Manual

The Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English

Susan Pintzuk

September 2000

Table of Contents

Section III: Syntactic Bracketing and Labelling

Section IV: Morphological Annotation of the Brooklyn Corpus

Section V: Using and Searching the Brooklyn Corpus

Section I: General Introduction to the Corpus

1. Introduction

The Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English (henceforth the Brooklyn Corpus) is an annotated version of texts from the Old English Section of the Helsinki Corpus of English Texts (henceforth the Helsinki Corpus); the Helsinki Corpus was created under the direction of Matti Rissanen and Ossi Ihalainen at the University of Helsinki). The Brooklyn Corpus contains more than 106,000 words of Old English text (see Appendix A for a complete list of texts); the samples from the longer texts are 5,000 to 10,000 words in length. The texts represent a range of dates of composition, authors, and genres. The texts in the Brooklyn Corpus are syntactically and morphologically annotated, and each word is glossed. The Brooklyn Corpus is available without fee for educational and research purposes, but see Appendix B for copyright matters and conditions of use.

The Brooklyn Corpus is the joint project of five linguists: Susan Pintzuk (University of York, UK), Eric Haeberli (University of Geneva, Switzerland, and University of Reading, UK), Ans van Kemenade (University of Nijmegen, the Netherlands), Willem Koopman (University of Amsterdam, the Netherlands), and Frank Beths (Vrije Universiteit, Amsterdam, the Netherlands, and University of York, UK). Pintzuk's work was funded by grant #RT-21583-94 from the National Endowment for the Humanities (USA), an independent federal agency. Van Kemenade, Koopman, and Beths were responsible for the design and implementation of the morphological annotation scheme, which was based on the one developed for the Old French corpus of Anthonij Dees at Vrije Universiteit. Pintzuk and Haeberli were responsible for the design and implementation of the syntactic annotation scheme, which was based on the one developed at the University of Pennsylvania for the first edition of the Penn-Helsinki Parsed Corpus of Middle English (Kroch and Taylor 1994), henceforth the PPCME1. Our intent was to make the two corpora as similar as possible; and those who are familiar with the PPCME1 will recognize the similarities between the PPCME1 and the Brooklyn Corpus -- in both the design and implementation of the syntactic annotation schemes and also in the organization of the manuals. We are indebted to Tony Kroch and Ann Taylor for their help and support. We would also like to acknowledge here the enthusiastic support of Matti Rissanen and Merja Kytö of the Helsinki Corpus, and Antonette Healey of the Toronto Dictionary of Old English project.

The mark-up conventions of the Helsinki Corpus have been retained in the Brooklyn Corpus except where they conflict with the syntactic annotation. The major changes are the following:

- The text is presented in units of main clauses with their associated subordinate clauses, rather than line by line.
- All Helsinki Corpus text level codes (see Kytö 1993: 28-40) within the texts have been changed as follows:

TEXT LEVEL CODE	HELSINKI	BROOKLYN
foreign language	(\...\)	<Latin> ... </Latin>
emendation	[{...{]	not indicated
heading	[}...}]	<heading> ... </heading>
Helsinki comment	[^...^]	either eliminated (e.g. those indicating text information), or <HC:_...>
Brooklyn comment		<BC:_...>

Notice that the Helsinki Corpus conventions for Old English characters have been retained: +a = ash, +t = thorn, +d = eth.

2. Design of the syntactic annotation scheme

Since the philosophy and goals of the Brooklyn Corpus are almost identical to those of the PPCME1, we quote from the PPCME1 Manual, pp. 5-6:

"Our primary goal has been to create an annotation system that facilitates automatic searches, not to give a correct linguistic analysis of each sentence. Thus, if a construction can be found unambiguously through a combination of properties of a bracketed sentence, the annotation may not contain all of the structure that a full phrase structure diagram of the sentence would have."

"... subjective judgments must be avoided since they are extremely error prone; so, for example, we have not distinguished verbal from adjectival passive participles. Some syntactic structure (e.g. the internal structure of NPs and PPs) has been systematically left out ..."

"As many categories as possible should have clear meanings so that unclear cases should wind up in a small number of categories of residual cases. The price of making most categories homogeneous is that these residual categories will not be."

"To the maximum extent possible we have avoided making decisions that would be controversial, either linguistically or as far as interpretation is concerned. Where there is room for doubt as to the correct parse or interpretation of the sentence we have either used a mechanical rule to decide the case for searching purposes or we have left structure unmarked. Adherence to this criterion has made it impossible for us to include a VP constituent since, given the word order variation/change in Middle English [and in Old English (SP)] and the existence of scrambling, the boundaries of the VP are all too often indeterminate."

"NOTE TO THE USER: The annotation system used in this corpus is complex and tries to make a number of quite subtle syntactic distinctions while failing to make some others, mostly for practical reasons. Hence, it is very important in using this corpus that the user not rely on an informal notion of how the system works but rather read the documentation carefully in deciding how to search for constructions of interest and to check the exhaustiveness of a search by searching for a broader set of sentences than those desired in a subset of the data. Only in this way can one be certain that what is actually searched for corresponds to the researcher's intentions."

And finally, we should emphasize that the syntactic annotations should in no way be regarded as the implementation of a structural analysis within a particular theoretical framework. The annotation schemes were developed as a tool for the investigation of the structure of earlier stages of English. The annotations enable the users to pose and answer questions about word order, constituent order, abstract structure, and syntactic and morphological characteristics of the texts in the corpus. The annotation schemes are general-purpose ones that are as theory-neutral as possible, while still incorporating the insights of modern linguistic theory. The annotations can be used as they are, or augmented without the need for revision or redesign, by scholars with widely varying research interests.

3. Format and layout of the texts

3.1 Text formats

Each text in the Brooklyn Corpus is supplied in four different formats, each format as a separate file with the same name and a different extension. For an explanation of the names of the files, see Appendix A. The four different formats are suitable for use with different search methods (see Section 13 below).

- Format 1, with extension .o2/.o23/.o24/.o3/.o34. The largest version of the corpus, with a header block and three sections for each token: 1) the Old English data with syntactic annotation, 2) the gloss, and 3) the morphological annotation. This format can be searched only by search functions within word-processing programs and editors (see Section 13, Method 1).
- Format 2, with extension .oe. The Old English data with syntactic annotation only. This format can be searched by word-processing programs and by the PERL scripts supplied with the Brooklyn Corpus (see Section 13, Methods 1 and 2).
- Format 3, with extension .unpacked. The Old English data unpacked, with one clause per token. This format can be searched by word-processing programs and by the PERL scripts supplied with the Brooklyn Corpus (see Section 13, Methods 1 and 2).
- Format 4, with extension .psd. The Old English data in a format suitable only for searching with CorpusSearch (see Section 13, Method 3).

3.1.1 Format 1

For files in Format 1, each token consists of one main clause, together with its dependent subordinate clauses. There are three parts for each token, each part separated from previous and subsequent parts by a blank line. Part 1 contains the Old English data with part-of-speech (POS) tags and syntactic bracketing and labelling, and with a token reference. Part 2 contains the word-for-word Modern English gloss. Part 3 contains the Old English data with morphological annotation. An example is given below:

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN ,
1[L [wh-1 seo/PDN ] %co% %nn-1% [vt w+as/ET ] [vn geciged/VN ]
2[S %nn-1% [nn Euthicia/NMN ] S]2 L]1 , ] [pp betwux/PP
o+drum/JJD mannum/NND ] [pp to/PP +t+are/PDD m+aran/JJD
byrigene/NND ] , [o and/CC hire/PO dohtor/NNN samod/RR
, seo/PDN ges+alige/JJN Lucia/NMN ] . )
(AELIVE,I,210.5)

then came some widow, that was called Eutychia, between
other persons to that famous grave, and her daughter
simultaneously, that fortuitous Lucy.

+ta_l(+ta)_m(w:avti)
com_l(cuman)_m(m:in_n:sg_p:3_t:pa_w:vb)_c(1)
sum_l(sum)_m(c:nm_n:sg_w:ajat)
wydewe_l(wuduwe)_m(c:nm_n:sg_w:nono)
seo_l(se)_m(c:nm_g:fm_n:sg_w:prrl)
w+as_l(beon)_m(m:in_n:sg_p:3_t:pa_w:vbax)
geciged_l(geciegan)_m(m:pt_t:pa_w:vb)_c(8)
Euthicia_l(euthicia)_m(c:nm_n:sg_w:nona)
betwux_l(betwux)_m(w:pp)
o+drum_l(o+ter)_m(c:dt_n:pl_w:ajat)
mannum_l(mann)_m(c:dt_n:pl_w:nono)
to_l(to)_m(w:pp)
+t+are_l(se)_m(c:dt_g:fm_n:sg_w:prde)
m+aran_l(m+are)_m(c:dt_n:sg_w:ajat)
byrigene_l(byrgen)_m(c:dt_n:sg_w:nono)
and_l(and)_m(w:coco)
hire_l(hire)_m(w:prpo)
dohtor_l(dohtor)_m(c:nm_n:sg_w:nono)
```

