EVT EditionVisualizationTechnology

TEI markup for critical editions

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EVT Home: http://evt.labcd.unipi.it/
EVT GitHub: https://github.com/evt-project

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DISH

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SUMMARY

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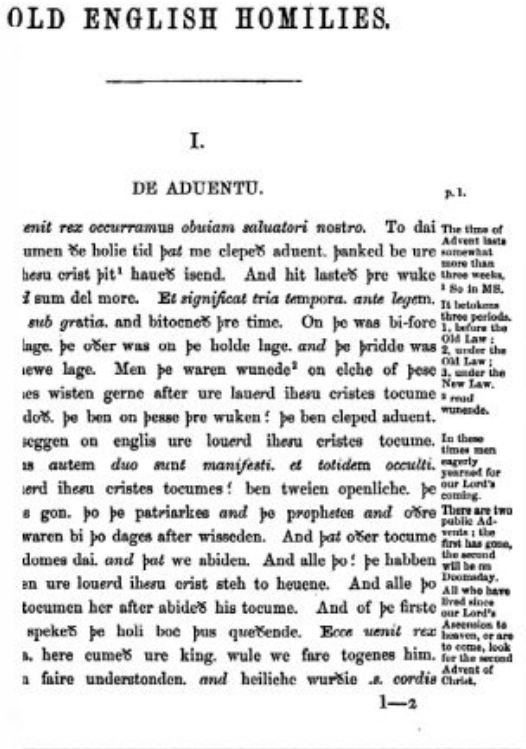
Foreword



OLD ENGLISH HOMILIES.

I.

DE ADUENTU.

p. 1.

enit rex occurramus obuiam saluatori nostro. To dai umen ðe holie tid *þat* me clepeð aduent. þanked be ure hesu crist þit[1] haueð isend. And hit lasteð þre wuke 7 sum del more. *Et significat tria tempora. ante legem. sub gratia.* and bitocneð þre time. On þe was bi-fore lage. þe oðer was on þe holde lage. *and* þe þridde was iewe lage. Men þe waren wunede[2] on elche of þese ies wisten gerne after ure lauerd ihesu cristes tocume doð. þe ben on þesse þre wuken! þe ben cleped aduent. seggen on englis ure louerd ihesu cristes tocume. is *autem duo sunt manifesti. et totidem occulti.* erd ihesu cristes tocumes! ben tweien openliche. þe s gon. þo þe patriarkes *and* þe *prophetes and* oðre waren bi þo dages after wisseden. And *þat* oðer tocume domes dai. *and þat* we abiden. And alle þo! þe habben en ure louerd ihesu crist steh to heuene. And alle þo tocumen her after abideð his tocume. And of þe firste speked þe holi boc þus quedende. *Ecce uenit rex* s. here cumeð ure king. wule we fare togenes him. a faire underutonden. *and* heiliche wurðie *.s. cordis*

The time of Advent lasts somewhat more than three weeks.
[1] So in MS.
It betokens three periods. 1, before the Old Law; 2, under the Old Law; 3, under the New Law.
[2] read wunede.
In these times men eagerly yearned for our Lord's coming.
There are two public Advents: the first has gone, the second will be on Doomsday.
All who have lived since our Lord's Ascension to heaven, or are to come, look for the second Advent of Christ.

1—2

BEOWULF. 3

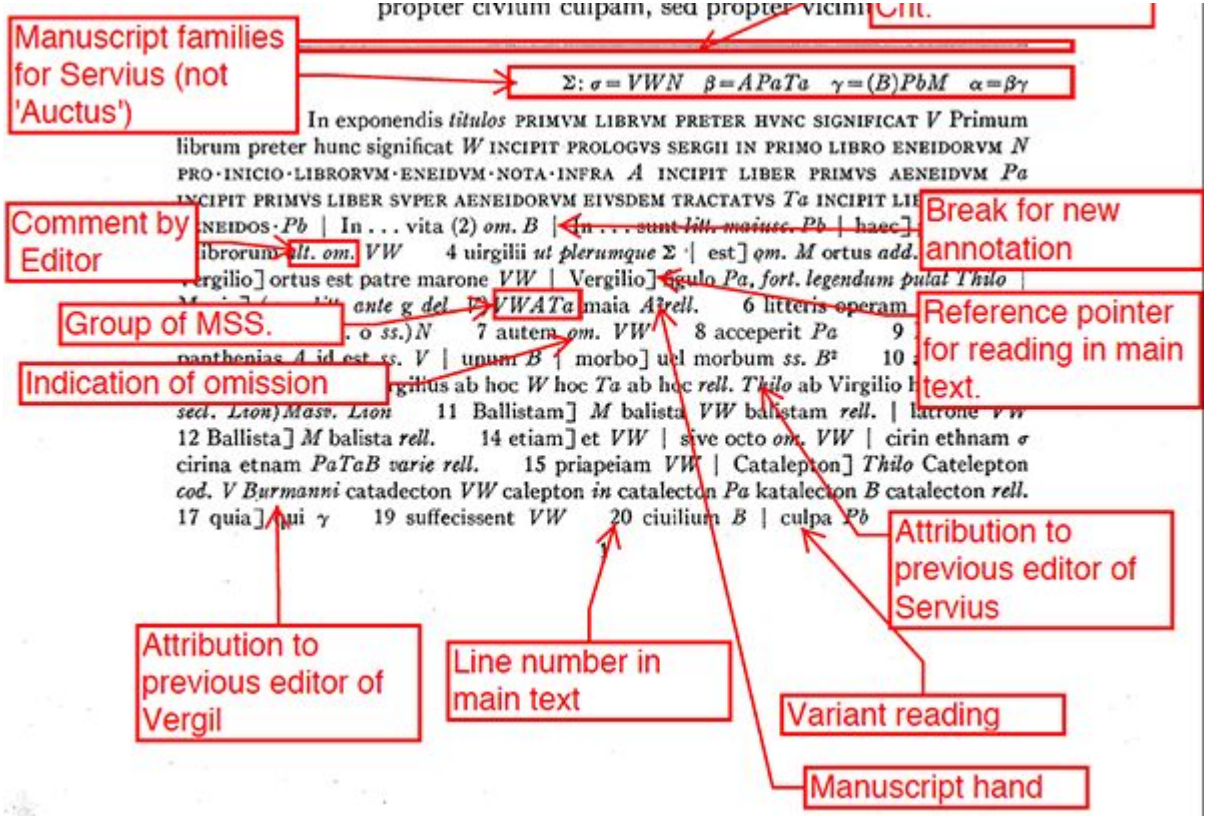
þæt hine on ylde eft gewunigen
wil-gesiþas, þonne wig cume,
leode gelæsten; lof-dædum sceal
in mægðа gehwære man geþeón.
Him ðá Scyld gewát to gescæp-hwile
fela-hror feran on Frean wære:
hi hyne þá ætbæron to brimes faroðe,
swæse gesiþas, swa he selfa bæd,
þenden wordum weold wine Scyldinga,
leof land-fruma, longe ahte.

