TEI for Critical Editions
This lecture

- A bit of background
- The apparatus entry
- Readings, lemmas, and witnesses
- Subvariation in readings
- Fragmentary witnesses
- Lists of witnesses or manuscript descriptions?
- A variety of methods of linking apparatus and text
- Sources rather than witnesses
- Editorial notes
- Critical apparatus toolbox
Background

- What do we mean by a ‘critical edition’?
- An edition (in this sense) is a text that has been prepared for a new publication. Bibliography: new type-setting.
- Critical implies a knowledge of historical versions (‘witnesses’) of a work that have been collated (compared), leading to a ‘new’ text.
- It is usually accompanied by scholarly apparatus: textual variants, contextual notes, other background materials.
Hamlet, Act III

Her father and myself, lawful espials,
We'll so bestow ourselves that, seeing unseen,
We may of their encounter frankly judge,
And gather by him, as he is behav'd,
If't be th' afflication of his love or no
That thus he suffers for.

Queen. I shall obey you.
And for your part, Ophelia, I do wish
That your good beauties be the happy cause
Of Hamlet's wildness; so shall I hope your virtues
Will bring him to his wonted way again,
To both your honours.

Oph.: Madam, I wish it may.

Pol. Ophelia, walk you here.—Gracious, so please you,
We will bestow ourselves.—Read on this book,
That show of such an exercise may colour
Your loneliness.—We are oft to blame in this,

---

Textual Editing in the Digital Age

Carefully edited text including editorially supplied material and choices between witnesses

Critical apparatus notes

Explanatory notes

Paratextual apparatus such as line numbers

---

'Tis too much prov'd, that with devotion's visage
And pious action we do sugar o'er
The devil himself.

King. [aside] O 'tis too true.
How smart a lash that speech doth give my conscience.
The harlot's cheek, beautied with plast'ring art,
Is not more ugly to the thing that helps it
Than is my deed to my most painted word.
O heavy burden!

Pol. I hear him coming. Let's withdraw, my lord.

Enter Hamlet.

Ham. To be, or not to be, that is the question:
Whether 'tis nobler in the mind to suffer

---

47. [aside] testified by experience.
48. 'tis nobler... suffer
49. [aside] As Copel: beginning 50 Pope, 100 Qr; not in F.; 55. Let's) F.; not in Qr. 55 S.D. Emerson) F.; not in Qr. King and Polonius) Copel: all but Ophelia | Roox. Enter Hamlet] F.; before 53 Qr.

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There may be a specific echo of Pierce Penniless, "These aged mothers of iniquity will have their deformities new plaster'd over" (Nash, 1.1.191). This begins a motif which reappears at ll. 144-6 and vi.187-8.

50. [aside] In the thing that helps it in comparison with that (artificial beauty) which makes good its shortcomings.

53. [aside] A word appropriate to one-half of the comparison is transferred to the other: fair but false in appearance, like the beauty of the painted cheek.