```
samod_l(samod)_m(w:av)
seo_l(se)_m(c:nm_g:fm_n:sg_w:prde)
ges+alige_l(ges+alig)_m(c:nm_n:sg_w:ajat)
Lucia_l(lucia)_m(c:nm_n:sg_w:nona)
```

In Section 1, the token is surrounded by opening and closing parentheses, which are separated from the text by a space. Subordinate clauses are numbered, and are enclosed within labelled square brackets inside the main clause token. The token reference follows immediately, surrounded by another set of parentheses, with no spaces. The reference consists of the Helsinki Corpus file name without the initial 'CO', followed by the volume reference where relevant, the page number, and the line number or record number. Page numbers, line numbers, and record numbers are taken directly from the Helsinki Corpus; see Kytö 1993: 55-56. See Appendix A for the list of files, reference names, and record number formats.

Part 2 of each token contains the word-for-word Modern English gloss. These glosses were constructed automatically, without regard for sense or reasonable translation, simply by using the first definition for each lemma (=base form) from Clark Hall 1960. It should be emphasized that the glosses are meant only as an aid, are not guaranteed to be accurate, and in fact frequently do not make much sense. Use them at your own risk! Better yet, do not use them at all!

Part 3 of each token contains the Old English data with morphological annotation. The data are listed one word per line, with the following fields:

Field 1: the Old English word as it appears in the text
Field 2 (beginning with '_l'): the Old English lemma corresponding to the word
Field 3 (beginning with '_m'): the morphological annotation
Field 4 (beginning with '_p'): for verbs with (separable) particles only, the particle.
Field 5 (beginning with '_c'): for lexical verbs only, the complementation code

In Format 1, each file begins with a header block of 13 to 17 lines containing text and copyright information, and may contain additional blocks within the file, depending on whether the Helsinki Corpus has supplied information relevant for the individual samples; coaelet3.o3, coaelive.o3, colaw2.o2, colaw4.o34, cowulf3.o3, and cowulf4.o34 contain file-internal blocks. The text information is taken directly from the Helsinki Corpus; see Kytö 1993: 40-55 for a complete description. A sample header block, from Bede's *Ecclesiastical History*, is given below:

```
/*****************************************************************
BEDE'S ECCLESIASTICAL HISTORY. THE OLD ENGLISH VERSION OF 'BEDE'S
ECCLESIASTICAL HISTORY OF THE ENGLISH PEOPLE', PARTS I,1; I,2. EARLY
ENGLISH TEXT SOCIETY, O.S. 95, 96. ED. T. MILLER. LONDON, 1959 (1890;
1891). PP. 104.12 - 124.24 (SAMPLE 1); PP. 252.4 - 272.18 (SAMPLE 2);
PP. 418.22 - 436.19 (SAMPLE 3)

<B COBEDE> <Q O2 NN HIST BEDEHE> <N BEDE> <A X> <C O2> <O 850-950> <M
850-950> <K NON-CONTEMP> <D WS/A> <V PROSE> <T HISTORY> <G TRANSL> <F
LATIN> <W X> <X X> <Y X> <H X> <U X> <E X> <J X> <I X> <Z NARR
NON-IMAG> <S SAMPLE X>

The Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English
 Copyright (C) 2000 Susan Pintzuk, Eric Haeberli, Ans van Kemenade,
                  Willem Koopman, and Frank Beths
*****************************************************************/
```

3.1.2 Format 2

Files in Format 2 contain only the Old English data with POS tags and syntactic bracketing and labelling and with a token reference; in other words, the data from Part 1 of each token in the Format 1 files. Each token is separated from previous and subsequent tokens by a blank line. The example from Section 3.1.3 is repeated below.

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN ,
1[L [wh-1 seo/PDN ] %co% %nn-1% [vt w+as/ET ] [vn geciged/VN ]
2[S %nn-1% [nn Euthicia/NMN ] S]2 L]1 , ] [pp betwux/PP
o+drum/JJD mannum/NND ] [pp to/PP +t+are/PDD m+aran/JJD
byrigene/NND ] , [o and/CC hire/PO dohtor/NNN samod/RR
, seo/PDN ges+alige/JJN Lucia/NMN ] . )
(AELIVE,I,210.5)
```

3.1.3 Format 3

Files in Format 3 again contain only the Old English data with POS tags, syntactic bracketing and labelling, and token references; but in this format the data is ‘unpacked’, i.e. separated by clause, with one clause (main or subordinate) per token. The token reference is repeated for each clause with no modification or addition; note that if the reference includes a line number, that number will be the number of the beginning of the sentence, not the beginning of each individual clause. Where a subordinate clause has been pulled out from the clause that contained it, a special trace is left to indicate the original location of the clause: {Zn}, where Z is the clause label, n is the clause number. The example from Section 3.1.2 is shown below as it appears in a Format 3 file:

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN ,
{L1} , ] [pp betwux/PP o+drum/JJD mannum/NND ] [pp to/PP
+t+are/PDD m+aran/JJD byrigene/NND ] , [o and/CC hire/PO
dohtor/NNN samod/RR , seo/PDN ges+alige/JJN Lucia/NMN ] . )
(AELIVE,I,210.5)

( 1[L [wh-1 seo/PDN ] %co% %nn-1% [vt w+as/ET ] [vn geciged/VN ]
{S2} L]1 ) (AELIVE,I,210.5)

( 2[S %nn-1% [nn Euthicia/NMN ] S]2 ) (AELIVE,I,210.5)
```

3.1.4 Format 4

Files in Format 4 contain all of the data from files in Format 2, with the annotation modified so that the data can be searched by CorpusSearch. The example from Section 3.1.2 is repeated below, followed by the Format 4 version.

Format 2:

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN ,
1[L [wh-1 seo/PDN ] %co% %nn-1% [vt w+as/ET ] [vn geciged/VN ]
2[S %nn-1% [nn Euthicia/NMN ] S]2 L]1 , ] [pp betwux/PP
o+drum/JJD mannum/NND ] [pp to/PP +t+are/PDD m+aran/JJD
byrigene/NND ] , [o and/CC hire/PO dohtor/NNN samod/RR
, seo/PDN ges+alige/JJN Lucia/NMN ] . )
(AELIVE,I,210.5)
```

Format 4:

```
( (IP (rt (RT +ta)) (vt (VT com)) (nn (JJN sum) (NNN wydewe) (, ,)
(IP-L (wh-1 (PDN seo)) (e %nn-1%) (e %co%) (vt (ET w+as)) (vn (VN geciged))
(IP-S (e %nn-1%) (nn (NMN Euthicia)))) (, ,)) (pp (PP betwux)
(JJD o+drum) (NND mannum)) (pp (PP to) (PDD +t+are) (JJD m+aran)
(NND byrigene)) (, ,) (o (CC and) (PO hire) (NNN dohtor) (RR samod)
(, ,) (PDN seo) (JJN ges+alige) (NMN Lucia)) (. .))
(ID AELIVE,I,210.5.2))
```

Notice the following differences in the Format 4 token:

- Main clauses are labelled IP; subordinate clauses are labelled IP-Z, where Z is the clause type. Labels are used only at the beginning of clauses.
- Subordinate clauses are not numbered.
- Square brackets have been replaced by parentheses.
- POS tags have been replaced by labels on brackets.
- Empty categories are dominated by a node labelled ‘e’.
- Punctuation is dominated by a node with the label of the punctuation.
- The token reference is dominated by a node labelled ‘ID’ and included within the token. The token reference also now contains a token number added as the last number in the reference; the token number is the relative number of the token within its file.
- Data contained bracketed html-like indicators (e.g. <Latin> ... </Latin>, <heading> ... </heading>, <HC:_...>, <BC:_...>) are now dominated by a node ‘CODE’.

3.2 Separating and joining words

In general, we have avoided altering the word boundaries of the Helsinki Corpus texts. There are two exceptions: 1) In cases where a particular word in the Helsinki Corpus was not listed in Clark Hall 1960, and where either joining the word to an adjacent word or separating the word into two parts produced a Clark Hall lexical item, we have done so. Words that have been joined together are indicated in the text by an underline character (‘_’) between the two parts; words that have been separated are indicated in the text by an underline character at the end of the first part.

```
( 1[B [cs +ta/RT +da/CS ] [nn he/PEN ] [rr hamwerd/RR ] [vt w+as/BT ]
[pp mid/PP his/PO heah_+tegenum/NND ] B]1 ) (AELIVE,I,318.179)

( [nn Se/PDN earm/NNN ] [vt wear+t/ET ] [vn geled/VN ] [rm
arwur+dlice/RM ] [pp on/PP scrine/NND of/PP seolfre/NND asmi+tod/VN ] ,
[pp on/PP sancte/NMG Petres/NMG mynstre/NND ] [pp binnan/PP
Bebbanbyrig/NMD ] , [pp be/PP +t+are/PDD s+a_strande/NND ] , )
(AELIVE,III,136.172)
```

```
( 1[B [cs o+d_+t+at/CS ] [nn heo/PEN ] [vt beceapode/VT ] [na +ta/PDA
scinendan/JJA gymmas/NNA , and/CC eac/RR hire/PO landare/NNA ] [pp
wi+d/PP licgendum/VGD feo/NND , ] B]1 ) (AELIVE,I,212.52)

( 4[B [cs +ta_/RT +da/CS ] [nn heo/PEN ] [vt hrepode/VT ] [na
+t+as/PDG H+alendes/NMG reaf/NNA ] B]4 ) (AELIVE,I,210.11)

( 3[L [wh-1 se_/PDN ] [co +te/CO ] %nn-1% [vt dem+d/VT ] [pp be/PP
+tam/PDD willan/NND ] L]3 ) (AELIVE,I,214.86)
```

2) In cases where a verb particle appears joined to its verb, we have separated the two. Since the position of particles is an important diagnostic for the structure of Old English clauses, we felt it was important to label particles separately to facilitate searches. Note that in the Modern English gloss, the particle is not glossed separately.

```
( 1[B [cs Mid/PP +dy/PDI ] [nn wit/PEN ] [rt +da/RT ] [pp in/PP +da/PDA
+teostro/NNA ] [pa in_/PA ] [vt eodon/VT ] B]1 ... ) (BEDE,13.426.9)

with that we-two then in those darknesses entered ...
```

4. Conventions used in this manual

For the remainder of this manual, the following conventions are used:

- nc/gc/lc/fc/ec/jc = case-marked constituent, where ‘c’ stands for n(ominative), a(ccusative), d(ative), g(enitive), or i(nstrumental).
- Z = any clause label
- z = any clause-internal label, of length 1 through 4 characters

In all of the documentation in Sections II and III of this manual, the annotation is described as it appears in Formats 1 through 3 of the Brooklyn Corpus. Those users who intend to search the Corpus using CorpusSearch on texts in Format 4 should keep in mind the differences listed in Section 3.1.4.