afterwards, his willing followers may remain true to him, when war comes, [and] may exert themselves for the people; in every tribe or kinship it is by noble deeds that one must prosper. Then, at his fated time, Scyld the strenuous departed from amongst them to go into the protection of the Lord. They then, his beloved followers, carried him away to the sea shore, as he himself bade, he the Scyldings' lord, while his words had power, the dear chief of the land, during a long possession. There at the harbour stood the

[22] *gewunigen*, pres. subj. of *gewunian*; the sense seems something between the German allied verbs *wohnen* and *gewohnen*.
[23] The *geþeon*, or liege followers, of an Anglo-Saxon king, were to serve him to the death; for a curious illustration of this, see 'Sax. Chron.' an. 755. In return, he entertained them at his board, and attached them to his person by a constant and bountiful distribution of presents. Among these, after land and money, 'rings,' including in the term metal collars and bracelets, seem to have held the chief place; hence a common name for a prince or chieftain is *beaga brytta*, a dispenser of rings. After rings came arms, jewels, and other ornaments.
[24] *leode* might be neut. pl.; but it seems better on the whole to take it as the dat. sg. Ib. *gelæsten* is the same word as the German verb *leisten*. Ib. *lof-dædum*; lit. 'deeds of praise.'
[25] *mægða*. An Anglo-Saxon *mægð* corresponded to a Roman *gens*; it was a group of families descended from a common ancestor, and bearing a common name. The Readingas were a *mægð*; so were the Rodingas, the Bercingas, and many others; these *gentes*, or kinships, settling down after the migration and land-assignment on the lands still inhabited by their descendants, founded Reading, Roding, Barking, &c.
[26] *geweat*, pl. of *gewitan*. Ib. *gescæp*, MS.; read, with Thorpe, *gescæp*, destiny.
[27] *ætberan*, pl. of *æt-beran*.
[28] *wine*, lit. 'friend.' This word enters into the composition of many names, Winbert, Winfrid, Ethelwine, &c. Ib. *Scyldinga*. The Danes themselves are called Scyldings in a wider sense; more strictly the name belonged to their royal house.
[29] *ahte* can only be the pf. of *agan*, to own; it seems better to read *ahte*, dat. sg. of *æht*, possession.

B 2

- main goal of textual criticism: producing a reliable text
- no change for digital philology



- critical apparatus: brief critical notes in a formalized, conventional language
- our task is to “translate” them in a real formal language

Text preparation: which formal language?

- fundamental step for the edition text, the critical apparatus, notes, introduction, etc.
- could the text be encoded in HTML?
  - HTML is simple and effective
  - excellent for hypertext publishing on the Web
  - HTML a well documented and widely used international standard
- limitations (no semantic encoding, small vocabulary) that advise for a **descriptive** markup language such as **XML** → TEI (Text Encoding Initiative https://tei-c.org/) schemas
  - HTML is one possible output of XML

The TEI *Guidelines* and schemas

- TEI publishes a rich (and complex) encoding manual, the *Guidelines for Electronic Text Encoding and Interchange*, where
- a remarkable number of elements are described, both structural and semantic types, which are defined by means of
- several encoding schemas which are
- organized in a highly modular and customizable structure:
  - you can choose just the needed modules
  - you can change/add new elements and attributes
- the TEI *Guidelines* are the basic reference for all encoding needs, here we will focus on what is needed to create a DSE
  - you will also find a full description of all elements mentioned

The TEI Critical Apparatus module

Digital scholarly editing using TEI XML

- many elements already available in the **core** module
- the following modules are needed for textual criticism
  - **msdescription** manuscript description
  - **transcr** primary sources transcription
  - **textcrit** critical apparatus
  - **analysis** text analysis
  - **gaiji** non standard characters
- other possibly very useful modules (depends on markup goals): **linking**, **figures**, **namesdates**, **verse**, **certainty**

Why create a custom TEI schema

- you could use tei_all to have all TEI elements available all the time, or use Oxygen XML which has internal support for TEI (no schema association needed)
- creating your own schema is the smarter move because
  - a smaller schema means **faster validation**, greater efficiency
  - smart editors will present a **shorter list** of available elements: faster to choose the right one, less error-prone
  - easier to have the schema fit the needs of an **annotation model**
  - learning how to create a schema also means being able to modify and **further customize** it should the need arise

The *Critical Apparatus* module

- the *Critical Apparatus* module (**textcrit**) was one of the oldest in the TEI schemas
- several shortcomings:
  - each encoding method limited in its own way
  - software assistance hinted, but not offered
  - not scalable (with large numbers of witnesses)
- the MS-SIG initiative to rewrite it:
  - http://wiki.tei-c.org/index.php/Critical_Apparatus_Workgroup
- final decision: not a rewrite, but a slow improving in new releases starting from v. 2.9.2