56-88] tran. 56. To be] to have to be, existing. See ll. 56-88 tran. 57-60. Whether 'tis nobler... end then The question is restated in amplified form. xx. 57. in the mind] 'This is to be connected with "suffer", not with "nobler" (Dowden): 'This modifies nobler, not suffer' (Kittredge).
nullit se laudari pro Christo, dicuntibusque quod quidam "Ego sum Paulus? respondit in libertate
te Domini. Non quemadmodum crucifixus est pro
vobis aut in nomine Pauli baptizatus est. Ergo
dicant martyres in persecutione etiam adduc-
tium AVERTANTUR STATIM ERUBESCENTES
QUE DICUNT MEHIE EUGE EUGE. (6) Et quid fi-
est huius illius avertantur et erubescant omnes, uve-
que quaeant animam sana, uve qui cogitant
mula mala, uve qui pervenit et simulata bene-
volentia lingua volunt emollire quod furtum
v.en fuerint et ipsi avertisse et consiliatum, quid fieri?
EXSEUTENT ET IUCUNDIUNTUR IN TE. non in
me, non in illo aut in illo, sed quod fugat sunt
lux qui fuerunt tenetra, EXSEUTENT ET IUC-
UNDIUNTUR IN TE OMNES QUI QUARERUNT
TE. Allud est quarende duem, allud quaererem
hominem iacundiuntur qui quaerunt TE. Non
inconsistuntur ergo qui quareunt te, quos prior
quaesitae antiquae quaerentes te? Nondum
quaerentes ivos illis patruerat a 15
gregem et descendit ad eum, quiescit eum, repor-
tavit in unius suae sicventem te iam quareten-
tem set iam ergo quiarius num, qui prior quaesi-
tit te fac quod ait: Quae sunt oves mune, vocem
muam audientem et sequantur mi. Si ergo quae-
erunt 20 eum qui quaesit te, et eos facit eum et
adip vocem patruis sae et sequitur eum, vide
quid tibi de se ostendit, quid de corpore suo, ne
in ipso errores, ne in ecclesia errores, ne quis tibi
diceret. "Christus est," qui non est Christus, aut
"escientia," quae non est ecclesia. Multit enim
dicentur carmen non subiuersum Christum et non
in corpore suo ressuscitatus Christus non sequi
voces eorum? Audi vocem ipsius patruor, qui
indulser est carne, ut quarenet perditam car-
num. Resurrexet et ait: "Paulus et visio, quis
spiritum esset et carmen non habet, et in me videa,
habeo. Osenet te simi vocem eum se sequere.
Osenit et eclestiam, ne quis te fallat nomine
ecclesiae. Oportetque inquit Christo pati et 33
nescrose a mortuis terris suis, et praedicaverit in
manifesta eis parietium et resurrexit pectora-
um per omnes gentes incipit inabantus ab huncem. 
Habes vocem patruor tuis auct se volu
laruorum et funum! (Vocem laruorum et fun-
um) caviem, si vocem patruor fueris sequor.
Unde autem sequi? Si nec eiaquea hominum
dicet quae etiam merito. EUGE EUGE, nec quam
gundatione aedificus, ne oleo peccati plagi-
acei caput tuum.
EXSEUTENT ET IUCUNDIUNTUR IN TE, OM-
NES QUI QUARERUNT TE ET DICANT — quid
dicant qui exsultan? SEMPER MAGNIFICETUR
DOMINUS. Descant hic omnes qui exsultan et
quearunt te — qui? SEMPER MAGNIFICETUR
DOMINUS — QUI DICANT SALUTARE TUUM.
Nunc tamen MAGNIFICETUR DOMINUS, sed
etiam SEMPER. Ecce errabas et averseb ab eo
eras vocavit te: MAGNIFICETUR DOMINUS. Ecce
inspiravisti tibi confessionem peccatum; con-
fessus es, dedit ventis: MAGNIFICETUR DOMI-
NUS. Iam corporis iste viventi; iam puto quod
issuem est ut et tu magnificeris. Ecce tibi te
vocaret errantem, magnificandas esserat dominus
cum tibi confert pecatum dimisserat, magnific-
ans eos dominus; modo tam audaces verba
eius corporis prudenter, injustitias eius, perscrutii
ad quandam virtutis excellentiam: dignum est
ut et tu aliquidem magnificeris! DICANT. SEM-

62 J Cor. 1,12 sqq. 6,6 cf. Eph. 5,8 14 cf. Luc. 23,6 sqq. 19 Indo 10,3 31 Luc. 26,39 35 Luc. 24,8 sqq.
6,8 aut ... Illus om. cc 13 te P 2, non te P 2 seta, cc 14 te signum interrogationis posuit 17 iam es ovis P 2
add. id. sl. 18 cc qui prior quaesitae controversem se et non quaesitae se add. T, cc (cf. 39) | quarenet
exum incipe cc 19 te et reportavit in unius suae add. S bbl. cc, et reportavit in unius suae sanctum te iam
quarenet etiam ergo quarenet eum qui prior quaesitae et add. P 2 21 qui prior add. cc 26 ecclesia ecclesia
esse add. cc 32 carmen et omne. cc [C Ch 1, 40 larumus P 2, bbl. T, cc | funum] {larumus P 2, bbl. T,
SP 5,6 bbl. T, cc. | vocem larumus et funum addt 41 non carebisset P 2 non timebisset bbl. T, cc 50 te | 51 qui
distintus te. Quis? Semper ... Dominus, qui cc 62 dimissit y, cc.
The apparatus entry