Section II: Part of Speech (POS) Tags

5. Introduction to POS tagging

Each Old English word in the corpus is marked with a POS tag, attached to the end of the word and preceded by a slash (/). The POS tags used in the Brooklyn Corpus will not be discussed in detail in this manual, since they were derived directly from the morphological annotation of Part 3 of the Format 1 files (see Section 3.1.1 for a brief description and Section 12 for the correspondence between POS tags and morphological annotation). For a complete description of the morphological annotation upon which the POS tags are based, contact Ans van Kemenade (a.v.kemenade@let.kun.nl).

Listed below are the POS tags used in the Brooklyn Corpus.

Adjectives	
normal	JJc(~)
interrogative	WJc
Adverbs	
locative	RL(~)
manner	RM
temporal	RT
other non-interrogative	RR(~)
interrogative	WR
Nouns	
common nouns	NNc(~)
names	NMc
Numbers	NR
Pronouns	
demonstrative	PDc
personal	PEc
possessive	PO(c)
man	PMc
other indefinites	PIc(~)
reflexive	PFc
interrogative	WPc
Verbs	
lexical	Vx(~)
copula 'be'	Bx(~)
auxiliary *habban* 'have'	Hx(~)
auxiliary 'be'	Ex(~)
modal	Mx(~)
auxiliary *wuton*	Ax
where x = V (infinitival), T (finite indicative/subjunctive), I (imperative), G (present participle), or N (past participle)	
Conjunctions / complementizers	
coordinating	CC(~)
subordinating	CS
complementizer	CO
Prepositions	PP
(Verb) particles	PA
Negative particle *ne*	NE
Interjections/exclamations	UH

6. POS tags

6.1 Adjectives

6.1.1 Normal adjectives: JJc(~)

Attributive and predicative adjectives are POS-tagged JJ, with case marking and optional negation.

```
( [nn +tis/PDN ] [vt com/VT ] [rt +ta/RT ] [pp to/PP earan/NND ] [d
+tam/PDD +a+delborenan/JJD cnihte/NND ... ] . ) (AELIVE,I,212.57)

this came then to ear that distinguished boy ...

( [nn He/PEN ] [vt w+as/BT ] [jn cystig/JJN ] [nd w+adlum/NND and/CC
wydewum/NND ] [pp swa/RR swa/CS f+ader/NNN ] , ) (AELIVE,IV,314.22)

he was charitable beggars and widows so so-as father,
```

Quantifiers are POS-tagged as adjectives when used as modifiers within NPs.

```
( [nd +te/PED sylf/PFD ] [rr so+dlice/RR ] [~ ne/NE ] [vt
genealec+a+d/VT ] [nn~ nan/JJN~ yfel/NNN ] ... ) (AELIVE,I,216.111)

you self truly not approaches no evil.

( [rr For+ty/RR ] [vt bi+d/BT ] [nn +anig/JJN +ting/NNN ] [jn full/JJN
] 1[B [cs +te/CS ] [nn sum/PIN ] [vt bi+d/BT ] [jn wana/JJN ] B]1 , )
(BOETH,83.10)

therefore is any thing full when some is wanting,
```

6.1.2 Interrogative adjectives: WJc

The POS tag WJc is used only for the lexical item *hwilc*. Interrogative adjectives are used only within [wh constituents.

```
( 1(Q [wh-1 On/PP hwilcum/WJD godum/NND ] [vt tihst/VT ] [nn +tu/PEN ]
[na us/PEA ] 2[U %pp-1% [av to/PP ] [vv gelyfenne/VVD ] U]2 ? Q)1 )
(AELIVE,I,316.145)

on which gods invite you us to allow?
```

6.2 Adverbs

For the POS-tags of the adverbs in the corpus, we have simply used the adverb word class used in the morphological section of the token (part 3 of Format 1 data):

[rl ...]	locative adverbs
[rm ...]	manner adverbs
[rt ...]	temporal adverbs
[rr ...]	all other adverbs

Users should be warned that the adverb types are not always consistent; if you are investigating the behavior of adverbs in Old English, we advise you to collect all clauses with adverbs and make your own division of types. Examples are given below.

6.2.1 Locative adverbs: RL(~)

```
( 1(D [~ Ne/NE ] [vt synd/BT ] [nn ge/PEN 2[L %wh-1% [co +te/CO ] %nn-1%
[rl +t+ar/RL ] [vt spreca+d/VT ] L]2 ] , D)1 ) (AELIVE,I,214.73)

not are you that there speak,
```

6.2.2 Manner adverbs: RM

```
( [rt +ta/RT ] [vt geb+ad/VT ] [nn Georius/NMN ] [na hine/PFA ] [rm
bealdlice/RM ] [pp to/PP Gode/NMD ] , {V1} ) (AELIVE,I,312.89)

then asked George him(self) boldly to God,
```

6.2.3 Temporal adverbs: RT

```
( [rt Nu/RT ] [nn ic/PEN ] [at wylle/MT ] [na me/PEA sylfe/PFA ] [nd
him/PED ] [rr so+dlice/RR ] [vv geoffrian/VV ] ... ) (AELIVE,I,214.66)

now I will me self him truly offer ...
```

6.2.4 Other non-interrogative adverbs: RR(~)

```
( [pp +after/PP +disum/PDD gebede/NND ] [vt b+arst/VT ] [pp ut/PA of/PP
heofonum/NND ] [nn swy+de/RR f+arlic/JJN fyr/NNN ] , )
(AELIVE,I,316.141)

after this prayer broke out of skies very-much sudden fire,

( [+ and/CC ] [rr~ na/RR~ ] [rt leng/RT ] [nn heo/PEN ] [~ ne/NE ] [vt
gebad/VT ] 1[B [cs +donne/CS ] [nn hit/PEN ] [nn d+ag/NNN ] [vt w+as/BT
] B]1 , ) (APOLLO,28.18.1)

and not longer she not stayed when it day was,
```

+te when used as an article in late Old English texts is lemmatized as *+ty*, classified as ‘w:av’ in the morphological section of the token, and POS-tagged as ‘/RR’:

```
( [+ and/CC ] 1[B [cs to/PP +dam/PDD ] [co +t+at/CO ] [nn he/PEN ] [na
hi/PEA ] [rt +te/RR lengc/RT ] [vv brucan/VV ] [at mihte/MT ] [ng
his/PO dohtor/NNG arleasan/JJG bridbeddes/NNG ] B]1 2[B [+ and/CC ] %cs%
%co% %nn% %at% [pp him/PED fram/PP ] [vv adryfan/VV ] [na +ta/PDA 3[L
%wh% [co +de/CO ] [ng hyre/PEG ] [vt girndon/VT ] [pp to/PP rihtum/JJD
gesynscipum/NND ] L]3 ] B]2 , [nn he/PEN ] [vt asette/VT ] [rt +da/RT ]
[na r+adels/NNA ] 4[R [rr +tus/RR ] [vg cwe+dende/VG ] {D1} R]4 : )
(APOLLO,4.3.5)

and to that that he her therefore longer use could his daughter
dishonorable bridal-bed and him from drive those that her yearned to
straight cohabitations, he set then enigma thus saying:

...
```

```
+te_l(+ty)_m(w:av)
lengc_l(leng)_m(w:avti)
...
```

6.2.5 Interrogative adverbs: WR

(1(Q [wh-1 **Hw+ar/WR**] %rl-1% [vt eart/BT] [nn +tu/PEN] [rt nu/RT] [o gefera/NNN] ? Q)1) (AELIVE,IV,324.148)

where are you now associate?

6.3 Nouns

6.3.1 Common nouns: NNc(~)

(1(V 2[B [cs Gif/CS] [nn +tu/PEN] [vt gelyfst/VT] , [o **modor/NNN**] , [nd +tysum/PDD m+aran/JJD **godspelle/NND**] B]2 , [vt gelyf/VI] 3[T [co +t+at/CO] [nn Agathes/NMN] [vt geearnode/VT] [pp +at/PP Criste/NMD] , 4[B [cs +ta_/RT +da/CS] [nn heo/PEN] [pp for/PP his/PO **naman/NND**] [vt +drowode/VT] 5[B [co +t+at/CO] [nn heo/PEN] [na hine/PEA] [rt symle/RT] [vt h+abbe/VT] [pp on/PP **andwerdnysse/NND**] [pp on/PP ecere/JJD **blysse/NND**] B]5 B]4 T]3 . V)1) (AELIVE,I,210.14)

if you allow, mother, this famous gospel, allow that Agatha earned at Christ, then when she for his name endured that she him ever have on presence on perpetual bliss.

Negative quantifiers that are heads of NPs are tagged as negative common nouns:

([~ ne/NE] [at miht/MT] [nn +du/PEN] [na~ **naht/NNA~**] [vv l+adan/VV] [pp of/PP +tysum/PDD life/NND] [pp mid/PP +te/PED] ,) (AELIVE,I,212.46)

not can you nothing lead of this life with you,

6.3.2 Names: NMc

([+ &/CC] [nn se/PDN **Cenwalh/NMN**] [vt w+as/BT] [nn **Cynegilses/NMG** sunu/NNN] ;) (CHROA2,2.14)

and that C. was C. son;

6.4 Numbers: NR

NR is used only for the first part of a complex numeral; cardinal and ordinal numbers are POS-tagged JJc, and nominal numbers are POS-tagged NNc.