Critical Apparatus module

- this module provides several elements to encode the critical apparatus:
  - witness information (<listWit>, <witness>, etc.)
  - the <app> element for apparatus entries
  - elements to record the critical text (<lem>) and rejected variants (<rdg>), linking the latter to the respective witnesses
  - elements to handle lacunas, fragmentary witnesses, wit. groups
- and three methods to link the apparatus to the critical text:
  - the location-referenced method
  - the double-end-point-attached method
  - the parallel segmentation method

The TEI Critical Apparatus module elements

The <listWit> and <witness> elements

- <listWit> lists all the witnesses together with their sigla
- each <witness> assigns an ID (= siglum) and contains a description

```
<listWit>
    <witness xml:id="P2">Paris, BnF, lat. 3284, f. 107va-110ra </witness>
    <witness xml:id="P3">Paris, BnF, lat. 3337, f. 76rb-77vb </witness>
    <witness xml:id="P1">Paris, BnF, lat. 17509, f. 79d-82b </witness>
    <witness xml:id="G">Paris, Bibliothèque Sainte-Geneviève, 1420, f.
                    81ra-82vb</witness>
    <witness xml:id="R2">Rome, Arch O.P. XIV-36, f.
162ra-166ra</witness>
    <witness xml:id="T">Troyes, BM 228, f. 138vb-140rb </witness>
 </listWit>
```

The <listWit> for the *Edictus Rotari* edition

```
<listWit xml:id="main">
     <witness xml:id="B1">Codex Sangallensis 730</witness>
     <witness xml:id="B2">Codex Vercellensis CLXXXVIII</witness>
     <witness xml:id="B3">Codex Eporedianus XXXIV</witness>
     <witness xml:id="B4">Codex Helmstadiensis (now Guelferbytanus 532:
Wolfenbüttel, Herzog August Bibliothek, Helmst. 532)</witness>
     <witness xml:id="B5">Codex Vaticanus: Roma, Biblioteca Apostolica
Vaticana, Vat. Lat. 5359</witness>
     <witness xml:id="B6">Codex Blankenburgensis 52 (now Guelferbytanus 130:
Wolfenbüttel, Herzog August Bibliothek, Blankenb. 130)</witness>
     <witness xml:id="B7">Codex Parisiacus Latinus 4613: Parigi, Bibliothèque
Nationale, Lat. 4613</witness>
     <witness xml:id="B8">Codex Matritensis 413: Madrid, Biblioteca Nacional,
413</witness>
     <witness xml:id="B9">Codex Cavensis: Cava dei Tirreni, Biblioteca della
Badia, 4</witness>
     <witness xml:id="B10">Codex Parisiacus Latinus 4614: Parigi,
Bibliothèque Nationale, Lat. 4614</witness>
     <witness xml:id="B11">Codex Gothanus 84: Gotha, Forschungs- und
Landesbibliothek, Memb. I 84</witness>
     <witness xml:id="B12">Codex Heroldinus</witness>
  </listWit>
```

← witness lists can nest! three lists for ER: main, fragmentary, editions

A <witness> can include an <msDesc> element

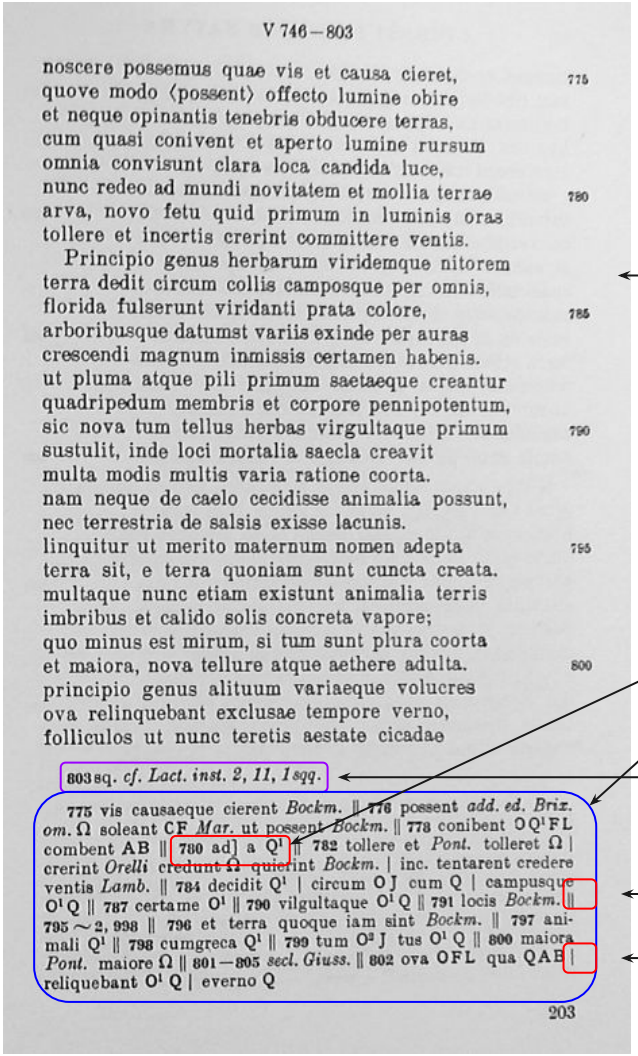
```
<witness xml:id="C">
     <msDesc>
      <msIdentifier>
       <settlement>Oxford</settlement>
       <repository>Bodleian Library</repository>
       <idno>MS. Add. A. 61</idno>
       <altIdentifier type="SC">
        <idno>28843</idno>
       </altIdentifier>
      </msIdentifier>
      <msContents>
       <p><quote>Hic incipit Bruitus Anglie,</quote> the
          <title>De origine et gestis Regum Angliae</title>
          of Geoffrey of Monmouth (Galfridus Monumetensis):
          beg. <quote>Cum mecum multa &amp;amp; de multis.</quote>
          In Latin.</p>
      </msContents>
      <physDesc>
      [...]
     </msDesc>
```