32. lawful espials] F; not in Q₂. 33. We’ll] Q₂; Will F. 38. your] Q₂,F; my Q₃. 42 S.D.] Theobald; not in Q₂,F. 43. please you] Q₂; please ye F. 46. loneliness] F; lowlines Q₂.

- The apparatus entry in a scholarly critical edition provides a specialised notation to record the differences between the edited texts and what the text of the various witnesses being used to prepare the text. The ideal is the ability to ‘reconstruct’ the versions of the text.
- This is a mental data model that we reconstruct in our mind – but holding all of these variations for a whole text in our mind at one time is not practicable.
- The best digital encoding does not merely reproduce the apparatus note, but the mental data model which it is meant to represent.
<app>
  ● <app> provides a container readings and lemmas
  ● These usually contain short phrases of text or individual words
  ● More recently entire <div> elements can be added (but here be dragons)
</app>

<app>
  <rdg wit="#El #Hg">Experience though noon Auctoritee</rdg>
  <rdg wit="#La">Experiment thouh noon auctorite</rdg>
  <rdg wit="#Ra2">Eryment though none auctorite</rdg>
</app>

<app>
  <lem wit="#El #Hg">Experience</lem>
  <rdg wit="#La" type="substantive">Experiment</rdg>
  <rdg wit="#Ra2" type="substantive">Eryment</rdg>
</app>
Readings, lemmas, and witnesses

- Reading: a single instance of textual variation encoded with a `<rdg>` element
- Lemma: a chosen base text for the apparatus, that is the suggested editor’s preference (whether this is displayed to end users or not), encoded with a `<lem>` element
- Witness: either a single existing or purported document or a group of them that share significant textual variations. These are detailed elsewhere with a `<witness>` or `<msDesc>` and referenced with the `@wit` attribute.
- The `@wit` attribute can contain as many pointers as needed and can be local or in remote documents.
- Where this falls down: scalability – fine with 10, 20, 50 witnesses, what about 1000s or more?
<lem>, <rdg>, @wit, @varSeq, @cause

- <lem> is entirely optional – think about why you might or might not want to provide this
- <rdg> can be classified with @type, e.g. orthographic or substantive forms of variation
- @varSeq can give a sequence of relationship between readings
- @cause can give a suggested cause for this variation (but @ana could link to a taxonomy)

```xml
<app>
  <lem wit="#El #Hg">Experience</lem>
  <rdg wit="#La" type="substantive">Experiment</rdg>
  <rdg wit="#Ra2" type="substantive">Eryment</rdg>
</app>

<app>
  <lem wit="#El #Ra2">though</lem>
  <rdg wit="#La" type="orthographic">thouh</rdg>
</app>

<app>
  <rdg wit="#La" varSeq="1">Experiment</rdg>
  <rdg wit="#Ra2" cause="abbreviation_loss" varSeq="2">Eryment</rdg>
</app>
```
Subvariation in readings

- `<rdgGrp>` groups two or more readings perceived to have a genetic relationship or any other affinity
- The `<rdgGrp>` elements can cover different granularity of text

```xml
<app type="substantive">
  <rdgGrp type="subvariants">
    <lem wit="#El #Hg">Experience</lem>
    <rdg wit="#Ha4">Experiens</rdg>
  </rdgGrp>
  <rdgGrp type="subvariants">
    <lem wit="#Cp #Ld1">Experiment</lem>
    <rdg wit="#La">Ex<sup>g</sup> ref="#per"/>iment</rdg>
  </rdgGrp>
  <rdgGrp type="subvariants">
    <lem resp="#ed2013">Eriment</lem>
    <rdg wit="#Ra2">Eryment</rdg>
  </rdgGrp>
</app>
```
Fragmentary witnesses