([+ and/CC] %nn% [pp on/PP eallum/JJD d+adum/NND] [na his/PO Drihten/NMA] [vt arwur+dode/VT] , 1[B [cs o+d_+t+at/CS] [nn he/PEN] [pa of_/PA] [vn slagen/VN] [vt wear+d/ET] [pp for/PP his/PO folces/NNG ware/NND] , [pp on/PP +tam/PDD **nigo+dan/JJD** geare/NND 2[L %wh-1% [co +te/CO] %rt-1% [nn he/PEN] [ng rices/NNG] [vt geweold/VT] L]2] , 3[B [cs +ta/RT +ta/CS] [nn he/PEN sylf/PFN] [vt w+as/BT] [pp

```
on/PP ylde/NND ] [nn eahta/NR and/CC +trittig/NNN geara/NNG ] B]3
B]1 . ) (AELIVE,III,134.143)
```

```
and on all deeds his Lord honored, until he struck-off became before his
people sea, on that ninth year that he rule ruled, then when he self was
on age eight and thirty years.
```

6.5 Pronouns

6.5.1 Demonstrative pronouns: PDc

Demonstratives can be used as nominals, determiners, or relative pronouns in wh- clauses. Note that *þe* is POS-tagged as a complementizer, not a pronoun, when used in a wh- clause.

```
( [nn +tis/PDN ] [vt com/VT ] [rt +ta/RT ] [pp to/PP earan/NND ] [d
+tam/PDD +a+delborenan/JJD cnihte/NND ... ] . ) (AELIVE,I,212.57)

this came then to ear that distinguished boy ...

( [+ and/CC ] %nn% %na% [vt l+addan/VT ] [pp to/PP +t+are/PDD
byrig/NND 1[L %wh-1% [co +te/CO ] [nn he/PEN ] [pp on/PP %nx-1% ] [vt
+drowode/VT ] L]1 ] , ) (AELIVE,I,318.171)

and led to that fort that he on endured,

( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN , 1[L [wh-1 seo/PDN
] %co% [vt w+as/ET ] [vn geciged/VN ] 2[S %nn-1% [nn Euthicia/NMN ] S]2
L]1 , ] ... ) (AELIVE,I,210.5)

then came some widow, that was called Eutychia ...
```

6.5.2 Personal pronouns: PEc

```
( ... 3[B [cs swa/CS ] [nn he/PEN ] [na lyft/NNA ] [pa on_/PA ] [vt
styrge/VT ] B]3 4[B [+ ond/CC ] %cs% %nn% [na his/PO hond/NNA ] [pp
swa/RR swa/CS 5[U [na us/PEA ] [av to/PP ] [vv sleanne/VV ] U]5 ] ...
B]4 ... ) (BEDE,3.270.2)

... so-as he air move and his hand so so-as us to strike ...

( [+ ac/CC ] [nn hi/PEN ealle/JJN ] [~ ne/NE ] [at mihton/MT ] [nd
hyre/PED anre/JJD ] [vv gehelpan/VV ] . ) (AELIVE,I,210.8)

but they all not could her one help.

( ... 5[B [co +t+at/CO ] [nn heo/PEN ] [na hine/PEA ] [rt symle/RT ]
[vt h+abbe/VT ] [pp on/PP andwerdnysse/NND ] [pp on/PP ecere/JJD
blysse/NND ] B]5 ... V)1 ) (AELIVE,I,210.14)

... that she him ever have on presence on perpetual bliss.

( ... 3[L %wh% [co +de/CO ] [ng hyre/PEG ] [vt girndon/VT ] [pp to/PP
rihtum/JJD gesynscipum/NND ] L]3 ... ) (APOLLO,4.3.5)
```

```
... that her yearned to straight cohabitations ...
```

6.5.3 Possessive pronouns: PO(c)

Case is marked on all forms of possessive pronouns except 3rd person, which are invariant forms.

```
( [nn We/PEN ] [vt syndon/BT ] [nn +tyne/PON ceastergewaran/NNN ] 1[R
[pp of/PP +a+delum/JJD gebyrdum/NND ] [vn geborene/VNN ] R]1 )
(APOLLO,30.19.10)

we are your burghers of noble descents carried.

( 1(V [vt hlyst/VI ] [ng mines/POG r+ades/NNG ] V)1 )
(AELIVE,I,212.46)

listen my advice;

( 1[B [cs +teah/CS ] [nn +tu/PEN ] [na mine/POA hand/NNA ] [vt
ahebbe/VT ] [pp to/PP +dinum/POD h+a+tengilde/NND ] B]1 ... )
(AELIVE,I,214.86)

although you my hand raise to your idolatry ...

( [rr for+dy/RR ] [vt fundia+d/VT ] [nn +alc/JJN gesceaft/NNN ] [rl
+tider/RL %L-1% ] [rr swi+dost/RR ] 1[L-1 [wh-2 +tider/CS ] %co% %rl-2%
[nn his/PO eard/NNN &/CC his/PO h+alo/NNN ] [rr swi+dost/RR ] [vt
bio+d/BT ] L]1 , ) (BOETH,92.19)

therefore tend each creatures thither most where his country and his
health most are,

( ... 1[B [cs +tonne/CS ] [nn hie/PEN ] [nd heora/PO willan/NND ] [at
moton/MT ] [rm wel/RM ] [vv wealdan/VV ] B]1 . ) (OROSIU,60.5)

... when they their mind may well rule.
```

6.5.4 *man*: PMn

man is used only in the nominative case.

```
( 1[B [cs Gif/CS ] [nn mon/PMN ] [na folcleasunge/NNA ] [vt gewyrce/VT
] B]1 ... ) (LAW2,66.32)

if one slander prepare ...
```

6.5.5 Other indefinites: PIc(~)

These are non-negative quantifiers used as heads of NPs:

```
( [+ and/CC ] [rt sona/RT ] [rt +ta/RT ] [pa inn/PA ] [vt eode/VT ] [nn
an/PIN +t+as/PDG cyninges/NNG +tegna/NNG ... ] , ) (AELIVE,III,130.87)

and soon then in went one that king servants that his alms kept,
```

([f-1 1[H [wh-2 swa/CS **hw+at/PIA**] [co swa/CO] %na-2% [nn +tu/PEN] [nd minum/POD lichaman/NND] [vt dest/VT] H]1] , [~ ne/NE] [at m+ag/MT] [nn-1 +t+at/PDN] [vv belimpan/VV] [pp to/PP me/PED] .) (AELIVE,I,214.92)

so-as anyone so-as you my body do, not can that concern to me.

([+ &/CC] [rl +t+ar/RL] [vt wear+d/BT] [nn +tara/PDG Denescra/JJG micle/RR **ma/PIN**] [pa of_/PA] [vn slegenra/VNG] ...) (CHROA3,132.1001.9)

and there was those Danish greatly more struck-off ...

(1[B [cs Gif/CS] [nn **hwa/PIN**] [vt adelfe/VT] [na w+aterpyt/NNA] B]1 ...) (LAW2,34.1.22)

if anyone dig well ...

(... 1[B [cs +te/CS] [nn **sum/PIN**] [vt bi+d/BT] [jn wana/JJN] B]1 ,) (BOETH,83.10)

when some is wanting,

(... 2[Q [wh-1 hu/WR **fela/PIN**] %co% [rl +t+ar/RL] [nn %nn-1% swelcerra/JJG manna/NNG] [vt w+are/BT] 3[M [cs swelce/CS] [nn he/PEN] [vt w+as/BT] M]3 Q]2 .) (OROSIU,68.25)

... how many there such persons were just-as he was.

(... 1[Q [wh hw+a+der/CS] %co% [nn he/PEN] [pp +after/PP f+ace/NND] [at meahte/MT] [na **o+derne/PIA** %L-1%] [vv findan/VV] , 2[L-1 %wh-2% [co +te/CO] %nx-2% [nn mon/PMN] [pp to/PP biscope/NND] [vv hadian/VV] [at meahte/MT] L]2 Q]1 .) (BEDE,1.254.13)

... whether he after interval could other find, that one to bishop ordain could.

(1[B [cs Gif/CS] [nn hwa/PIN] [pp to/PP **hw+a+drum/PID** +tissa/PDG] [vn genied/VN] [vt sie/ET] [pp on/PP woh/NNA] ... B]1 ...) (LAW2,46.1.1)

if anyone to both these forced be on bending ...

(1(D %ne-1% [nn-2 Se/PDN %L-3%] [nd me/PED] [vt +dinc+d/VT] 2[S-1 %nn-2% [jn ges+aligra/JJN] S]2 3[L-3 %wh-4% [co +te/CO] %nn-4% [na **hw+athwugu/PIA**] [vt h+af+d/VT] L]3 . D)1) (BOETH,119.4)

that me appears more-fortuitous that something has.

([+ &/CC] [nn ures/POG hlafordes/NNG ger+adnes/NNN &/CC his/PO witena/NNG] [vt is/BT] , 1[T [co +t+at/CO] [nn muneca/NNG **gehwylc/PIN** ...] [vt do/VT] 4[B [cs swa/CS] [nd him/PED] [nn +tearf/NNN] [vt is/BT] B]4 T]1 ...) (LAW3,238.5) and our lord agreement and his sages is, that monks each ... do so-as him need is ...

6.5.6 Reflexive pronouns: PFc

This category includes the lexical item *self* , personal pronouns used reflexively, and personal pronouns used as benefactives when their referent is the same as the subject.

([nd +te/PED **sylf/PFD**] [rr so+dlice/RR] [~ ne/NE] [vt genealec+a+d/VT] [nn~ nan/JJN~ yfel/NNN] ...) (AELIVE,I,216.111)

you self truly not approaches no evil.

(1(D 2[B [cs +teah/CS] [nn he/PEN] [na hit/PEA] [ln **silf/PFN**] [vt forswige/VT] B]2 , [nn his/PO gegirla/NNN] [na hine/PEA] [vt geswutela+d/VT] . D)1) (APOLLO,22.14.10)

although he it self suppress, his dress him shows.

(1[B [cs Gif/CS] [nn mon/PMN] [vt~ n+abbe/VT~] [rr buton/RR] [na anfeald/JJA hr+agl/NNA 2[L %wh-1% %co% 3[U [na **hine/PFA**] [pp mid/PP %nx-1%] [av to/PP] [vv wreonne/VV] U]3 ... B]1 ... .) (LAW2,38.36.1)

if one not-have outside single dress him(self) with to cover ...

(1[B [cs Gif/CS] [nn hi/PEN] [na **hie/PFA**] [~ ne/NE] [vt gesamnien/VT] B]1 ...) (LAW2,60.19.1)

if they them(selves) not assemble ...