<witness> can include scribal hand notes (<handNote>)

```
<witness xml:id="P4">
  <msDesc>
    <msIdentifier>
      <settlement>Paris</settlement>
      <repository>Bibliothèque Nationale</repository>
      <msName>lat. 3337</msName>
    </msIdentifier>
    <physDesc>
      <handDesc>
        <handNote medium="black" xml:id="E1">Collects variant readings from another manuscript. </handNote>
        <handNote medium="black" xml:id="E2">Sporadic additions.</handNote>
        <handNote medium="red" xml:id="G1">Later hand, mostly works on the margin.</handNote>
        <handNote medium="black" xml:id="G2"/>
      </handDesc>
    </physDesc>
  </msDesc>
</witness>
```

Critical Apparatus elements

- **<app>** marks an apparatus entry, contains a <lem> and/or one or more <rdg>s
- **<lem>** the base text of the edition (optional if using *ps*)
- **<rdg>** any variant belonging to that textual tradition
  - **type** type of variant (e.g. lexicographic, orthographic, etc.)
  - **cause** what presumably caused the variation
  - **varSeq** correct sequence of variants
- **<rdgGrp>** groups readings on the basis of a predefined typology
- **<note>** a critical note, but it can hold an expanded, more discursive apparatus entry or commentary to an entry



V 746–803

noscere possemus quae vis et causa cieret,
quove modo ⟨possent⟩ offecto lumine obire
et neque opinantis tenebris obducere terras,
cum quasi conivent et aperto lumine rursum
omnia convisunt clara loca candida luce,
nunc redeo ad mundi novitatem et mollia terrae
arva, novo fetu quid primum in luminis oras
tollere et incertis crerint committere ventis.
Principio genus herbarum viridemque nitorem
terra dedit circum collis camposque per omnis,
florida fulserunt viridanti prata colore,
arboribusque datumst variis exinde per auras
crescendi magnum inmissis certamen habenis.
ut pluma atque pili primum saetaeque creantur
quadripedum membris et corpore pennipotentum,
sic nova tum tellus herbas virgultaque primum
sustulit, inde loci mortalia saecla creavit
multa modis multis varia ratione coorta.
nam neque de caelo cecidisse animalia possunt,
nec terrestria de salsis exisse lacunis.
linquitur ut merito maternum nomen adepta
terra sit, e terra quoniam sunt cuncta creata.
multaque nunc etiam existunt animalia terris
imbribus et calido solis concreta vapore;
quo minus est mirum, si tum sunt plura coorta
et maiora, nova tellure atque aethere adulta.
principio genus alituum variaeque volucres
ova relinquebant exclusae tempore verno,
folliculos ut nunc teretis aestate cicadae

803 sq. *cf. Lact. inst. 2, 11, 1 sqq.*

775 vis causaeque cierent *Bockm.* ‖ 776 possent *add. ed. Brix. om.* Ω soleant CF *Mar.* ut possent *Bockm.* ‖ 778 conibent OQ¹FL combent AB ‖ 780 ad] a Q¹ ‖ 782 tollere et *Pont.* tolleret Ω | crerint *Orelli* crediunt Ω quierint *Bockm.* | inc. tentarent credere ventis *Lamb.* ‖ 784 decidit Q¹ | circum OJ cum Q | campusque O¹Q ‖ 787 certame O¹ ‖ 790 vilgultaque O¹Q ‖ 791 locis *Bockm.* ‖ 795 ~ 2, 998 ‖ 796 et terra quoque iam sint *Bockm.* ‖ 797 animali Q¹ ‖ 798 cumgreca Q¹ ‖ 799 tum O²J tus O¹Q ‖ 800 maiora *Pont.* maiore Ω ‖ 801–805 *secl. Giuss.* ‖ 802 ova OFL qua QAB | reliquebant O¹Q | everno Q

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LUCRETI *DE RERUM NATURA*

Critical text

Critical apparatus

780 ad] a Q^1

780 reference to line / verse number
ad] critical text: accepted variant
a rejected variant
Q^1 siglum of witness

Apparatus fontium

A double vertical bar (||) separates apparatus entries for different lines / verses
A single vertical bar (|) separates apparatus entries for the same line

A simple example 1

Text: ove relinquebant exclusae tempore verno (v. 802)

Apparatus: ove] ova O F L qua Q A B

relinquebant] reliquebant O^1 Q

verno] everno Q

```
<app>
    <lem>ove</lem>
    <rdg wit="#O #F #L">ova</rdg>
    <rdg wit="#Q #A #B">qua</rdg>
</app> relinquebant exclusae tempore verno
```

A simple example 2

Text: ove relinquebant exclusae tempore verno (v. 802)

Apparatus: ove] ova O F L qua Q A B

relinquebant] reliquebant O^1 Q

verno] everno Q

```
<app>
    <lem>relinquebant</lem>
    <rdg wit="#O1 #Q">reliquebant</rdg>
</app> exclusae tempore <app>
    <lem>verno</lem>
    <rdg wit="#Q">everno</rdg>
</app>
```

A simple example 3

```
aliqua portio
<app>
    <lem>creature tue</lem>
    <rdg wit="#A">creatr ae tuae</rdg>
    <rdg wit="#B" cause="subs">creaturas
        <del>tuas</del></rdg>
    <rdg wit="#E" hand="user1">creaturarum tuarum</rdg>
    <note>This is a note</note>
</app>
et homo circumferens
```

A simple example 4

Text: Experience though noon Auctoritee […]

Apparatus: Experience] Experiment *La*, Eryment *Ra2*

```
<app>
    <lem wit="#El">Experience</lem>
    <rdg wit="#La" type="substantive">Experiment</rdg>
    <rdg wit="#Ra2" type="substantive">Eryment</rdg>
</app> though noon Auctoritee
```

- note that you can do without a <lem>, but then there must be a way to choose a base text (a preferred witness)
- any <app> should contain at least one <rdg>, can also include critical <note>s

1. Si quis hominum[a] contra animam regis cogitaverit[b] aut[c] consiliaverit[c·d], animae suae incurrat periculum et[e] res eius infiscentur. · Sang.qu. l. fol. 1.

