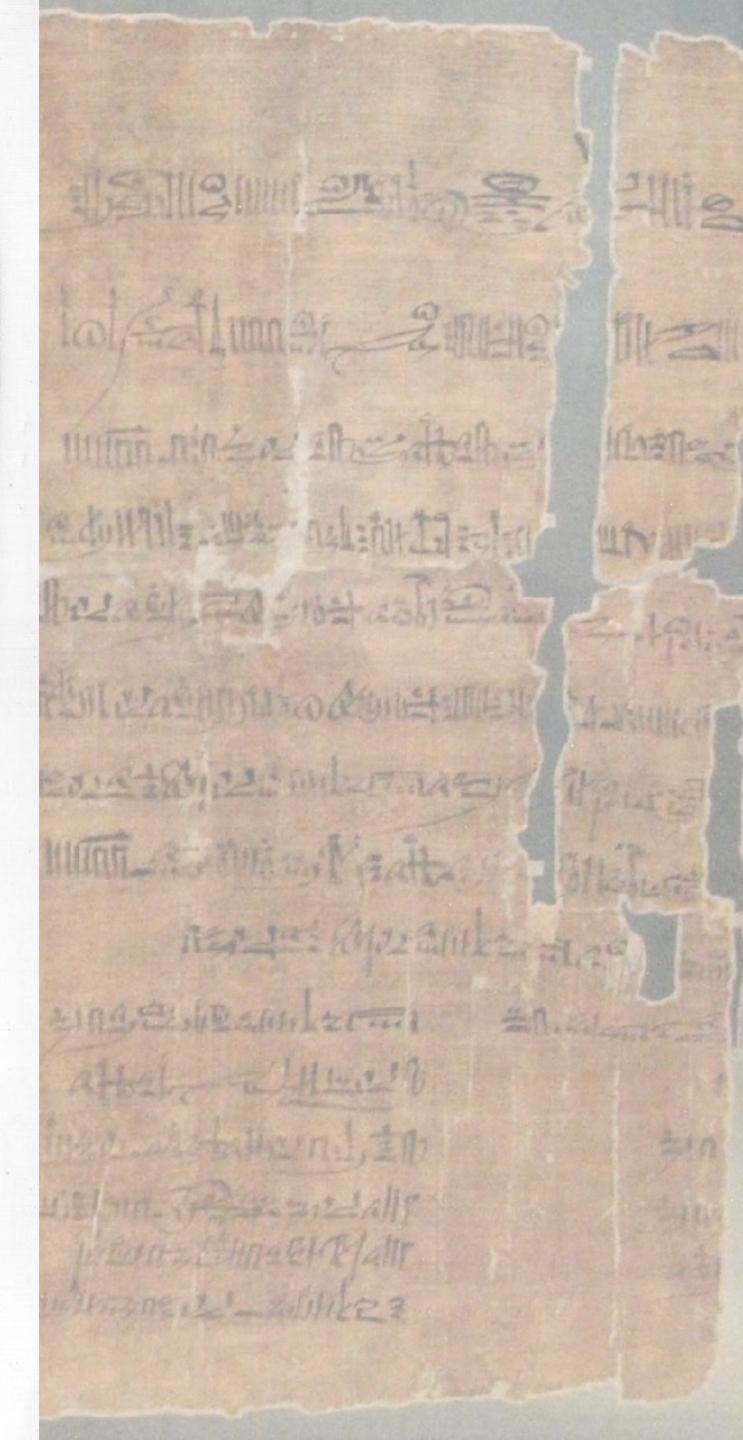
| | | | | | | | | | | | |
|-----------|---------|-------|--------|-----------|-----------------|---------|---------------|------------|------------|--------|-------|
| | | | | | | | | | | | |
| man | woman | deer | horse | mare | stallion | ewe | ram | nanny goat | billy goat | sow | boar |
| | | | | | | | | | | | |
| cow | bull | wheat | barley | olive oil | spice | cypress | kapo | kanako | oil | wine | arepa |
| | | | | | | | | | | | |
| meri | bronze | gold | wool | horn | cloth | garment | armour | month | tree | helmet | |
| | | | | | | | | | | | |
| footstool | bathtub | spear | arrow | sword | wheeled chariot | chariot | chariot frame | wheel | dart | | |