([rt Nu/RT] [vt bidde/VT] [nn we/PEN] [na +te/PEA] 1[T [co +t+at/CO] [nn +tu/PEN] [vt geceose/VT] [nd **+te/PFD**] [na +anne/PIA] [pp of/PP us/PED +trym/JJD] ...) (APOLLO,30.19.12)

now ask we you that you choose you(yourself) one of us three ...

6.5.7 Interrogative pronouns: WPc

Interrogative pronouns are used only within [wh constituents.

(1(Q [wh-1 **hw+at/WPN**] %nn-1% [vt is/BT] [nn se/PDN intinga/NNN] ... ? Q)1) (AELIVE,I,216.108)

who is that matter ... ?

6.6 Verbs

In this section of the manual, ‘x’ used in conjunction with a verb label stands for one of the following: V (infinitival), T (finite indicative/subjunctive), I (imperative), G (present participle), N (past participle)

6.6.1 Lexical: Vx(~)

([rt Nu/RT] [nn ic/PEN] [at wylle/MT] [na me/PEA sylfe/PFA] [nd him/PED] [rr so+dlice/RR] [vv **geoffrian/VV**] ...) (AELIVE,I,214.66)

```
now I will me self him truly offer ...

( [pp +after/PP +disum/PDD gebede/NND ] [vt b+arst/VT ] [pp ut/PA
of/PP heofonum/NND ] [nn swy+de/RR f+arlic/JJN fyr/NNN ] , )
(AELIVE,I,316.141)

after this prayer broke out of skies very-much sudden fire,

(V [vt Gehrepa/VI ] [na hire/PO byrigene/NNA ] , V) (AELIVE,I,210.19)

touch her grave,

( ... 1[B [co +t+at/CO ] [pp on/PP swelce/JJA healfe/NNA 2[M [cs
swelce/CS ] [nn hie/PEN ] [rt +tonne/RT ] [vg winnende/VG ] [vv
beon/EV ] [at woldan/MT ] ... M]2 ] ... B]1 . ) (OROSIU,106.11)

... that on such half just-as they then laboring be would ...

( [vt~ Nis/ET~ ] [nn Angelcynn/NMN ] [vn bed+aled/VN ] [ng
Drihtnes/NMG halgena/NNG ] ... ) (AELIVE,IV,332.259)

not-is English-people deprived Lord saints ...
```

6.6.2 Copula 'be': Bx(~)

Bx is used for the POS-tag of four verbs meaning 'be' when they are used as copulas: *beon*, *eom*, *wesan*, and *weor+tan*. . In the Brooklyn Corpus, copula 'be' is not used in present participle form.

```
( ... 2[M [cs +te/CS ] [nn +t+as/PDG hweoles/NNG felga/NNN ] [at
magon/MT ] [vv bion/BV ] [pp on/PP +d+am/PDD f+arelte/NND ] ... M]2 ]
... ) (BOETH,130.8)

neither to nothing not are, if they by no portion not are fastened to
God. then more when that wheel felloes can be on that way, if they not
are fast on those spokes, and those spokes on that axis.

( [nn He/PEN ] [vt w+as/BT ] [jn cystig/JJN ] [nd w+adlum/NND and/CC
wydewum/NND ] [pp swa/RR swa/CS f+ader/NNN ] , ) (AELIVE,IV,314.22)

he was charitable beggars and widows so so-as father,

( [nn Ealle/JJN , we/PEN ] [at scoldan/MT ] [vv forweor+dan/VV ] [gd
ecan/JJD dea+de/NND ] , 1[N %ne-1% [vt~ n+are/BT~ ] 2[T-1 [co +t+at/CO
] [nn Crist/NMN ] [pp for/PP us/PED ] [na dea+d/NNA ] [vt +trowode/VT ]
T]2 N]1 . ) (WULF3,227.42)

all, we must perish perpetual death, not-were that Christ before us
death endured.

( 1(V [vt beo+d/BI ] [ng +tyses/PDG ] [jn gemyndig/JJN ] ... V)1 )
(AELET3,142.211)

be this mindful ...
```

```
( %ne-1% [jn Betere/JJN ] [nd him/PED ] [vt w+are/BT ] 1[T-1 [co
+t+at/CO ] [nn he/PEN ] [nn man/NNN ] [vt~ n+are/ET~ ] [rt +afre/RT ]
[vn geworden/BN ] T]1 2[M [cs +tonne/CS ] [nn he/PEN ] [vt gewurde/VT
] M]2 . ) (WULF3,230.86)

better him were that he person not-were ever been when he became.
```

6.6.3 Auxiliary *habban* 'have': Hx(~)

```
( ... 1[B [cs swa/CS ] [nn Datianus/NMN ] [nd him/PED ] [vn gediht/VN ]
[at h+afde/HT ] B]1 ... ) (AELIVE,I,316.158)

... so-as Datian them arranged had ...

( 1(D [at~ Nabbe/HT~ ] [nn ge/PEN ] [rr~ na/RR~ ] [na godne/JJA
timan/NNA ] [vn aredodne/VNA ] . D)1 ) (APOLLO,30.19.13)

not-have you not good time made-ready.
```

There are no examples in the Brooklyn Corpus of auxiliary *habban* in imperative or participial form, and only two cases in infinitival form.

```
( 1(Q [wh Mid/PP hu/WR micle/JJI feo/NND ] %pp% [at woldest/MT ] [nn
+tu/PEN ] [rt nu/RT ] [av habban/HV ] [vn geboht/VN ] ... Q)1 )
(BOETH,89.26)

with how great cattle would you now have bought ...
```

6.6.4 Auxiliary 'be': Ex(~)

Ex is used for the POS-tag of four verbs meaning 'be' when they are used as auxiliaries: *beon*, *eom*, *wesan*, and *weor+tan*.. In the Brooklyn Corpus, auxiliary 'be' is not used in imperative or participial form.

```
( ... 1[B [co +t+at/CO ] [pp on/PP swelce/JJA healfe/NNA 2[M [cs
swelce/CS ] [nn hie/PEN ] [rt +tonne/RT ] [vg winnende/VG ] [vv
beon/EV ] [at woldan/MT ] ... M]2 ] ... B]1 . ) (OROSIU,106.11)

... that on such half just-as they then laboring be would ...

( [nn Se/PDN earm/NNN ] [vt wear+t/ET ] [vn geled/VN ] [rm
arwur+dlice/RM ] [pp on/PP scrine/NND of/PP seolfre/NND asmi+tod/VN ] ,
[pp on/PP sancte/NMG Petres/NMG mynstre/NND ] [pp binnan/PP
Bebbanbyrig/NMD ] , [pp be/PP +t+are/PDD s+a_strande/NND ] , )
(AELIVE,III,136.172)

( [vt~ Nis/ET~ ] [nn Angelcynn/NMN ] [vn bed+aled/VN ] [ng
Drihtnes/NMG halgena/NNG ] ... ) (AELIVE,IV,332.259)

not-is English-people deprived Lord saints ...
```

6.6.5 Modal: Mx(~)

The following lexical items are categorized as modals: *+urfan*, *cunnan*, *durran*, *magan*, *motan*, *sculan*, *willan*. In the Brooklyn Corpus, modals are used only in tensed forms.

```
( ... 4[T-1 [co +t+at/CO ] [nn he/PEN ] [na biscopas/NNA ] [vv hadian/VV
] [at moste/MT ] T]4 ... ) (BEDE,7.118.26)
```

```
... that he bishops ordain might.
```

```
( ... 2[G [co +t+at/CO ] [nn he/PEN ] [at~ nolde/MT~ ] [vv abugan/VV ]
[pp to/PP bysmorfullum/JJD leahtrum/NND ] G]2 , ) (AELIVE,IV,314.16)
```

```
... that he not-would bow to infamous vices,
```

6.6.6 Auxiliary *wuton*: Ax(~)

wuton appears only in tensed form: *utan*, *uton*., or *wutan*.

```
( [+ ac/CC ] [at utan/AT ] [vv don/VV ] 1[B [cs swa/CS ] [nd us/PED ]
[nn +tearf/NNN ] [vt is/BT ] B]1 , ) (WULF3,181.123)
```

```
but let-us do so-as us need is,
```

6.6.7 Case marking of verbs

Verbs may be case-marked when they are non-finite.

```
( 1(Q [wh-1 On/PP hwilcum/WJD godum/NND ] [vt tihst/VT ] [nn +tu/PEN ]
[na us/PEA ] 2[U %pp-1% [av to/PP ] [vv gelyfenne/VVD ] U]2 ? Q)1 )
(AELIVE,I,316.145)
```

```
on which gods invite you us to allow?
```

```
( ... 1[B [cs o+d_+t+at/CS ] [nn heo/PEN ] [vt beceapode/VT ] [na
+ta/PDA scinendan/JJA gymmas/NNA , and/CC eac/RR hire/PO landare/NNA ]
[pp wi+d/PP licgendum/VGD feo/NND , ] B]1 ) (AELIVE,I,212.52)
```

```
... until she sold those shining gems, and also her landed-property with
lying cattle,
```