2. Si quis cum rege de morte alterius consiliaverit[a] aut hominem per ipsius iussionem occiderit[b], in nullo sit culpavelis[c], nec ille, nec heredes[d] eius[e] quoquo[f] tempore ab[g·h] illo[h] aut heredes[i] ipsius[g·k] requisitionem[l·m] aut molestia[n] patiatur[m·o]: quia postquam[p] corda[q] regum[r] in manum[s] Dei credimus esse[t], non est possibile[u] ut homo possit[v] eduniare[w] quem rex occidere[x] iusserit[y]. · Ep. 66′.

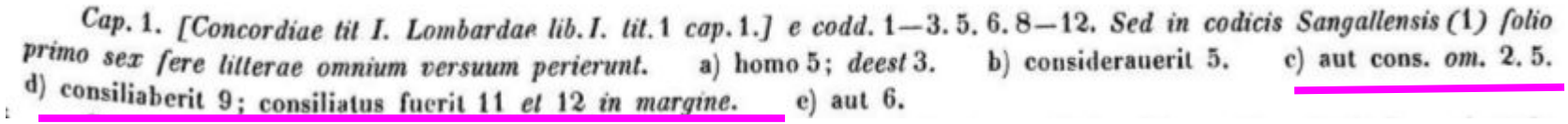
u) possi|oo 1; posseuilem 2. v) se *add.* 9. w) *sic* 1. 12; aduniare 2; aedoniare 3. 5. 8. 9; edoniare 6. 11; idoniare 10. 12 *in marg.* x) occidi 8; occiderit 5. y) iussit 3. 12 *et pr. man.* 9.

```
<app>
    <lem wit="#B1 #B12"><w>eduniare</w></lem>
    <rdg wit="#B2"><w>aduniare</w></rdg>
    <rdg wit="#B3 #B5 #B8 #B9"><w>aedoniare</w></rdg>
    <rdg wit="#B6 #B11"><w>edoniare</w></rdg>
    <rdg wit="#B10 #B12"><w>idoniare</w></rdg>
</app>
```

1. Si quis hominum[a] contra animam regis cogitaverit[b] aut[c] consiliaverit[c. d], animae suae incurrat periculum et[e] res eius infiscentur. *Sang.qu. I. fol. 1.

Cap. 1. *[Concordiae tit I. Lombardae lib. I. tit.* 1 *cap.* 1.*] e codd.* 1—3. 5. 6. 8—12. *Sed in codicis Sangallensis* (1) *folio primo sex fere litterae omnium versuum perierunt.* a) homo 5; *deest* 3. b) considerauerit 5. c) aut cons. *om.* 2. 5. d) consiliaberit 9; consiliatus fuerit 11 *et* 12 *in margine.* e) aut 6.

```
<app>
    <lem><w>consiliaverit</w></lem>
    <rdg wit="#B9" type="orthographic"><w>consiliaberit</w></rdg>
    <rdg wit="#B11 #B12" type="substantive"><w>consiliatus</w>
        <w>fuerit</w></rdg>
    <rdg wit="#B2 #B5" type="omissio"/>
</app>
```



Cap. 1. *[Concordiae tit I. Lombardae lib. I. tit.* 1 *cap.* 1.*] e codd.* 1—3. 5. 6. 8—12. *Sed in codicis Sangallensis* (1) *folio primo sex fere litterae omnium versuum perierunt.* a) homo 5; *deest* 3. b) considerauerit 5. c) aut cons. *om.* 2. 5. d) consiliaberit 9; consiliatus fuerit 11 *et* 12 *in margine.* e) aut 6.

```
<app>
  <lem><w>aut</w>
      <app>
        <lem><w>consiliaverit</w></lem>
        <rdg wit="#B9" type="orthographic"><w>consiliaberit</w></rdg>
        <rdg wit="#B11 #B12" type="substantive"><w>consiliatus</w>
            <w>fuerit</w></rdg>
      </app>
  </lem>
  <rdg wit="#B2 #B5"/>
</app>
```

5. Si quis scamaras[a] intra provincia[b] caelaverit[c] aut[d] anonam[e] dederit, animae suae incurrat periculum, aut certe[f] conponat regi[g.h] solidos[i] noningentos[h.k].

e) mortis 5. f) suae *om.* 5. g) infescentur 3.

Cap. 5. *[Concord. II. Lomb. I, 1, 4.]* *e codd.* 1—3. 5. 6. 8—12. a) escamaras 1; scameras 5; scamaris celatis, *corr.* scamaros, 11; scaram 12; scamuram 12 *in marg.* b) *sic* 1—3; prouinciam *rell.* c) *sic* 1; celauerit *rell.* d) eis *add.* 5 *et corr.* 11. e) annonam 5. 8. 9. 11. 12; *cod.* 1 *incertus.* f) certe *omitt.* 2. 6. 9. 10. 12, *addunt* 12 *in marg. et corr.* 9. g) regis 2. 9; ad partem regis 6; *deest* 11. 12. h) sol. DCCCC regi 5. i) solidus 2. 3. k) noning. 1; nonientos 2; nungentos 8; nongentos 10; XC 11; DCCCC *rell.*; DCCCC Regi 12 *in marg.*

```
<app>
    <lem><w>certe</w></lem>
    <rdg wit="#B2 #B6 #B9 #B10"/>
    <rdg wit="#B12">
      <add place="margin">
        <w>certe</w>
      </add>
    </rdg>
</app>
```

5. Si quis scamaras[a] intra provincia[b] caelaverit[c] aut[d] anonam[e] dederit, animae suae incurrat periculum, aut certe[f] conponat regi[g·h] solidos[i] noningentos[h·k].

e) mortis 5. f) suae *om.* 5. g) infescentur 3.