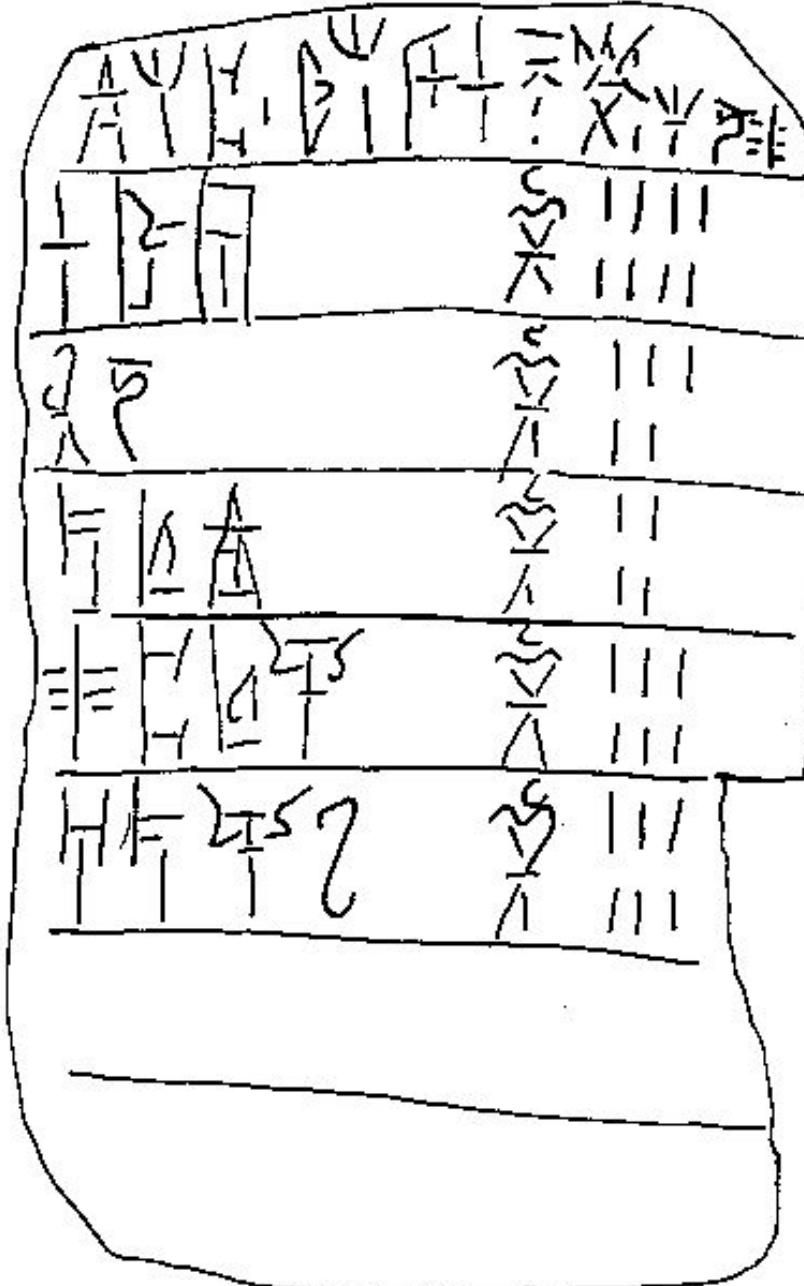
pa-te represents **πατήρ**

but could in principle also be:

- | | |
|------------------------|---------------|
| (s)ba(:)(n)te(:)(C) = | βάντες, βᾶτε |
| (s)fa(:)(n)te(:)(C) = | φατε |
| (s)pa(:)(n)te(:)(C) = | πάντες |
| (s)ba(:)(n)the(:)(C) = | etc. |
| (s)fa(:)(n)the(:)(C) = | etc. |
| (s)pa(:)(n)the(:)(C) = | etc. |
| etc. | |

PY AN 1





Anl

ΑΥΓ, ΕΥΦΥΛΛ,
ΠΕΙΡΑ, ΚΑΙ,
ΧΑΙ, ΧΑΙ,
ΧΑΙ, ΧΑΙ,
ΧΑΙ, ΧΑΙ,
ΧΑΙ, ΧΑΙ,

| | | | |
|----|--------------------------------------|------|---|
| .1 | e-re-ta , pe-re-u-ro-na-de , i-jo-te | | |
| .2 | ro-o-wa | VIR | 8 |
| .3 | ri-jo | VIR | 5 |
| .4 | po-ra-pi | VIR | 4 |
| .5 | te-ta-ra-ne | VIR | 6 |
| .6 | a-po-ne-we | VIR | 7 |
| .7 | | vac. | |
| .8 | | vac. | |

- .1 eretai Pleurōnade iontes
.2 *ro-o-wā* VIR 8
.3 *Riō* VIR 5
.4 *po-ra-phi* VIR 4
.5 *te-ta-ra-nē* VIR 6
.6 *a-po-ne-wē* VIR 7
.7 vac.
.8 vac.

- .1 rowers going to Pleurōn
.2 from *ro-o-wa* MEN 8
.3 from *Riō* MEN 5
.4 from *po-ra* MEN 4
.5 from *te-ta-ran* MEN 6
.6 from *a-po-neu* MEN 7
.7 vac.
.8 vac.

- .1 ἐρεταὶ Πλευρωναδε ἰοντες
.2 ro-o-fā VIR 8
.3 Ριω VIR 5
.4 po-ra-φι VIR 4
.5 te-ta-ra-vη VIR 6
.6 a-po-ne-Φη VIR 7
.7 vac.
.8 vac.



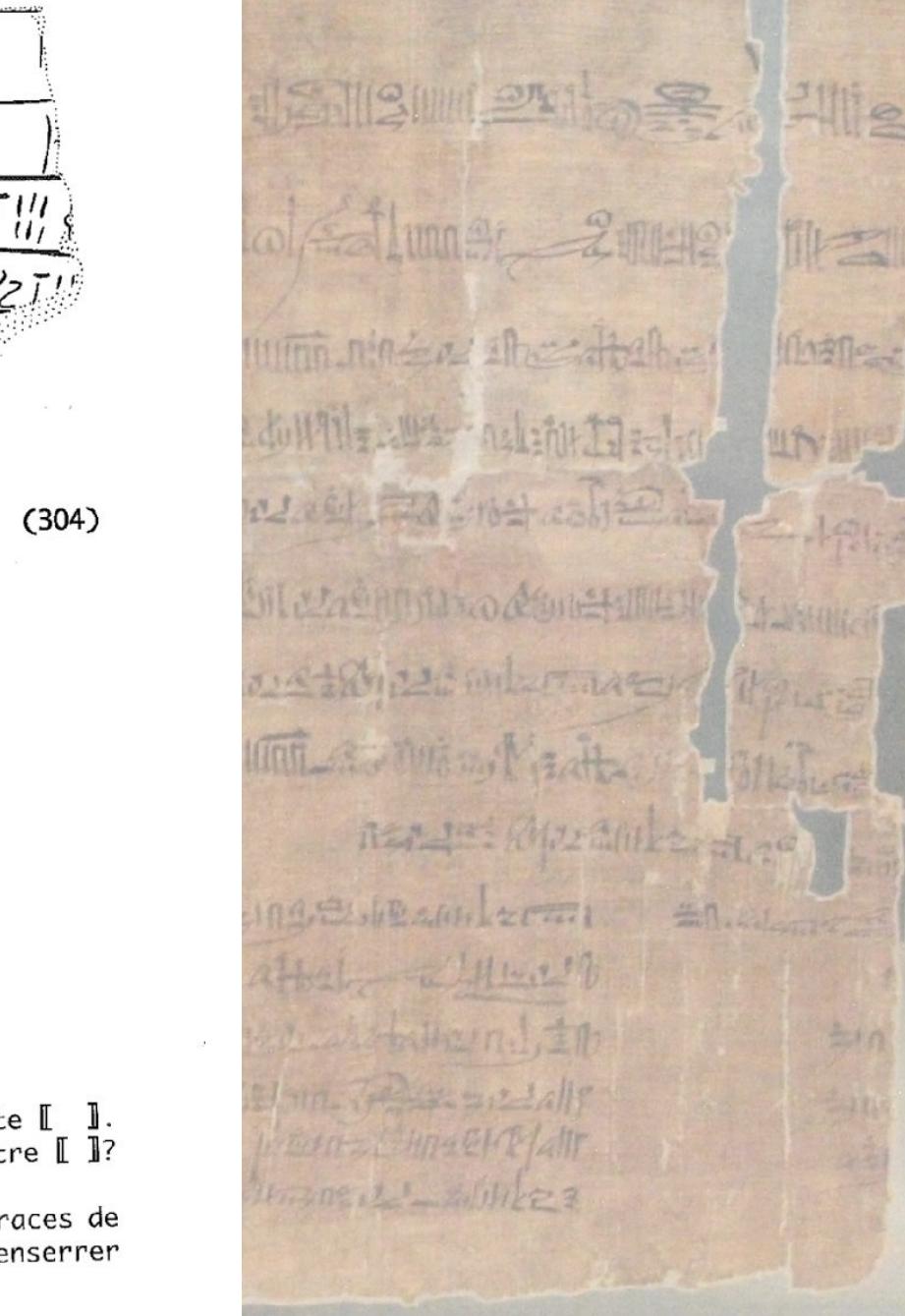
101 (Av)