6.7 Conjunctions and complementizers

6.7.1 Coordinating conjunctions: CC(~)

```
( [+ And/CC ] [rr eac/RR ] [nn +ta/PDN halgan/JJN canones/NNN ] [nd
gehadodum/VND ] [vt forbeoda+d/VT ] [o ge/CC bisceopum/NND ge/CC
preostum/NND ] , 1[U [av to/PP ] [vv beonne/BVD ] [pp embe/PP
+teofas/NNA ] U]1 ... ) (AELIVE,IV,330.220)
```

```
and also those holy canons ordained prohibit and bishops and priests, to
be around criminals ...
```

```
( [+ &/CC ] %nn% [rt +ta/RT ] [pp +t+ar/RL to/PP ] [vt eodon/VT ] ; )
(CHROA2,48.755.23)
```

```
and then there to went;
```

```
( [fn-1 Se/PDN cirlisca/JJN mon/NNN ... ] , [vt slea/VT ] [nd-1 him/PED
] [nn mon/PMN ] [na hond/NNA ] [pa of/PA ] [o o+d+de/CC fot/NNA ] . )
(LAW2,104.37)

that common person ... , strike him one hand off or foot.

( [fn Se/PDN 1[L %wh-1% [co +de/CO ] %nn-1% [na hine/PEA ] [rt +tonne/RT
] [rr nedes/RR ] [pa of_/PA ] [vt sloge/VT ] [o o+d+de/CC unwillum/RM
o+d+de/CC ungewealdes/RM ] ... ) (LAW2,30.13.2)

that that him then of-need struck-off or unwillingly or involuntarily
...

( ... 2[T [co +t+at/CO ] [nn +tu/PEN ] [na~ nanne/JJA~ brydguman/NNA ]
[rr~ n+afre/RR~ ] [nd me/PED ] [~ ne/NE ] [vt namige/VT ] T]2 , 3[T [+~
ne/CC~ ] %co% %nn% [pp of/PP minum/POD lichaman/NND ] [na deadlicne/JJA
w+astm/NNA ] [~ ne/NE ] [vt sece/VT ] T]3 ; ) (AELIVE,I,212.36)

... that you no bridegroom never me not name , neither of my body mortal
growth not seek;
```

6.7.2 Subordinating conjunctions: CS(~)

```
( ... 2[B [cs gif/CS ] [nn heo/PEN ] [vv suwian/VV ] [at~ nolde/MT~ ]
B]2 ... . ) (AELIVE,I,214.68)

... if she be-silent not-would.

( ... 1[B [cs +donne/CS ] [nn hit/PEN ] [nn d+ag/NNN ] [vt w+as/BT ]
B]1 , ) (APOLLO,28.18.1)

... when it day was,

( ... 1[B [cs o+d/CS ] [co +t+at/CO ] [nn he/PEN ] [nd hire/PED ] [na
swingele/NNA ] [vt behet/VT ] ... B]1 . ) (AELIVE,I,214.68)

... until that he her whip promised ...

( ... 1[B [cs butan/CS ] %nn% [nd +tam/PDD lyfigendan/JJD drihtne/NMD
] [na +tas/PDA lac/NNA ] [vt geoffrode/VT ] B]1 . ) (AELIVE,I,214.64)

... except that living Lord these plays offered.

( ... 1[B [cs for+tan/CS ] [co +te/CO ] [nn he/PEN ] [pp on/PP his/PO
godspelle/NND ] [vt cw+a+d/VT ] , {D1} B]1 , ) (AELIVE,I,214.73)

... because that he on his gospel said,
```

6.7.3 Complementizers: CO

The POS tag CO is used for invariant *þe* or *þæt*. in various types of subordinate clauses, and for the second *swa* in *swa ... swa* relative clauses (see Sections 8.3.2.4 and 8.3.3.1).

```
( ... 1[B [cs for+tan/CS ] [co +te/CO ] [nn he/PEN ] [pp on/PP his/PO
godspelle/NND ] [vt cw+a+d/VT ] , {D1} B]1 , ) (AELIVE,I,214.73)
```

... because that he on his gospel said,

(... 3[L %wh-2% [co **+te/CO**] %nx-2% [nd him/PED] [vt bead/VT] [nn Hinguar/NMN] L]3 ...) (AELIVE,IV,318.59)

... that him commanded Hingwar.

(... 3[G [co **+t+at/CO**] [nn an/JJN mynet/NNN] [vt gange/VT] [pp ofer/PP ealle/JJA +tas/PDA +teode/NNA] [pp butan/PP +alcan/JJD false/NND] G]3 ...) (LAW3,314.7.8)

... that one coin go over all this nation out-of each falsehood ...

(1(D [nn Hluttor/JJN offrung/NNN] [nn-1 +t+at/PDN] [vt is/BT] , [o and/CC licwur+de/JJN Gode/NMD] , 2[T-1 [co **+t+at/CO**] [nn mann/PMN] [na wydewan/NNA] [vt geneosige/VT] T]2 ... D)1) (AELIVE,I,212.60)

pure sacrifice that is, and pleasing God, that one widows visit ...

(... 5[B [co **+t+at/CO**] [nn he/PEN] [at wolde/MT] [pp mid/PP his/PO l+afnesse/NND &/CC mid/PP his/PO bl+atsunge/NND] [na +t+at/PDA willsume/JJA weorc/NNA] [pa on_/PA] [vv ginnan/VV] ... B]5 .) (BEDE,12.418.22)

... that he would with his permission and with his consecration that desirable work begin ...

([f-1 1[H [wh-2 swa/CS hw+at/PIA] [co **swa/CO**] %na-2% [nn +tu/PEN] [nd minum/POD lichaman/NND] [vt dest/VT] H]1] , [~ ne/NE] [at m+ag/MT] [nn-1 +t+at/PDN] [vv belimpan/VV] [pp to/PP me/PED] .) (AELIVE,I,214.92)

so-as anyone so-as you my body do, not can that concern to me.

6.8 Prepositions: PP

Prepositions always have an object, either overt or empty.

([rt +ta/RT] [pp **+after/PP** +t+are/PDD m+assan/NND] [nn seo/PDN modor/NNN and/CC seo/PDN dohtor/NNN] [vt astrehton/VT] [na hi/PFA] [pp **on/PP** gebedum/NND] [pp **+at/PP** +t+are/PDD byrgene/NND] .) (AELIVE,I,210.20)

then after that mass that mother and that daughter extended them(selves) on prayers at that grave.

([+ and/CC] %nn% %na% [vt l+addan/VT] [pp **to/PP** +t+are/PDD byrig/NND 1[L %wh-1% [co +te/CO] [nn he/PEN] [pp **on/PP** %nx-1%] [vt +drowode/VT] L]1] ,) (AELIVE,I,318.171)

and led to that fort that he on endured,

```
( [+ and/CC ] %nn% [vt clypode/VT ] [nd-1 hyre/PED ] [rr +tus/RR ] [pp
to/PP %nd-1% ] , 1[R [vg clypigende/VG ] [rl ufenne/RL ] , {Q1} R]1 )
(AELIVE,I,210.22)
```

```
and spoke her thus to, speaking from-above,
```

6.9 (Verb) particles: PA

Adverbial particles associated with verbs are POS-tagged /PA. The following are the Old English lexical items we have identified as particles: *adun(e), +after, aweg, (of)dune, fore, for+t, fram, geond, in, mid, ni+ter, of, ofer, ongean, on, onweg, to, +turh, under, up, ut, wi+t, wi+ter, ymb(e).* For examples, see Section 9.6.

6.10 Negative particle *ne:* NE

A distinction is made between the negative particle *ne*, which always appears immediately before the finite verb and is POS-tagged /NE, and the negative conjunction *ne*, which is POS-tagged /CC~.

```
( [+ ac/CC ] [nn hi/PEN ealle/JJN ] [~ ne/NE ] [at mihton/MT ] [nd
hyre/PED anre/JJD ] [vv gehelpan/VV ] . ) (AELIVE,I,210.8)
```

```
but they all not could her one help.
```

```
( [+~ ne/CC~ ] [pp~ on/PP na+tre/JJD~ healfe/NND ] [nn he/PEN ] [~
ne/NE ] [vt ahylde/VT ] [na his/PO +teawas/NNA ] , ) (AELIVE,IV,314.16)
```

```
neither on neither half he not bent his usages,
```

When negation appears attached to verbs and other lexical items, ~ is appended to the POS-tag, as in the examples below:

```
( ... 2[G [co +t+at/CO ] [nn he/PEN ] [at~ nolde/MT~ ] [vv abugan/VV ]
[pp to/PP bysmorfullum/JJD leahtrum/NND ] G]2 , ) (AELIVE,IV,314.16)
```

```
... that he not-would bow to infamous vices,
```

```
( ... %np% [pp mid/PP nanum/JJD~ leohtran/JJD +dinge/NND ] [vt
gebete/VT ] ... 4[B [co +t+at/CO ] [na hie/PEA ] [nn mon/PMN ] [rr~
na/RR~ ] [gd undeorran/JJD weor+de/NND ] [at moste/MT ] [vv lesan/VV ]
... B]4 . ) (LAW2,66.32)
```

```
... with no lighter thing repair ... that her one not cheaper value
might loosen ...
```

6.11 Interjections and exclamations: UH

Interjections and exclamations play no role in the syntax of the clause, and they are normally enclosed in [o ...]:

```
( 1(Q [vt Eart/BT ] [nn +tu/PEN ] [o la/UH ] [nn God/NMN ] ? Q)1 )
(AELIVE,I,214.72)
```

```
are you lo God?
```

([+ and/CC] [nn se/PDN halga/JJN Georius/NMN] [vt si+dode/VT] [pp to/PP Criste/NMD , 1[L [wh-1 mid/PP +dam/PDD] %co% %pp-1% [nn he/PEN] [rt a/RT] [vt wuna+d/VT] [pp on/PP wuldre/NND] L]1] ; [o **Amen/UH**] .) (AELIVE,I,318.179)

and that holy George went to Christ, with that he always inhabits on glory; amen.

([o **Hw+at/UH**] [rt +da/RT] [nn Georius/NMN] [pp to/PP eor+dan/NND] [vt abeah/VT] ...) (AELIVE,I,316.134)

what then George to ground bowed ...

(1(D [o **Eala/UH** +tu/PEN s+a/NNG Neptune/NMN , manna/NNG bereafigend/NNN and/CC unsc+a+d+digra/JJG beswicend/NNN] , [nn +tu/PEN] [vt eart/BT] [jn w+alreowra/JJN] [pp +tonne/CS Antiochus/NMN se/PDN cyngc/NNN] . D)1) (APOLLO,16.12.4)

alas you sea Neptune, persons dispoiler and innocent deceiver, you are crueler when Antiochus that king.