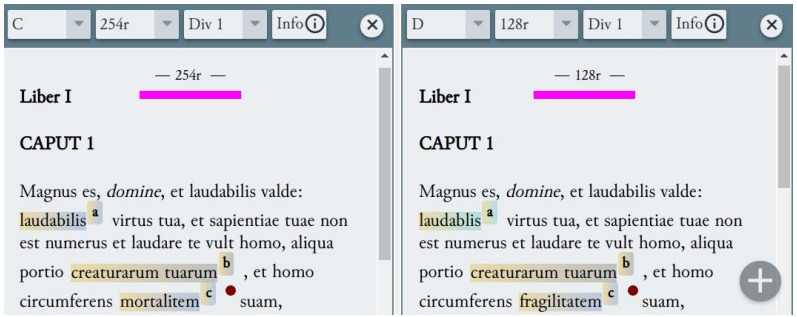
Cap. 5. *[Concord. II. Lomb. I, 1, 4.] e codd.* 1—3. 5. 6. 8—12. a) escamaras 1; scameras 5; scamaris celatis, *corr.* scamaros, 11; scaram 12; scamuram 12 *in marg.* b) *sic* 1—3; prouinciam *rell.* c) *sic* 1; celauerit *rell.* d) eis *add.* 5 *et corr.* 11. e) annonam 5. 8. 9. 11. 12; *cod.* 1 *incertus.* f) certe *omitt.* 2. 6. 9. 10. 12, *addunt* 12 *in marg. et corr.* 9. g) regis 2. 9; ad partem regis 6; *deest* 11. 12. h) sol. DCCCC regi 5. i) solidus 2. 3. k) noning. 1; nonientos 2; nungentos 8; nongentos 10; XC 11; DCCCC *rell.*; DCCCC Regi 12 *in marg.*

```
<app>
    <lem><w>aut</w></lem>
    <rdg wit="#B5"><w>aut</w> <add><w>eis</w></add></rdg>
    <rdg wit="#B11"><subst>
        <del><w>aut</w></del>
        <add><w>eis</w></add></subst>
    </rdg>
</app>
```

A more complex example 1

```
<p><pb ed="#P2" n="107v"/>
<app><lem>Sermo</lem>
        <rdg wit="#P3">Exhortatio</rdg>
</app> ad leprosos et <app>
        <lem>alios</lem>
        <rdg wit="#G">ad</rdg>
</app> infirmos, thema sumptum ex epistula Iacobi, <app>
        <lem>capitulo V</lem>
        <rdg wit="#G #P1 #T" type="omission"/>
</app>: <cit type="bible"><quote><app>
        <lem>Sufferentiam</lem>
        <rdg wit="#G">sufficientiam</rdg>
</app> Iob audistis et finem Domini uidistis</quote>
        <bibl>Iac. 5, 11</bibl></cit>.</p>
```

Note the **@ed** attribute, it can be used together with <pb/> to keep track of the folio sequence in all or part of the witnesses.
The values of those attributes will be shown by EVT in the collation view:



A more complex example 2

Similiter est doctrina logica: non enim considerat incomplexa harum

```
  <app resp="#silvia">
      <lem wit="#B #F #G #N #R #U">rerum</lem>
      <rdg type="concordance" wit="#V2"><add
            place="margin">rerum</add></rdg>
      <rdg cause="subs" wit="#P #V">scientiarum</rdg>
      <rdg cause="om" wit="#C #M"/>
      <note resp="#silvia"><mentioned>scientiarum</mentioned>
            fort. etiam V a.c.</note>
  </app> secundum quod sunt alicuius duorum modorum esse, scilicet quod
est in his
```

Use of <rdgGrp>

```
<p>Magnus es, domine, et laudabilis valde:
        <app resp="m1">
            <lem wit="#A">magna</lem>
                <rdgGrp type="orthographic">
                    <rdg wit="#B" hand="user1">magma</rdg>
                    <rdg wit="#E">maga</rdg>
                </rdgGrp>
                <rdgGrp type="lexicographic">
                    <rdg wit="#C">laudabilis</rdg>
                    <rdg wit="#D">laudablis</rdg>
                </rdgGrp>
            <note>Distinguishing variant types.</note>
        </app> virtus tua, et sapientiae tuae non est numerus [...]
```

Additional elements for critical apparatus

- **<witDetail>** holds a note concerning the reading of a specific witness, which is linked using @wit and the corresponding siglum
  - it can be used immediately after the related <lem> or <rdg>
  - or (**recommended** because it is a safer method) anywhere in the <app>, but with a @target pointing to the @xml:id of the corresponding <lem> or <rdg>

```
<app type="substantive">
    <lem xml:id="W026x" wit="#El #HG">Experience</lem>
    <rdg wit="#Ha4">Experiens</rdg>
    <witDetail target="#W026x" resp="#PR"
        wit="#El" type="presentation">Ornamental
        capital.</witDetail>
</app>
```

Additional elements for critical apparatus

- **<witStart/>** and **<witEnd/>**: empty elements marking the start / end of a fragmentary witness
  - use @wit to specify the witness

```
<app>
    <lem>imples</lem>
    <rdg wit="#E #G "><witStart wit="#G"/>implebis</rdg>
</app>
[...]
<app>
    <lem wit="#A #E" type="lessicographic">minora</lem>
    <rdg wit="#B" type="lessicographic"><del>maio</del>maiora</rdg>
    <rdg wit="#G #D">maiora<witEnd wit="#G"/></rdg>
</app>
```

Additional elements for critical apparatus

- **<lacunaStart/>** and **<lacunaEnd/>**: empty elements marking the start / end of a lacuna in a witness
  - use @wit to specify the witness

```
<app>
    <lem wit="#A #B #D #E"/>
    <rdg wit="#C"><lacunaStart wit="#C"/></rdg>
</app>
[...]
<app>
    <lem wit="#A #B #D"/>
    <rdg wit="#E"><lacunaEnd wit="#C"/></rdg>
</app>
```

The three linking methods

Linking methods

- there are three different methods to link an apparatus to the text in a TEI document
  - **location-referenced** method
  - **double-end-point-attached** method
  - **parallel segmentation** method
- each has advantages and disadvantages, the most used one is the parallel segmentation method for several reasons
- the chosen method should be declared in the <teiHeader> using the <variantEncoding> element