- supra mutila*
- .1]vest.[
 - .2]dq-raq VIR 1 vest.[
 - .3]po-me-ne VIR 2 dq[
 - .4] a-ko-da-mo VIR 2 T 6 V[
 - .5]V 2 ma-di-je T 6 V 4 ko-su-we T 2[
 - a] ku-su-to-ro-q[
 - .6 b]-te / shi-raq to-pa-po-ro-i[

Thèbes, inv. 28418.
Dimensions: 5,8 x 5,8 x 1,9 cm.



(304)



Toute la tablette sur [].

- .2 vest.[: peut-être dq[.
- .3 Trace à gauche de po-me-ne. Sans doute [].
- .4 Trace à gauche de a-ko-da-mo. Peut-être []?

Sur le verso du document, on trouve des traces de l'extrémité d'une corde qui, comme en Av 100, servait à enserrer la tablette.

How are Mycenaean inscriptions different?

- they have different and more “word types”

Word type

| | |
|--|-------------------------|
| common word | de-u-ki-jo-jo |
| abbreviation | <i>o</i> |
| logogram | OLE |
| logogram: measure unit | S |
| logogram: syllabogram used as logogram | NI |
| logogram: monogram (ligatured syllabograms) | MERI |
| logogram: specified | TELA ² |
| logogram: ligature: logogram + syllabogram | TELA+PA |
| logogram: specified: ligature: logogram + syllabogram | TELA ³ +PA |
| logogram: ligature: logogram + logogram | AROM+PYC |
| logogram: ligature: logogram + syllabogram + syllabogram | *172+KE+RQ ² |
| logogram: ligature: logogram + ? | CYP[+?] |
| numeral | 7 |
| missing signs | [•-•] |

How are Mycenaean inscriptions different?

- they have different and more “word types”
- the (syllabic) sign is the basic unit

Syllabic sign

| Feature | Markup |
|----------------------|---------|
| transliteration | pa |
| uncertain reading | pa |
| damage at left/right |]pa pa[|
| reconstructed | [pa] |
| erased | [[pa]] |
| written under | -pa |
| written over | 'pa' |
| omission | <pa> |
| modern expunction | {pa} |
| numbering | 10 |

| | |
|--|---------------------|
| syllabogram-basic | de |
| syllabogram-special | ra2 |
| syllabogram-uninterpreted | *47 |
| syllabogram used as (or part of) a logogram | NI |
| logogram | OLE |
| logogram-uninterpreted | *178 |
| logogram-vases | *211 ^{VAS} |
| measure unit: dry | T |
| measure unit: dry/liquid | V |
| measure unit: liquid | S |
| measure unit: weight | M |
| missing sign | • |
| numeral | 1 |
| logogram specification | 2 |
| logogram specification: gender | f |
| word-divider | , |

How are Mycenaean inscriptions different?

- they have different and more “word types”
- syllabic sign is the basic unit
- other special annotations (often due to scribal habits or the uncertain nature of the content)

| | |
|--|-------------------------|
| bigger signs following | // pa-ro |
| smaller signs following | / pa-ro |
| lacuna, but possibly complete word | pa-ro[]pa-ro |
| lacuna, incomplete word | o-pe-ri-[]-ti-jo-ko |
| Lacuna possibly containing a dividing line | „ „ |
| Uncertain word division because of a lacuna | pa_ _ro |

| LINE TYPE | EXAMPLE |
|---|---------------------------|
| single line | <i>no sign</i> |
| single line: subdivision: ruling | .A |
| single line: subdivision: ruling: no ruling | Aa |
| unruled | .a |
| ruled | .1 |
| ruled: subdivision: no ruling | .1a |
| ruled: subdivision: ruling | .1A |
| sup. mut. | sup. mut. |
| inf. mut. | inf. mut. |
| upper part unruled and unwritten | prior pars sine regulis |
| lower part unruled and unwritten | reliqua pars sine regulis |

“Wingspread Convention”

= adaptation of the Leiden conventions to
the needs of Mycenology

Desideratum 1:

EpiDoc annotation scheme for Mycenaean

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EpiDoc annotation scheme for Mycenaean
& the other Aegean writing systems?

- deciphered: Cypriot syllabary

Desideratum 1:

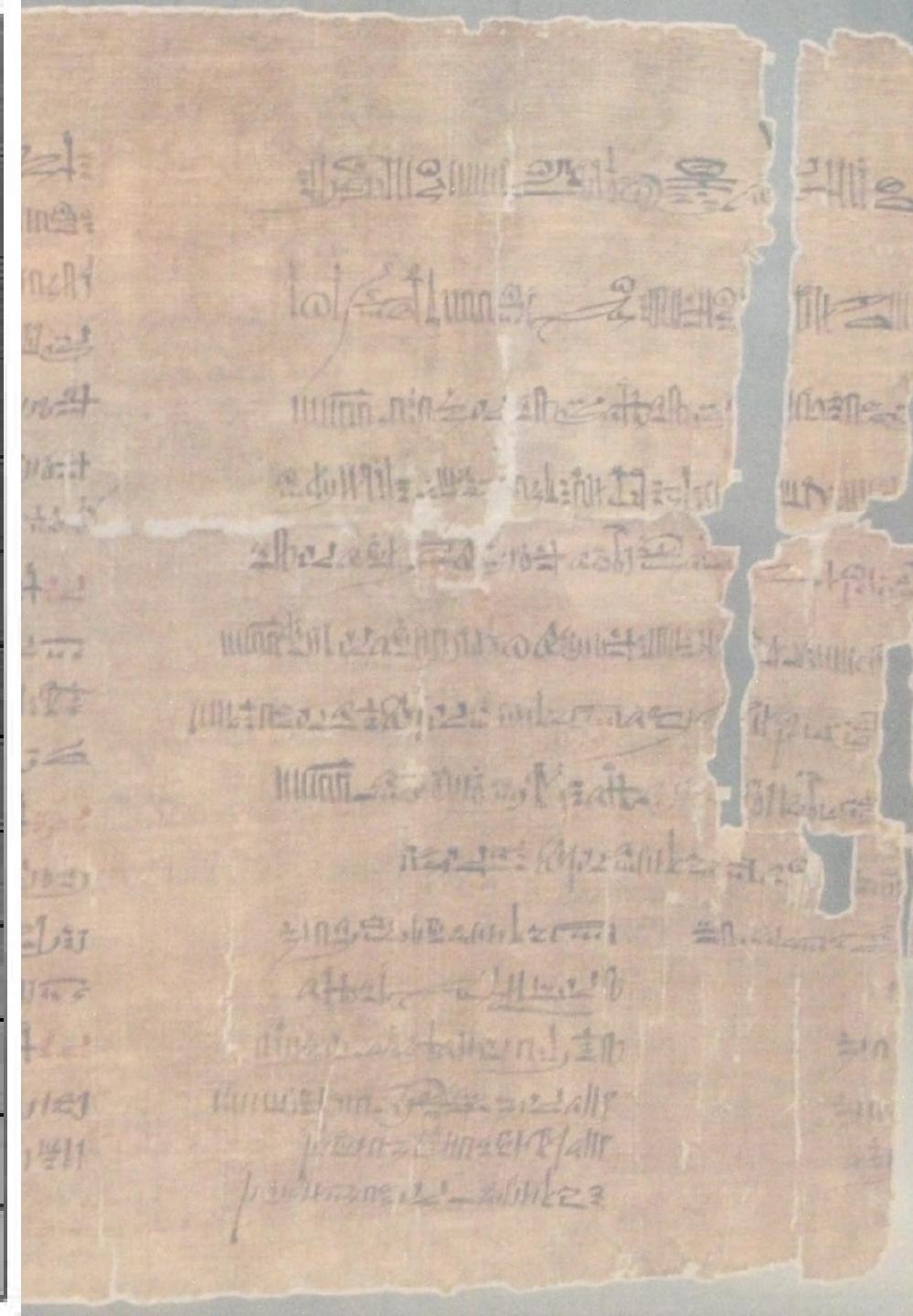
EpiDoc annotation scheme for Mycenaean

& the other Aegean writing systems?

- deciphered: Cypriot syllabary
- and not deciphered: Linear A, Cretan “Hieroglyphic”,
Cypro-Minoan, Phaistos disc

Cypriot Syllabary

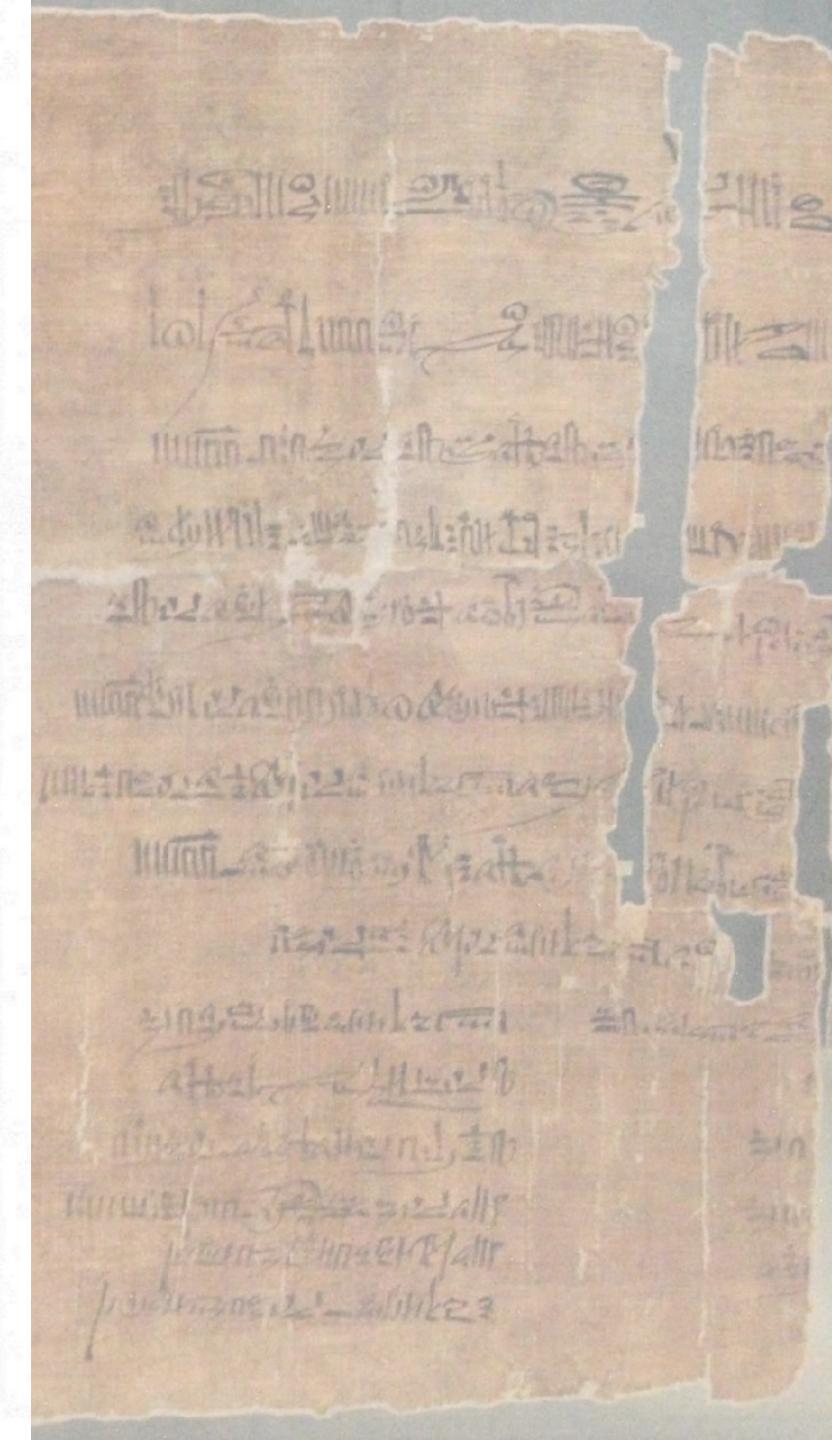
| . | ◦ | ◦ | ◦ | ◦ |
|----|---|------|---|----|
| * | * | X | X | ≈ |
| I | O | • | | VV |
| K | ↑ | X | Ȳ | Λ |
| I | Ȳ | 8 | L | Δ |
| M | Y | X | U | Ϛ |
| N | 〒 | W | H | Ϻ |
| P | † | S | V | Ϙ |
| R | ▽ | ">// | Ş | ॥ |
| V | V | Ψ | ≈ | Ϻ |
| T | Τ | Ϣ | ↑ | F |
| W | Ѡ | 工 | Ӣ | Ӣ |
| Z? | Ѡ | | | Ӣ |