Section III: Syntactic Bracketing and Labelling

7. General characteristics of the syntactic annotation scheme

7.1 Complements and adjuncts of verbs and adjectives

There is no VP or AdjP constituent in the annotation scheme: given the word order variation in Old English, the boundaries of the VP and the AdjP are in most cases impossible to determine. Complements and adjuncts of verbs and adjectives are treated in the same way: they are bracketed separately, and they are not coindexed to empty categories if they are not adjacent to the verb or adjective.

Complements and adjuncts of verbs:

([+ and/CC] %nn% [vt awearp/VT] **[na his/PO w+apna/NNA]** ,) (AELIVE,IV,320.101)

and threw his weapons,

([rt +ta/RT] [vt cw+a+d/VT] [nn Lucia/NMN] **[pp mid/PP geleafan/NND] [pp to/PP hire/PO meder/NND]** , {V1}) (AELIVE,I,210.14)

then said Lucy with belief to her mother,

Complements and adjuncts of adjectives:

([nn He/PEN] [vt w+as/BT] [jn cystig/JJN] **[nd w+adlum/NND and/CC wydewum/NND]** [pp swa/RR swa/CS f+ader/NNN] ,) (AELIVE,IV,314.22)

he was charitable beggars and widows so so-as father,

([rt +ta/RT] [vt cw+a+d/VT] [nn Eadmund/NMN cyning/NNN] 1[B [cs swa/RR swa/CS] [nn he/PEN] **[rr ful/RR]** [jn cene/JJN] [vt w+as/BT] B]1 , {D1}) (AELIVE,IV,318.73)

then said Edmund king so so-as he very bold was,

7.2 Constituent-internal annotation

In general, there is no non-clausal internal structure bracketed within a constituent: heads and all their modifiers, specifiers, complements, adjuncts, etc. are enclosed on a single level within the constituent. Thus PPs are not bracketed within NPs, nor are NP objects of prepositions bracketed within PPs.

([nn He/PEN] [vt genam/VT] [rt +da/RT] [na ane/JJA cuppan/NNA **mid/PP cwealmberum/JJD drence/NND**] ,) (AELIVE,I,312.73)

he took then one cup with deadly drink,

([+ ac/CC] [nn ic/PEN] [~ ne/NE] [vt forhtige/VT] [pp for/PP **+dinum/POD gebeote/NND**] ,) (AELIVE,I,314.99)

but I not fear before your boast,

When particles occur at the left edge of a PP, they are included within the PP and not bracketed separately.

([pp +after/PP +disum/PDD gebede/NND] [vt b+arst/VT] [pp **ut/PA** of/PP heofonum/NND] [nn swy+de/RR f+arlic/JJN fyr/NNN] **,**)
(AELIVE,I,316.141)

after this prayer broke out of skies very-much sudden fire,

When clausal constituents (e.g. L, R, T) appear adjacent to the constituent that they modify, they are included within that constituent. They are bracketed and labelled, and have full internal structure.

([nn +tis/PDN] [vt com/VT] [rt +ta/RT] [pp to/PP earan/NND] [d +tam/PDD +a+delborenan/JJD cnihte/NND **1[L** %wh-1% [co +te/CO] %nn-1% [vt awogode/VT] [na Lucian/NMA] **L]1 ...] .**) (AELIVE,I,212.57)

this came then to ear that distinguished boy that wooed Lucy ...

([nn Athanasius/NMN] [rt +da/RT] [rr ardlice/RR] [vt genam/VT] [na +anne/JJA mycelne/JJA bollan/NNA **1[R** [pp mid/PP bealuwe/NND] [vn afylled/VNA] **R]1] ,**) (AELIVE,I,312.67)

Athanasius then quickly took one great bowl with harm filled,

([nd +te/PED] [vt is/BT] [rr so+dlice/RR] [nn micel/JJN +tearf/NNN **1[T** [co +t+at/CO] [nn +tu/PEN] [na +de/PFA] [vt warnige/VT] **T]1**] **,** 2[B [cs for+dam/CS] [co +te/CO] [nn +du/PEN] [vt eart/ET] [vn fordemed/VN] B]2 .) (APOLLO,12.8.11)

you is truly great need that you you(yourself) warn, because that you are condemned.

Similarly, clauses within [o ...] phrases are bracketed and given full internal structure.

([rt Nu/RT] [vt bidde/VT] [nn we/PEN] [na +te/PEA] 1[T [co +t+at/CO] [nn +tu/PEN] [vt geceose/VT] [nd +te/PFD] [na +anne/PIA] [pp of/PP us/PED +trym/JJD] **[o 2[H** [wh-2 hwilcne/PIA] %na-2% [nn +tu/PEN] [at wille/MT] [d +te/PED] [pp to/PP a+dume/NND] [vv habban/VV] **H]2]** T]1 .) (APOLLO,30.19.12)

now ask we you that you choose you(yourself) one of us three which you will you to son-in-law have.

([rt +ta/RT] [vt geascade/VT] [nn se/PDN cyng/NNN] [na +t+at/PDA] **[o 1[T** [co +t+at/CO] [nn hie/PEN] [pa ut/PA] [pp on/PP herga+d/NNA] [vt foron/VT] **T]1] ,**) (CHROA2,96.911.8)

then discovered that king that that they out on harrying went,

([rr Eac/RR] [rr swylce/RR] [nn +ta/PDN sacerdas/NNN] [vt suncon/VT] [pa for+d/PA] [rr mid/RR] **, [o** and/CC sume/JJN +da/PDN h+a+denan/JJN **1[L** %wh% [co +te/CO] %nn% [rl +t+ar/RL] [rl gehende/RL] [vt stodon/VT] **L]1] ;**) (AELIVE,I,316.145)

```
also in-like-manner those priests sank forth with, and some those
heathen that there near stood;
```

This method of bracketing has at least one disadvantage: some constituents are "hidden" within other constituents. For example, a search for [nd ...] (dative NPs) will not retrieve all dative NPs in the Corpus, since some are contained within prepositional phrases. When searching the corpus, therefore, it is necessary to give some consideration to the search strings used, taking the limitations of the annotation scheme into account.

7.3 Non-adjacent constituents of NPs

Three types of non-clausal constituents are given a separate tag when they are separated from the NP that they belong to: emphatic reflexives, floated quantifiers, and appositives. When these constituents are adjacent to their NP, they are included within the NP and not bracketed and labelled separately.

Reflexives:

```
( [nd +te/PED sylf/PFD ] [rr so+dlice/RR ] [~ ne/NE ] [vt
genealec+a+d/VT ] [nn~ nan/JJN~ yfel/NNN ] ... ) (AELIVE,I,216.111)

you self truly not approaches no evil.

( 1(D 2[B [cs +teah/CS ] [nn he/PEN ] [na hit/PEA ] [ln silf/PFN ]
[vt forswige/VT ] B]2 , [nn his/PO gegirla/NNN ] [na hine/PEA ] [vt
geswutela+d/VT ] . D)1 ) (APOLLO,22.14.10)

although he it self suppress, his dress him shows.
```

Quantifiers:

```
( [+ ac/CC ] [nn hi/PEN ealle/JJN ] [~ ne/NE ] [at mihton/MT ] [nd
hyre/PED anre/JJD ] [vv gehelpan/VV ] . ) (AELIVE,I,210.8)

but they all not could her one help.

( 1(D 2[B [cs +teah/CS ] [nn +tu/PEN ] [vt clypige/VT ] [na tyn/JJA
+tusend/NNA manna/NNG ] B]2 , [nn hi/PEN ] [at sceolan/MT ] [en
ealle/JJN ] [vv gehyran/VV ] [na +tone/PDA halgan/JJA gast/NNA ] 3[U
[rr +tus/RR ] [vg cwe+dende/VG ] , {D2} U]3 D)1 ) (AELIVE,I,216.111)

although you speak ten thousand persons, they must all hear that holy
breath thus saying,
```

Appositives:

```
( [nn Se/PDN ilca/JJN Geoweor+da/NMN ] [vt w+as/BT ] [nn Mecipsuses/NMG
m+ag/NNN , Nume+dia/NMG cyninges/NNG ] . ) (OROSIU,228.7)

that same Jugurtha was Micipsa male-kinsman, Numidians king.

( [nn-1 Hit/PEN ] [vt gelamp/VT ] [pp on/PP sumne/JJA s+al/NNA ] 1[T-1
[co +t+at/CO ] [nn hi/PEN ] [vt s+aton/VT ] [rr +atg+adere/RR ] , [o
```

Oswold/NMN and/CC Aidan/NMN] [pp on/PP +tam/PDD halgan/JJD easterd+age/NND] T]1 ;) (AELIVE,III,130.87)

it happened on some time that they sat together, O. and Aidan on that holy Easter-day;

7.4 Determining the boundaries of phrases

If it is unclear whether a PP or an adverb belongs within another constituent, it is bracketed as a separate constituent.

([+ ac/CC] [nn +du/PEN] [vt~ n+afst/VT~] **[rr swa/RR] [rr +teah/RR]** [na mine/POA sawle/NNA] , [o ac/CC God/NMN] .) (AELIVE,I,314.99)

but you not-have so however my soul, but God.

(... 1[B [cs swa/RR swa/CS] **[nn great/JJN beam/NNN] [pp on/PP wuda/NND]** [vt wyrc+d/VT] [na hludne/JJA dynt/NNA] 2[B [cs +tonne/CS] [nn men/NNN] [rr l+ast/RR] [vt wena+d/VT] B]2 B]1 ;) (BOETH,117.28)

... so so-as great tree on wood prepares loud blow when persons least imagine;

([+ &/CC] [nn ic/PEN] [nd +de/PED] [vt s+ade/VT] [rt ealne_weg/RT] 1[T [co +t+at/CO] [nn se/PDN fyrst/NNN] [vt bi+d/BT] **[rr swi+de/RR] [nn lytle/JJN hwile/NNN]** T]1 .) (BOETH,120.26)

and I you said always that that period is very-much little while.