- Often witnesses to the same text might be missing portions of text
- If you have completely segmented a text with `<app>` elements then you could just leave out the witness when it does not have the text
- Or you can indicate it explicitly with `<witStart/>`, `<witEnd/>` or `<lacunaStart/>`, `<lacunaEnd/>`
Fragmentary Witnesses

- `<witStart/>` indicates the beginning/resumption of the text
- `<witEnd/>` indicates the end/suspension of the text
- `<lacunaStart/>` indicates the beginning of a lacuna in mostly complete witness
- `<lacunaEnd/>` indicates the end of a lacuna in a mostly complete textual witness.
Witnesses or Descriptions?

- Scholarly editions must document the sources the edition is based upon with full descriptions of witnesses.
- Full manuscript descriptions can be time consuming and for manuscripts well-documented elsewhere, it is sometimes easier just to use an identifying set of information.
The TEI critical apparatus was designed not only to suit those encoding brand new scholarly digital editions, but those retrospectively converting existing print ones. For this reason it has a variety of methods for linking the apparatus with a portion of text, including:

- Location-Referenced Method
- Double End-Point Attachment Method
- Parallel Segmentation Method

Most TEI editors use Parallel Segmentation (or an out-of-line variation of this)
Location-Referenced Method

- Provides a method based on encoding existing printed apparatus
- The apparatus is linked to the base text by indicating explicitly only the block of text (in this case the metrical line as a whole)
- While useful for retrospective conversion of printed materials, it is a blunt instrument unsuitable for born-digital apparatus
Double End-Point Attachment Method

- Similar to the Location-Referenced Method except that it points to @xml:id’s at the start and end of the bit of text being referenced. (Here the word ‘Experience’)
- Multiple <anchor/> elements are used where an adjacent element (the start of the line here) does not exist

```xml
<div n="WBP" type="prologue">
  <head>The Prologue ... </head>
  <l n="1" xml:id="WBP.1">
    Experience
    <anchor xml:id="WBP-A2"/>
    though noon Auctoritee</l>
  <l n="2">Were in this world ...</l>
</div>

<!-- Elsewhere in the document -->

<app from="#WBP.1" to="#WBP-A2">
  <rdg wit="#La">Experiment</rdg>
  <rdg wit="#Ra2">Eryment</rdg>
</app>
```
Parallel Segmentation Method

- This embeds the apparatus at the site of variation
- The readings can surround as much or little text as needed
- The most popular method for born-digital editions
- From this it is very easy for a processor to generate any individual witness by suppressing the witnesses you do not wish to see

\[
\text{Experience} \\
\text{Experiment} \\
\text{Eryment}
\]

though noon Auctoritee

Were in this world ...
More Parallel Segmentation

- `<app>` elements can also be nested inside a `<rdg>` to further subdivide a reading
- This gives us a mix of a different reading (Chi3) with 4 others
- One could have also just provided this `<rdg>` merged in with the others, but this highlights its difference
Out-of-line <app> Elements

A more modern out-of-line or stand-off method for pointing from an <app> to an element (here <seg>) with an @xml:id

<lem> not necessary since the version in the main document file (here example.xml)

Another similar way would be to (automatically) mark each word <w> with an @xml:id
Sources Not Witnesses

- In an edition of a single witness you can record the different editorial versions of these.
- Use `<app>` and `<rdg>` but instead of a `@wit` attribute, one uses a `@source` attribute.
- Here editors disagree whether the last two minims showing an abbreviation should be expanded, are an ‘n’ with provided ‘u’ or a ‘u’ with provided ‘n’.

```xml
<l n="105">Virginite is grete
  <app>
    <rdg source="#ES">perfectio<am><g ref="#ii"/></am></rdg>
    <rdg source="#FJF">perfectio<ex>u</ex></rdg>
    <rdg source="#PGR">perfectio<ex>n</ex></rdg>
  </app>
</l>
```
Editorial notes