Linear A

Table of Standardized Linear A Signs

| | | | | | |
|----------|-----------------------|----------|----------|--------------|------------|
| AB 01 | AB 21 | AB 31 | AB 54 | AB 76 | AB 123 |
| AB 02 | AB 21 ^f | AB 34 | AB 55 | AB 77 | AB 131a |
| AB 03 | AB 21 ^m | AB 37 | AB 56 | AB 78 | AB 131b |
| AB 04 | AB 22 | AB 38 | AB 57 | AB 79 | A 131c |
| AB 05 | AB 22 ^f | AB 39 | AB 58 | AB 80 | AB 164 |
| AB 06 | AB 22 ^m | AB 40 | AB 59 | AB 81 | AB 171 |
| AB 07 | AB 23 | AB 41 | AB 60 | AB 82 | AB 180 |
| AB 08 | AB 23 ^m | AB 44 | AB 61 | AB 85 | AB 188 |
| AB 09 | AB 24 | AB 45 | AB 65 | AB 86 | AB 191 |
| AB 10 | AB 26 | AB 46 | AB 66 | AB 87 | A 301 |
| AB 11 | AB 27 | AB 47 | AB 67 | A 100/102 | A 302 |
| AB 13 | AB 28 | AB 49 | AB 69 | AB 118 | A 303 |
| AB 16 | A 28b | AB 50 | AB 70 | AB 120 | A 304 |
| AB 17 | A 29 | AB 51 | AB 73 | A 120b | A 305 |
| AB 20 | A 30 | AB 53 | AB 74 | AB 122 | A 306 |



An alternative strategy:

- Eliminate (the few) ambiguities (especially for the computer) of the Wingspread mark up
- Add some extra markup (new readings and joins)
- Extract the information already there through a computer program (PHP script)
- Insert them in a relational database
- Annotate further in the database, if needed

Modifications of the Wingspread conventions (reconverted in the online version of the texts)

TEL A > *TEL A*

MERI > *ME±RI*

OVIS^f --> *OVIS;f*

TEL A² --> *TEL A:2*

Additional annotation:

pa-ro --> <*em>ro*

Resulting structure

- texts
 - metadata:
 - standard Mycenological classification (site, series, set, find-place, scribal hand)
 - notes
 - *basic tablet bibliography*
 - *linked open data*
 - lines
 - epigraphical information
 - words
 - epigraphical information
 - syllabic (or other) sign
 - epigraphical information

DĀMOS

Database of Mycenaean at Oslo

- Contains all the Mycenaean tablets in *transliteration*.
- All the features recorded by the Wingspread conventions are searchable
 - + further annotation (linguistic, geographic, chronological)

| | | | |
|----|--------------------------------------|------|---|
| .1 | e-re-ta , pe-re-u-ro-na-de , i-jo-te | | |
| .2 | ro-o-wa | VIR | 8 |
| .3 | ri-jo | VIR | 5 |
| .4 | po-ra-pi | VIR | 4 |
| .5 | te-ta-ra-ne | VIR | 6 |
| .6 | a-po-ne-we | VIR | 7 |
| .7 | | vac. | |
| .8 | | vac. | |

Data Retrieval: MySQL Workbench

MySQL Workbench

mykensk

Management

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema

SCHEMAS

- Filter objects
- joinsource
- ling_clauses
- ling_phrases
- ling_sentences
- ling_words
- phrase_words
- phys_line
- phys_syllables
- phys_word
- problem
- references
- referenceresource
- sentence_clauses
- syllable

Table: ling_words

Result Grid

Query 1

```
1 • wordid = pw.id) left join writers wr on ps.writer_id = wr.id where lw.class = 'Adp' order by LB;
```

100% 990:1

Result Grid

| writer | site | tablet | linenum | ser | sub | rank | LB | LBw | LBlex | MYCw | MYClex |
|--------|------|--------|---------|-----|------|------|--------------|---------|---------|--------|--------|
| - | KN | 820 | .1 | G | NULL | 1 | a-pi | a-pi | a-pi | amphi | amphi |
| 2 | PY | 716 | .1 | T | a | 2 | a-pi | a-pi | a-pi | amphi | amphi |
| - | KN | 820 | .3 | G | NULL | 1 | a-pu | a-pu | a-pu | apu | apu |
| - | KN | 821 | .1 | A | m | 1 | e-ne-ka | e-ne-ka | e-ne-ka | heneka | heneka |
| - | KN | 821 | .1 | A | m | 1 | e-ne-ka | e-ne-ka | e-ne-ka | heneka | heneka |
| - | KN | 821 | .2 | A | m | 1 | e-ne-ka | e-ne-ka | e-ne-ka | heneka | heneka |
| 42 | PY | 303 | .b | A | e | 1 | e-ne-ka | e-ne-ka | e-ne-ka | heneka | heneka |
| 43 | PY | 59 | .5 | E | a | 1 | e-ne-ka | e-ne-ka | e-ne-ka | heneka | heneka |
| 43 | PY | 805 | NULL | E | a | 1 | e-ne-ka | e-ne-ka | e-ne-ka | heneka | heneka |
| "124" | KN | 280 | .15 | V | NULL | 1 | e-pi | e-pi | e-pi | epi | epi |
| 1 | PY | 2 | .1 | U | n | 1 | e-pi | e-pi | e-pi | epi | epi |
| 103 | KN | 561 | .a | L | c | 1 | e-pi-qe | e-pi- | e-pi | epi | epi |
| 41 | PY | 842 | .B | E | b | 1 | e-pi-qe | e-pi- | e-pi | epi | epi |
| 1 | PY | 613 | .8 | E | p | 1 | e-pi-qe | e-pi- | e-pi | epi | epi |
| 103 | KN | 698 | .2 | L | NULL | 1 | ku-su-a-ta-o | ku-su- | ku-su- | ksun | ksun |
| 1 | PY | 519 | .15 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 654 | .7 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 656 | .5 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 656 | .8 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 656 | .14 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 656 | .16 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 656 | .19 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 657 | .11 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 657 | .14 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 661 | .7 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 1 | PY | 661 | .13 | A | n | 1 | me-ta-qe | me-ta- | me-ta- | meta | meta |
| 141 | KN | 368 | NULL | F | h | 1 | o-pi | o-pi | o-pi | opi | opi |
| 103 | KN | 537 | .2 | X | e | 1 | o-pi | o-pi | o-pi | opi | opi |