Parallel segmentation method

- presents several advantages
  - in-line encoding, more intuitive if compared to the *double-end-point attached* method (based on stand-off markup)
  - variants can be nested (you could als try to overlap them with a little creativity, but not recommended!)
  - allows to reconstruct the text of all witnesses (as does the *double-end-point attached* method)
  - allows <app>s with no <lem>s which means you can do without a base text (but would have to provide a start for navigation)

Parallel segmentation method

- the most popular method since it is the most cost-effective one
- disadvantages of parallel segmentation:
  - variants can’t overlap (but they can nest)
  - can’t be used with external apparatus (stand-off markup)
  - less suitable for complex traditions (?)
- the latter, however, is a general scalability problem
  - how suitable is TEI markup for a manual annotation of very rich and/or complex textual traditions?
  - the answer very much depends on the specific case

Parallel segmentation method

```
<p>Omnium hominum quos ad amorem veritatis natura superior impressit hoc maxime interesse videtur:
   ut, quemadmodum de <app>
      <lem wit="#Sh #B #C #D #E #F #G #H #K #L #M #N #P #Ph #Q #R #S #T #U #V #Z">labore</lem>
      <rdg wit="#A">laborem</rdg>
      </app> antiquorum ditati sunt, ita et ipsi posteris prolaborent, quatenus ab eis posteritas
   habeat quo ditetur.</p>

<p>Omnium hominum
   <app>
      <lem wit="#Sh #A #B #C #E #F #G #H #K #L #N #P #Q #R #T #U #V #Z">quos ad amorem veritatis</lem>
      <rdg wit="#D">in quos amorem veritatis</rdg>
      <rdg wit="#M">in quos Amorem virtutis</rdg>
      <rdg wit="#Ph">quos ad morem veritatis</rdg>
      <rdg wit="#S">quos amorem veritatis</rdg>
   </app> natura superior impressit hoc maxime interesse videtur: ut, quemadmodum de labore antiquorum
   ditati sunt, ita et ipsi posteris prolaborent, quatenus ab eis posteritas habeat quo ditetur.
</p>
```

- very simple example based on the *De monarchia* text
- note how the readings are not supposed to overlap!
- a problem solved: <lem>s and <rdg>s were phrase-level elements, now they can include structural elements (such as) for longer spans of text

Overlapping variants

- the parallel segmentation cannot handle variants which are overlapping in some ways, for instance the phrase

  la casa rossa e bella

- could have overlapping variants in some witnesses

```
<lem>la casa rossa e bella</lem>
<rdg>una casa rossa e bella</rdg>
<rdg>la casa blu e bella</rdg>
<rdg>la bella casa rossa</rdg>
```

- meaning that the same word might belong to different variants:

```
[la casa {rossa] e bella}
```

Overlapping variants

- an example by Catullus which pushed the editors towards the depa method:

  o factum male o miselle passer

- textual variants:

  bonus factum male | bonus ille passer
  bonum factum male | bellus ille passer
  o factum male | passer o miselle
  bonus factum male | bonus passer ille

Double-end-point-attached method

- the most powerful method since it offers all the advantages of PS and more:
  - can also handle overlapping variants
  - allows an external apparatus (stand-off markup)
  - which means that the text is free to be annotated with a different markup layer
- however DEPA is very cumbersome in practice:
  - especially when using it as stand-off markup
  - in fact the TEI editors were thinking of some kind of authoring software to use it

Double-end-point attached method

```
<l n="16"><anchor xml:id="lem3.16a"/>O factum male! <anchor xml:id="lem3.16b"/>O
        miselle <anchor xml:id="lem3.16c"/> passer!<anchor xml:id="lem3.16d"/></l>
```

```
<!-- l.16 -->
  <back>
    <div type="apparatus">
      <app from="#lem3.16b" to="#lem3.16d">
          <lem>o miselle</lem>
          <rdg
            wit="#O #G #R #ms.1 #ms.2 #ms.3 #ms.8 #ms.9 #ms.11 #ms.12 #ms.13 #ms.15 #ms.16 #ms.16a #ms.18 #ms.19 #ms.19a #ms.20 #ms.21 #ms.22 #ms.23 #ms.27
#ms.28 #ms.29 #ms.30 #ms.31 #ms.33 #ms.34 #ms.35 #ms.37 #ms.39 #ms. #ms.40 #ms.41 #ms.42 #ms.45 #ms.48 #ms.49 #ms. #ms.51 #ms. #ms.54 #ms.56 #ms.57
#ms.58 #ms.59 #ms.60 #ms.64 #ms.67 #ms.68 #ms.71 #ms.72 #ms.73 #ms.75 #ms.76 #ms.77 #ms.78 #ms.83 #ms.84 #ms.88 #ms.90 #ms.97 #ms.99 #ms.102 #ms.103
#ms.104 #ms.105 #ms.107 #ms.109 #ms.112 #ms.114 #ms.117 #ms.118 #ms.123 #ms.124 #ms.128 #ms.25 #ms.43 #ms.47">
            <app from="#lem3.16c" to="#lem3.16d">
              <rdg
                wit="#O #G #R #ms.1 #ms.2 #ms.3 #ms.8 #ms.9 #ms.11 #ms.12 #ms.13 #ms.15 #ms.16 #ms.16a #ms.18 #ms.19 #ms.19a #ms.20 #ms.21 #ms.22 #ms.23
#ms.27 #ms.28 #ms.29 #ms.30 #ms.31 #ms.33 #ms.34 #ms.35 #ms.37 #ms.39 #ms. #ms.40 #ms.41 #ms.42 #ms.45 #ms.48 #ms.49 #ms. #ms.51 #ms. #ms.54 #ms.56
#ms.57 #ms.58 #ms.59 #ms.60 #ms.64 #ms.67 #ms.68 #ms.71 #ms.72 #ms.73 #ms.75 #ms.76 #ms.77 #ms.78 #ms.83 #ms.84 #ms.88 #ms.90 #ms.97 #ms.99 #ms.102
#ms.103 #ms.104 #ms.105 #ms.107 #ms.109 #ms.112 #ms.114 #ms.117 #ms.118 #ms.123 #ms.124 #ms.128"
                >bonus</rdg>
              <rdg wit="#ms.25 #ms.43 #ms.47">bellus</rdg>
            </app> ille </rdg>
        </app>
        <app from="#lem3.16b" to="#lem3.16e">
          <rdg wit="#ms.6 #ms.14 #ms.17" type="transposition">passer o miselle</rdg>
          <rdg wit="#ms.10" type="transposition">bonus passer ille</rdg>
        </app>
      </div>
    </back>
```