- The `<note>` element is available inside many TEI elements
- For example you can have it inside a `<p>` element as well as just outside
- As such the `<note>` element is very generic, it can be an editorial note, a marginal gloss, an authorial note, or any other type of note you can conceive
- One can put it inside a `<rdg>` and be making a note about that specific reading, or inside an `<app>` and be making a note about all of those readings
- Hence, we usually say what type of note it is with a `@type` attribute
- If transcribing an authorial note we can use the `@place` attribute to say where it appears (e.g. below the line, in the left margin, etc.)
The TEI Critical Apparatus Toolbox is a tool for people preparing a natively digital TEI critical edition.

The Toolbox lets you

- **Check your encoding**: offers facilities to display your edition while it is still in the making, and check the consistency of your encoding
- **Display parallel versions**: choose the sigla of the witnesses, and the different versions of the text, following each chosen witness, will be displayed in parallel columns.
- **Print an edition**: of a TEI XML edition, with a TEI-to-Latex and PDF transformation
- **Annotate an image**: lets you easily trace zones on an image to prepare a documentary edition
- **Get statistics**: on the XML tags effectively used in different parts of your edition, and some word count.
I want to know more!

- Chapter 12: Critical Apparatus

12 Critical Apparatus

Scholarly editions of texts, especially texts of great antiquity or importance, often record some or all of the known variations among different witnesses to the text. Witnesses to a text may include authors or other manuscripts, printed editions of the work, early translations, or quotations of a work in other texts. Information concerning variant readings of a text may be accumulated in highly structured form in a critical apparatus of variants. This chapter defines a module for use in encoding such an apparatus of variants, which may be used in conjunction with any of the modules defined in these Guidelines. It also defines an element class which provides extra attributes for some elements of the core tag set when this module is selected. In printed critical editions, the apparatus takes the form of highly-compressed notes at the bottom of each page. TEI’s critical apparatus module allows variation to be encoded so that such notes may be generated, but it also models the variation so that, for example, interactive editions in which readers can choose which witness readings to display are possible.

Information about variant readings (whether or not represented by a critical apparatus in the source text) may be recorded in a series of apparatus entries, each entry documenting one variation, or set of readings, in the text. Elements for the apparatus entry and readings, and for the documentation of the witnesses whose readings are included in the apparatus, are described in section 12.4.1 The Apparatus Entry, Readings, and Witnesses. Special tags for fragmentary witnesses are described in section 12.1.5 Fragmentary Witnesses. The available methods for embedding the apparatus in the text of the text, or for linking an external apparatus to the base text, are described in section 12.2.1 Linking the Apparatus to the Text. Finally, several extra attributes for some tags of the core tag set, made available when the additional tag set for text criticism is selected, are documented in section 11.3.1.1 Core Elements for Transcriptional Work.

Many examples in this chapter refer to the following texts of the opening (usually just line 1) of Chaucer’s Wife of Bath’s Prologue, as it appears in each of the four different manuscripts:

- Ellesmere, Huntington Library 26.C.9 (E1)
- Hengist, National Library of Wales, Aberystwyth, Penniath 3920 (Hg)
- British Library Lindisfarne 855 (L) (Ke)
- Bodleian Library Rawlinson Poetic 149 (Rh2)

12.1 The Apparatus Entry, Readings, and Witnesses

This section introduces the fundamental markup methods used to encode textual variations:

- the app element for entries in the critical apparatus: see section 12.1.1 The Apparatus Entry;
- elements for identifying individual readings: see section 12.1.2 Readings;
- ways of grouping readings together: see section 12.1.3 Grouping Readings in Apparatus Entries;
- methods of identifying which witnesses support a particular reading, and for describing the witnesses included in the apparatus: see section 12.1.4 Witness Information;
- elements for indicating which portions of a text are covered by fragmentary witnesses: see section 12.1.5 Fragmentary Witnesses.