Result 10

Read Only

Context Help Snippets

My Snippets

parole utili

Normalization

EALC-normalization

EALC Adp 1

EALC-Adp grouped

EALC - writers and prepositions

EALC pe-mo writer

EALC: pe-ma writer

EALC: who writes pe-mo

EALC: who writes pe-ma

EALC: wa-na-ka

EALC: at

EALC: rank2

EALC: tokens Hand 1

EALC: Hand 1 words

EALC: words Hand1

EALC: Adp + e-ke

EALC: Adp + -phi

DĀMOS

Database of Mycenaean at Oslo
online

- Browse through the Mycenaean tablets:
 - text
 - metadata
 - basic bibliography
- Perform complex word searches

[Tablet Search](#)[Word Search](#)[How to Search](#)[About DĀMOS](#)[News](#)[Hide filter](#)[Hide metadata & bibliography](#)[Hide notes](#)

| Site | Tablet | Writer | Stylus | Series | Subseries | Set | Joined tablets |
|------------------|-------------|--------|--------|--------|-----------|-----|----------------|
| Knossos | KN 1 Fp(1) | 1KH | - | A | a | 1 | TI 7b |
| Pylos | KN 2 Fs | 1 | 1 | B | b | 2 | TI 7f |
| Thebes | KN 3 Fs | - | 2 | C | c | 3 | TI 7c |
| Mycenae | KN 4 Fs | 2 | 4 | D | d | 4 | PY 14 |
| Tiryns | KN 5 Fp(1) | 3 | 6 | E | e | 5 | TI 20 |
| Khania | KN 6 Fp(1) | 4 | 8 | F | f | 6 | TIv 26 |
| Hagios Vasileios | KN 7 Fp(1) | 6 | 28 | G | g | 7 | KN 27 |
| Midea | KN 8 Fs | 11 | 39v | J | h | 8 | KN 28 |
| Dimini | KN 9 Fs | 12 | 49 | K | i | 9 | KN 31 |
| Iklaina | KN 10 Gg | 13 | 60 | L | k | 10 | KN 37 bis |
| Medeon | KN 11 Fs | 14 | 64 | M | l | | KN 52 bis |
| Volos | KN 12 Fs | 15 | 74 | N | m | | MY 105 |
| Vases - Armeni | KN 13 Fp(1) | 21 | 79 | O | n | | PY 107 |

[Reset all](#)[Word search with this filter](#)

The database is to be referred to as:

Aurora, F; Nesøen, A; Nedić, D; Løken, H; Bersi, A
DAMOS - Database of Mycenaean at Oslo. University of Oslo, Oslo 2013.
March 23, 2015 <https://www2.hf.uio.no/damos/>

Contact information

Federico Aurora
Email: federico.aurora@ub.uio.no

Web administrator

DMLF HF-IT

- .1 de-u-ki-jo-jo 'me-no'
- .2 di-ka-ta-jo / di-we OLE S 1
- .3 da-da-re-jo-de OLE S 2
- .4 pa-de OLE S 1
- .5 pa-si-te-o-i OLE 1
- .6 ge-ra-si-ja OLE S 1[
- .7 a-mi-ni-so , / pa-si-te-o-i S 1[
- .8 e-ri-nu , OLE V 3
- .9 *47-da-de OLE V 1
- .10 a-ne-mo , / i-je-re-ja V 4
- .11 vac.
- .12 to-so OLE 3 S 2 V 2

[Open in new window](#)

Notes ↗

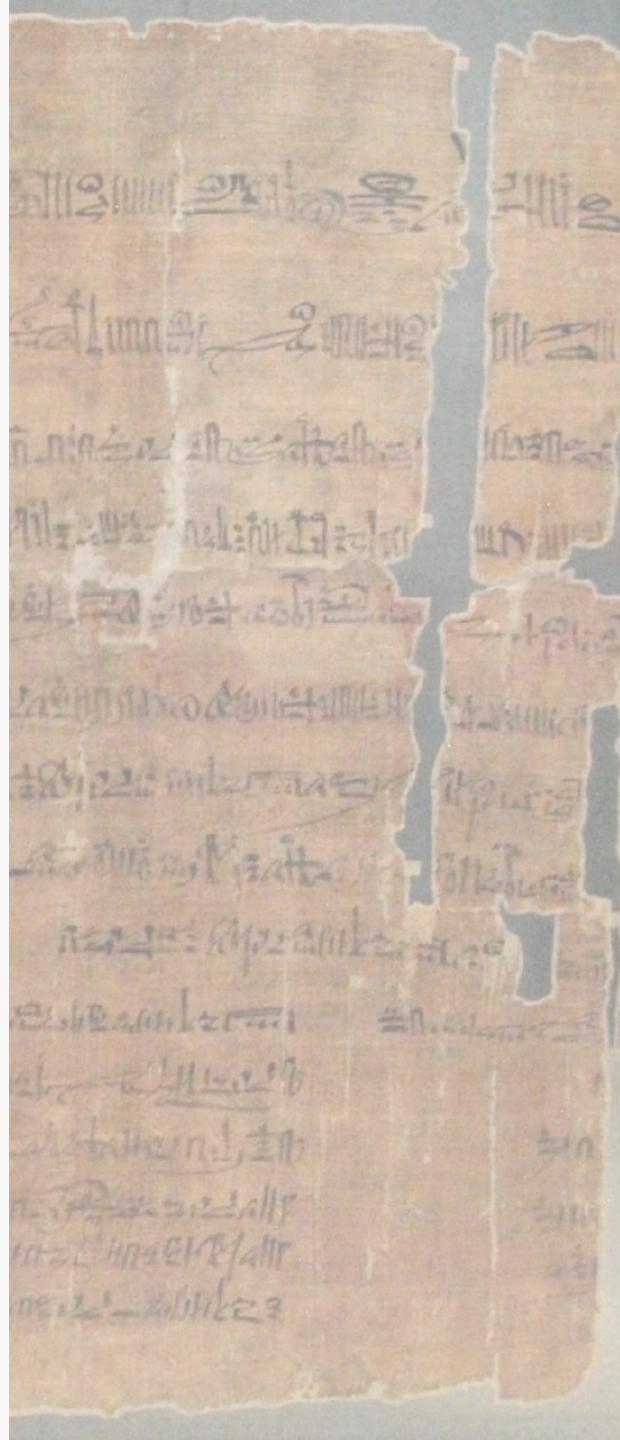
€KT5 @for the mismatch between the find place of the pieces see the note in ScribesChossos p. 25@