Double-end-point attached method

```
<p>Magnum <anchor xml:id="Luc-001-002"/>ingenium <anchor xml:id="Luc-001-003"/>L. <anchor xml:id="Luc-001-004"
  />Luculli <anchor xml:id="Luc-001-005"/>magnumque <anchor xml:id="Luc-001-006"/>optimarum <anchor
    xml:id="Luc-001-007"/>artium <anchor xml:id="Luc-001-008"/>studium, <anchor xml:id="Luc-001-009"/>tum
    <anchor xml:id="Luc-001-010"/>omnis <anchor xml:id="Luc-001-011"/>liberalis <anchor xml:id="Luc-001-012"/>et

    <back>
      <listApp>
        <app from="#Luc-001-002" to="#Luc-001-003">
          <rdg cause="rasura" wit="#Glas">[rasura]um</rdg>
        </app>
        <app from="#Luc-001-003" to="#Luc-001-004">
          <rdg type="orthographica" wit="#B #A #V1 #S #F">luci</rdg>
          <rdg type="orthographica" wit="#V2 #N">lucii</rdg>
          <rdg wit="#Bes #Cant3 #Cas #Harl3 #Pal6 #Reg #Vat6 #Ven">L.</rdg>
          <rdg wit="#Mon3 #Par6">Lutii</rdg>
          <rdg wit="#Cant2">[deest membrana]cii</rdg>
        </app>
        <app from="#Luc-001-004" to="#Luc-001-005">
          <rdg wit="Reg1">Lucilli</rdg>
        </app>
        <app from="#Luc-001-005" to="#Luc-001-006">
          <rdg wit="#Laur11">magnumquae</rdg>
          <wit>Laur1<hi rend="sup">1</hi><witDetail wit="#Laur11c">-a- exp. Laur1<hi rend="sup">1c</hi></witDetail></wit>
        </app>
        <app from="#Luc-001-006" to="#Luc-001-007">
          <rdg type="orthographica" wit="#N #Dav">optumarum</rdg>
        </app>
        <app from="#Luc-001-007" to="#Luc-001-008">
          <rdg type="polygenés" wit="#A1">attium</rdg>
          <rdg wit="#Laur2">artium artium</rdg>
          <rdg wit="#Ven4">{omisit}</rdg>
        </app>
```

Stand-off critical apparatus: critical text in <body>

```
<body>
  <div>
   <p xml:id="Luc-001">
     <w xml:id="Luc-001-001">Magnum</w>
     <w xml:id="Luc-001-002">ingenium</w>
     <w xml:id="Luc-001-003">L.</w>
     <w xml:id="Luc-001-004">Luculli</w>
     <w xml:id="Luc-001-005">magnumque</w>
     <w xml:id="Luc-001-006">optimarum</w>
     <w xml:id="Luc-001-007">artium</w>
     <w xml:id="Luc-001-008">studium</w>,
     <!-- ... -->
   </p>
  </div>
</body>
```

Stand-off critical apparatus: <listApp> in the <back>

```
<back>
  <div>
    <listApp>
      <app from="#Luc-001-002">
        <rdg cause="rasura" wit="#Glas">[rasura]um</rdg>
      </app>
      <app from="#Luc-001-003">
        <rdg type="orthographic" wit="#B #A #V1 #S #F">luci</rdg>
        <rdg type="orthographic" wit="#V2 #N">lucii</rdg>
        <rdg wit="#Bes #Cant3 #Cas #Harl3 #Pal6 #Reg #Vat6 #Ven">L.</rdg>
        <rdg wit="#Mon3 #Par6">Lutii</rdg>
        <rdg wit="#Cant2">[deest membrana]cii</rdg>
      </app>
      <app from="#Luc-001-004" to="#Luc-001-005" type="dummy">
        <rdg wit="#Peg1">Lucullus magnus</rdg>
      </app>
      <!-- ... -->
    </listApp>
  </div>
</back>
```

Final remarks

Creating and publishing a digital critical edition

- typical scenario wrt TEI XML encoding: I marked up my text, now what?
  - Web publishing: good idea, but how to do it?
  - XSLT stylesheets to convert TEI XML into HTML (+ CSS)
  - frameworks working with TEI (f.i. Omeka)
  - native XML databases (eXist, XTF)
  - specific software (TEI Boilerplate, TEI Publisher, EVT, etc.)
- whichever your choice you have to consider problems of sustainability, durability, usability of web-based digital editions

The encoded text is the edition

- typical scenario: theoretical model → markup schema → encoded text
- these steps need a textual scholar to ensure that the final product is a scholarly edition
- text encoding should be performed by a scholar to take into account all text particularities
- where is the edition? the encoded text **is** the edition
- how do I “extract” the edition? this is where you need the software component of a DSE

The displayed text is one possible edition

- any software will be **obsolete** in a matter of years
  - publishing on the Web best solution but no silver bullet
  - complex platforms harder to maintain, possible problems of compatibility / security
- better secure the data part of the equation using **proven standards** such as TEI/XML
  - using XML means that your textual data are independent from any specific processing / visualization software
  - so that migration to new tool(s) is always possible

Sharing the edition data

- using a standard data format
  - XML and other plain text formats are perfect for long term preservation of the textual components of a DSE
  - share as FAIR: *Findable*, *Accessible*, *Interoperable and Reusable*
  - any VRE or authoring tool should make it possible to export its data in a standard format → what TEI/XML is already
- open and FAIR data: sharing with the academic community
- this will also allow other scholars to use your encoded texts, perhaps in very different ways

Thank you for your attention!