Metadata

Site: Knossos
 Tablet number: 1
 Set: 1
 Joins: + 31
 Writer(s): 138
 Stylus:
 Chronology 1:
 Chronology 2:
 Chronology 3:
 Museum:
 Find spot: A

Basic Tablet Bibliography ↗

Kasus: 248
 Doria(1965): 116
 Introduction: 276
 Local Cases: 47
 Docs2: 200
 Interpretation: 116T
 Melena(2001): 46
 Bartonék(2002): BA22
 Ruipérez-Melena(1990): 237
 Companion-1: 243/257-261T



https://www2.hf.uio.no/damos/Index/item/chosen_item_id/802

KN 870 L + fr. (114)

o-]də-ku-we-ta / we-we-e-a TELA;3 1 TUN+KI 1

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/718

KN 785 Ld(2) (114)

.1 po-]k̥i-ro-nu-ka , *161' TELA;2 3 ki-ri-ta , / e-ru-ta-ra-pi , *1
 .2a] e-ru-ta-ra-pi [
 .2b]TELÄ;x 2 ke-ro-ta , /*161 ki-to-na TELA;x[

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/719

KN 786 Ld(2) (114)

A] a-*34-ka TELA;3+PA [
 .B pa-we-]a2 , / ke-ro-ta , *161 ki[

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/1747

KN 5284 L (114)

sup. mut.
 .a]so [
 .b] , TELA;3 2 [
 lat. inf.
]-k̥a-ma [

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/803

KN 871 L (114)

.a] pa-ro , re-wa-jo
 .b]ra , pe-ne-we-ta , / e-qe-si-ja , te-tu-ko-wo-a TELA;4 6

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/721

KN 788 Ld(2) (114)

.A] ti-ri[
 .B pa-we-]a2 , / ke-ro-ta[

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/720

KN 787 Ld(2) + 1009 + 7378 (114)

A a-*34-ka TELA;3+PA 1 [
 .B pa-we-a2 , / o-re-ne-ja *161 ki-to-pi[

https://www2.hf.uio.no/damos/Index/item/chosen_item_id/2896

KN 8192 Ld(2) (114)

.A sup. mut.
 .B]*161 *34-ka[

Normalized Actual form Exact Free text From start From end Regular expression Case sensitive Case insensitive

Word: te-o-i

Search

Hits: 16

te-o-i common word

r. .1b]ra , te-o-i / me-a-de[

KN E 842 (-)

r. .1 ro-u-si-jo , a-ko-ro , te-o-i , pa-ko-we OLE+PA V 3

PY Fr 1226 (2)LH II

r. te-o-i , a-ro-pa , pu-[OLE

PY Fr 1355 (Cii)LH

pa-si-te-o-i common word

r. .5 pa-si-te-o-i OLE 1

KN Fp 1 + 31 (138)



r. .7 a-mi-ni-so , / pa-si-te-o-i S 1[

KN Fp 1 + 31 (138)



r. .2 pa-si-te-o-i OLE S 1

KN Fp 5 (138)



r. .1 ka-ra-e-ri-jo / pa-si-te-o-i S 1

KN Fp 6 (138)

pa-si-te-o-i | KN Fp 1 + 31 (138) x

| | | |
|-----|----------------|-----------------------|
| .1 | de-u-ki-jo-jo | 'me-no' |
| .2 | di-ka-ta-jo | / di-we OLE S 1 |
| .3 | da-da-re-jo-de | OLE S 2 |
| .4 | pa-de | OLE S 1 |
| .5 | pa-si-te-o-i | OLE 1 |
| .6 | qe-ra-si-ja | OLE S 1[|
| .7 | a-mi-ni-so | , / pa-si-te-o-i S 1[|
| .8 | e-ri-nu | , OLE V 3 |
| .9 | *47-da-de | OLE V 1 |
| .10 | a-ne-mo | , / i-je-re-ja V 4 |
| .11 | vac. | |
| .12 | to-so | OLE 3 S 2 V 2 |

Regular expressions:

$^{\text{(j?o-u?-?)wo-ze(-qe|de)?\$}}$

- Normalized Actual form
- Exact Free text From start From end Regular expression
- Case sensitive Case insensitive

Word: Search

Hits: 2

O-WO-ZE *common word*

r. .B ke-ke-me-no , ko-to-ŋo-wo , o-pe-ro-sa-de , wo-zo-e , o-wo-ze GRA[qs

PY Eb 338 + fr.
(41)LH IIIB2/LH III

O-U-WO-ZE *common word*

r. .7 ka-pa-ti-ja , ka-ra-wi-po-ro , e-ke , ke-ke-me-no , o-pe-ro-sa , du-wo-u-pi , wo-ze-e , o-u-wo-ze , [to-ʂo]

PY Ep 704 (1)LH III
IIIC

Hits: 29 of 41

 Highlight Changes
 
[◀ Previous](#)[Next ▶](#)

PY An 614 + frr.(11) [+] frr. [+] frr. [+] fr. + fr. + 1126 [+] 1510 + fr. + fr. + fr. + 1508 + 1127 + fr. \$657\$ (1)

.1] -ne-[•] , ki[
 .2]ko-do-[•]-no VIR[
 .3]wa-ja[]na-ro , e-qe-ta , vest.[
 .4] , ko-[ro]-ku-ra-i-jo VIR 1[] , [q2-te-ro]
 .5]vest.[]e-o-ṭe[]VIR 30[] vacat
 .6] vac. [] vac. [] jo
 .7]a-pe-e-ṣi[] VIR [] vacat
 reliqua pars sine regulis

[Open in new window](#) 

Notes

JOINEPTT: 1127 + 1137

JOINE(Melena 1992-3a). ζ + Xn 1127 is certain but still unglued in spite of the existing contact ζ

JOINE(Melena 1992-3b): + fr. .2: «]ko-do-[•]-no»: «]ko-do-ṛo-no» possible but «]ko-do-ṛi-no» not impossible.

JOINE(Melena 1994-5a): a light contact may ensure Xn 1126 at left on line 4.

JOINE(Melena 1994-5b): two quasi-joins reported for this tablet in (Melena 1992-3a) were joined to Xn 1510 (see (Melena 1992-3b) p. 324), as was a component 618.f (DAMOS: I deduce, then, one of the 11 joins quoted in (Melena 1992-3a)) The resultant piece is a verso with large edge, probably belonging to An 614.

(FA): A quasi join of two fragments, from (Melena 1992-3a), was removed from here to become a join to An 724 in DISJOINE(Melena 1994-5b): it is difficult then to establish from the articles the exact composition of the tablet, so here I have just eliminated one [+] frr.

JOINE(Melena 1996-7a): .5: there is a considerable gap between the divider and «]e-o-ṭe», and it is likely that a word of two syllabograms (remains on rule) is still missing. \ddagger

READE(PN4DRAFT2013): .3: «]na-ro» for «]ro-» only "not excluded".

On Xn 1127: READE(Bennett 1992): «[q2-te-ro]» only in the notes. PTT has [ko-te-ro]. JOINE(Melena 1992-3a). (Dicc.Web)16-01-15 has «[q2-te-ro]» from 1127 at line .4.

PY An 614 + frr.(11) [+] frr. [+] frr. [+] fr.
+ fr. + 1126 [+] 1510 + fr. +
fr. + fr. + 1508 + 1127 + fr. \$657\$

(1)

.1]-ne-[•] , ki[
.2]ko-do-[•]-no VIR[
.3]wa-ja[]na-ro , e-qe-ta , vest.[
.4] , ko-[ro]-ku-ra-i-jo VIR 1[] , [[a2-te-ro]]
.5 vest.[Je-o-te[]VIR 30[] vacat
.6] vac. [] vac. []o
.7]a-pe-e-si[] VIR [] vacat

reliqua pars sine regulis

Some conclusions:

- good solution especially for a limited, quite homogeneous and peculiar corpus
- very flexible: it allows for many *ad hoc* and very precise annotations and
- further (refinement of the) annotation in the relational database

- the PHP-script required much time
- but it could now be easily reused for the other Aegean syllabaries (especially the Cypriot Syllabary!)
- a crosswalk to XML (EpiDoc and linguistic annotation) will anyway be needed for the sake of exchanging data within a broader community

Desideratum 2:

Crosswalk DĀMOS > EpiDoc

Rules of XML

XML is made up of plain text

- Unicode text: Latin or any other script
 - Θεὸς βοηθός, ? πατέλλα ΔΟ[·]
- Tags are distinguished by angle brackets ('<', '>')
 - <name>Θεόδοτος Παλατīν(?)ος</name>
- Therefore: escape literal angle brackets as <
>
 - &entity; () (&)

Tags + content make up elements

- <opening>
- </closing>
- <empty></empty>
- <empty/>
- <element attribute="value">content</element>

```
<coord type="latitude">-7.175</coord>
```

Whitespace

- Space is significant
 - marks attribute name
 - separates words, wanted in display
- Multiple space, tab, new-lines are not
 - XML differentiates between:
“Imperator” and “Imp erator”
or “<p type=”new”>” and “<p type=”new”>”
 - But **not** between:
“<p type=”new”>” and “<p → → → type=”new”>”

Whitespace

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- or “<ptype=”new”>” and “<p type=”new”>”**
- But **not** between:
“<p type=”new”>” and “<p
→ → → → type=”new”>”

XML must be well-formed

- Any <, >, & characters must be "escaped"
- All open (non-empty) tags must close
- All elements must be wholly contained by all ancestors
- Whole document must be contained by one root element
- Attributes may not contain tags

Common well-formedness errors

<book>

<page>

<paragraph>.....</paragraph>

<paragraph>These events suggest that there were influential groups of both pagans and Christians at Aphrodisias, and that there was some tension

</page>

<page>

between them; this may be the cause of the strife referred to in no. 64.

One other tradition may be relevant.</paragraph>

</page>

</book>

Common well-formedness errors

<book>

<page>

<paragraph>.....</paragraph>

<paragraph>These events suggest that there were influential groups of both pagans and Christians at Aphrodisias, and that there was some tension</paragraph>

</page>

<page>

<paragraph>between them; this may be the cause of the strife referred to in no. 64. One other tradition may be relevant.</paragraph>

</page>

</book>

Well-formed version (1)

<book>

<page>

<paragraph>.....</paragraph>

<paragraph part="start">These events suggest that there were influential groups of both pagans and Christians at Aphrodisias, and that there was some tension</paragraph>

</page>

<page>

<paragraph part="end">between them; this may be the cause of the strife referred to in no. 64. One other tradition may be relevant.

</paragraph>

</page>

</book>

Well-formed version (2)

<book>

<pageBegins/>

<paragraph>.....</paragraph>

<paragraph>These events suggest that there were influential groups of both pagans and Christians at Aphrodisias, and that there was some tension

<pageBegins/>

between them; this may be the cause of the strife referred to in no. 64.

One other tradition may be relevant.</paragraph>

</book>

Common well-formedness errors 2

- <name key="*<i>theodotus</i>*">Θεόδοτος</name>
- <p>brigḡ þusend hyda <þæ>r</p>
- <bibl><author>Reynolds & Roueché</author>...</bibl>

Common well-formedness errors 2

- <name key="*<i>theodotus</i>*">Θεόδοτος</name>
The value of attribute must not contain the < character
- <p>brüttig þusend hyda <þæ>r</p>
- <bibl><author>Reynolds & Roueché</author>...</bibl>

Common well-formedness errors 2

- <name key="*<i>theodotus</i>*">Θεόδοτος</name>
The value of attribute must not contain the < character
- <p>brigḡ þusend hyda <bæ>r</p>
Element <bæ> is not closed within parent!
- <bibl><author>Reynolds & Roueché</author>...</bibl>

Common well-formedness errors 2

- <name key="*<i>theodotus</i>*">Θεόδοτος</name>
The value of attribute must not contain the < character
- <p>brüttig þusend hyda <bæ>r</p>
Element <bæ> is not closed within parent!
- <bibl><author>Reynolds & Roueché</author>...</bibl>
Entity &Roueché has not been defined!

XML may validate to a schema

- Schema defines menu of available elements and attributes
 - and attribute values
- Defines what elements and content may appear in any given context
- Defines what elements and content **must** appear in any given context
- **Schema enables XML editor to:**
 - check ("validate") your XML file
 - offer you a contextual menu of elements, attributes, or values available to you

Validation to EpiDoc schema

- <p>Elliott, 1999: <biblScope>113-115</biblScope></p>
- νεοπ<supplied reason="broken">οιὸς</supplied> καὶ
- <div type="edition"/>
- <supplied>ἔτους</supplied>
- <lb n="3">αωαω</lb>

The EpiDoc Guidelines

<http://www.stoa.org/epidoc/gl/latest/>

Oxygen demo