7.5 Foreign words and phrases

All of the foreign words contained in the Brooklyn Corpus are Latin. In general, the Latin words and phrases do not play a role in the syntax of the clause, and are simply left unbracketed. Note that in the example below, a direct speech token which is the translation of the Latin has been extracted, with {D1} marking the extraction site.

([+ And/CC] [rm egeslice/RM] [vt sp+ac/VT] [nn Gregorius/NMN] [pp be/PP +dam/PDD] 1[B [cs +ta/RT +da/CS] [nn he/PEN] [rr +tus/RR] [vt cw+a+d/VT] : **<latin>** si quis ecclesiam Dei denudauerit uel sanctimonia uiolauerit , anathema sit ; ad quod respondentes omnes dixerunt , amen **</latin>** {D1} B]1 .) (WULF3,202.46)

and awfully spoke Gregory by that then when he thus said:

But if the Latin phrase has a function in a clause, it is either included within the brackets of a constituent or else syntactically bracketed and labelled appropriately.

(<HC:_VERSE_OMITTED> [rt Her/RT] [nn +a+telstan/NMN cyning/NNN] [pa for+d_/PA] [vt ferde/VT] [pp on/PP **<latin> vi Kalendae Novembris </latin>**] . [pp ymbe/PP xli/NNA wintra/NNG butan/PP anre/JJD niht/NND 1[B [cs +t+as/RT] [co +te/CO] [nn +alfred/NMN cyning/NNN] [pa for+t_/PA] [vt ferde/VT] B]1] ;) (CHROA2,110.941.1)

```
here AEthelstan king departed on . around 41 winters out-of one night
afterwards that Aelfred king departed;

( [rt Her/RT ] [vt gefor/VT ] [nn A+tulf/NMN ealdormon/NNN
Ealhswi+de/NMG bro+dor/NNN &/CC Uirgilius/NMN abbud/NNN of/PP
Scottum/NMD . &/CC Grimbald/NMN m+assepreost/NNN ] . [gx <latin> viii
idus Iulii </latin> ] . ) (CHROA2,92.903.1)

here went A. ruler E. brother and V. abbot of Scots. and G. mass-priest.
.
```

Note that Latin words are not glossed.

8. Clause bracketing

Parentheses () are used for bracketing most main clauses, square brackets [] for subordinate clauses. Labels are attached to the beginning and end of both main and subordinate clauses: (V ... V), [T ... T]. This differs from the PPCME1 practice, which does not attach labels to the end of main clauses.

Subordinate clauses (except for direct speech) are not separated from their main clauses in Format 1, 2, and 4 text files. Capital letters are used to label clause types. The only main clauses that are labelled for type are declaratives (D ... D), direct questions (Q ...Q), imperatives (V ... V), exclamations (I ... I), parentheticals [P ... P], and embedded main clauses [N ... N], but all subordinate clauses have a label. Consecutive subordinate clauses governed by the same element are bracketed separately. If there is a conjunction, it is included inside the second/third etc. clause bracket; that is, conjunctions are bracketed with the constituent that follows them. Embedded subordinate clauses are bracketed so that they are nested within the clauses that contain them. Embedded subordinate clauses are also numbered, in the order in which their left periphery occurs within the main clause; when clauses are unpacked, the trace of the extracted clause contains the clause number.

Clauses that are embedded in direct speech are always extracted from the main clause, with a specially-formatted trace left within the main clause; see Section 8.2.2.

8.1 Clause labels

Main clause labels. Note that this list includes clauses that are 'main-clause like', and that two of them are enclosed in square brackets.

(...)	the normal declarative main clause has no label
(D ... D)	declarative main clause that was embedded in direct speech
(Q ... Q)	direct question
(V ... V)	imperative
(I ... I)	exclamation
[P ... P]	parenthetical
[N ... N]	embedded main clause

Subordinate clause labels. All are enclosed in square brackets.

[B ... B]	adverbial clause
[L ... L]	relative clause
[H ... H]	free relative clause
[Q ... Q]	indirect question
[T ... T]	that-clause
[U ... U]	infinitival clause
[M ... M]	comparative clause

[G ... G] degree complement
[S ... S] small clause
[R ... R] adjunct participial/adjectival clause
[A ... A] absolute clause
[F ... F] direct speech fragments
[X ... X] unknown clause type

8.2 Main clauses

8.2.1 Normal declarative main clauses (...)

Each main clause token together with all the subordinate clauses that it incorporates (except direct speech) is contained in (...).

```
( [nn Ic/PEN ] [vt swerige/VT ] [pp +turh/PP +da/PDA gem+anan/JJA
h+alo/NNA ] 1[T [co +t+at/CO ] [nn ic/PEN ] [na me/PFA ] [rr~ n+afre/RR~
] [rm bet/RM ] [~ ne/NE ] [vt ba+dode/VT ] 2[M [cs +tonne/CS ] [nn
ic/PEN ] [vt dide/VT ] [rt tod+ag/RT ] M]2 T]1 ) (APOLLO,20.14.1)

I swear through that common health that I me(myself) never better not
washed when I did today
```

8.2.2 Main clauses embedded in direct speech (D ... D)

Direct speech is marked only when it is introduced by a verb of speaking; in the morphological section of the token, the complementation code of the verb of speaking in the main clause indicates a direct speech complement (complementation code 4 or 6). Clauses that are embedded in direct speech are extracted from the main clause token and stand as independent tokens. Within the main clause where the direct speech originated, curly brackets containing a clause type indicator (D/Q/V/I) and a clause number are inserted. The direct speech clause is pulled out, enclosed (as usual) in parentheses, and marked with the matching number and clause type. This extracted format is the same as the ‘unpacked’ format of Format 3 files (see Section 3.1.3 above). Only the first clause of the speech is marked as direct speech; the rest of the clauses are treated as normal main clauses. In the example below, the second and third tokens are both direct speech, but only the second is labelled as such.

```
( [+ and/CC ] %nn% [vt s+ade/VT ] [pp to/PP hire/PO meder/NND ] , {D1}
) (AELIVE,I,212.34)

and said to her mother,

( 1(D [nn +tu/PEN ] [vt eart/ET ] [rr mihtiglice/RR ] [vn geh+aled/VN ]
. D)1 ) (AELIVE,I,212.34)

you are mightily healed.

( [rt Nu/RT ] [vt bidde/VT ] [nn ic/PEN ] [na +te/PEA ] ... )
(AELIVE,I,212.36)

now ask I you ...
```

8.2.3 Direct questions (Q ... Q)

Direct questions, both wh- and yes/no, are enclosed in (Q ... Q).

```
(Q [wh-1 Hu/WR ] %rr-1% [at magon/MT ] [nn hi/PEN ] [vv ahreddan/VV ]
[na +de/PEA ] [pp fram/PP frecednyssum/NND ] , 1[B [cs +tonne/CS ] [nn
hi/PEN ] [~ ne/NE ] [at mihton/MT ] [na hi/PEA sylfe/PFA ] [vv
ahreddan/VV ] B]1 ? Q) (AELIVE,I,316.149)

how can they save you from harms, when they not could them selves save?

( 1(Q [wh-1 hw+at/WPN ] %nn-1% [vt is/BT ] [nn se/PDN intinga/NNN ]
2[T-1 [co +t+at/CO ] [nn an/JJN +tusend/NNN manna/NNG ] [na +te/PEA ] [~
ne/NE ] [at magon/MT ] [vv astyrian/VV ] 3[R [rr swa/RR ] [jn
unstrang/JJN ] 4[M [cs swa/CS ] [nn +du/PEN ] [vt eart/BT ] M]4 R]3 T]2
? Q)1 ) (AELIVE,I,216.108)

who is that matter that one thousand persons you not can excite so weak
so-as you are?

( 1(Q [wh-1 On/PP hwilcum/WJD godum/NND ] [vt tihst/VT ] [nn +tu/PEN ]
[na us/PEA ] 2[U %pp-1% [av to/PP ] [vv gelyfenne/VVD ] U]2 ? Q)1 )
(AELIVE,I,316.145)

on which gods invite you us to allow?

( 1(Q [vt Eart/BT ] [nn +tu/PEN ] [o la/UH ] [nn God/NMN ] ? Q)1 )
(AELIVE,I,214.72)

are you lo God?
```

hw+a+ter can be used to introduce yes/no direct questions; there is no subject-verb inversion in these clauses. *hw+a+ter* is POS-tagged as '/CS' and syntactically bracketed as 'wh'. No empty category representing the wh- constituent is left in the clause.

```
( 1(Q [wh Hw+a+ter/CS ] [nn +tu/PEN ] [rt nu/RT ] [rr fullice/RR ]
[pa on_/PA ] [vt gite/VT ] 2[Q [wh-1 forhwy/WR ] %co% %rr-1% [nn hit/PEN
] [rt +tonne/RT ] [rr swa/RR ] [vt sie/BT ] Q]2 ? Q)1 ) (BOETH,74.25)

whether you now entirely grasp why it then so be?
```

As with declarative clauses, direct questions that are embedded in direct speech are extracted from the main clause token and stand as independent tokens (see Section 8.2.2).

```
( [nn He/PEN ] [vt axode/VT ] [rt +da/RT ] [pp mid/PP olle/NND ] , {Q1}
) (AELIVE,I,214.72)

he asked then with contempt,

( 1(Q [vt Eart/BT ] [nn +tu/PEN ] [o la/UH ] [nn God/NMN ] ? Q)1 )
(AELIVE,I,214.72)

are you lo God?
```

8.2.4 Imperatives (V ... V) or [V ... V]

Imperatives are enclosed in (V ... V).

```
(V [vt Gehrepa/VI ] [na hire/PO byrigene/NNA ] , V) (AELIVE,I,210.19)
```

```
touch her grave,
```

Imperatives are the only finite clause type that do not obligatorily contain a subject, but subjects are occasionally present.

```
( 1(V ... [o God/NMN ] [vt beseoh/VI ] [nn +du/PEN ] [pp on/PP
minum/POD fultume/NND ] , V)1 ) (AELIVE,I,312.89)

... God see you on my help,
```

As with declarative clauses, imperatives that are embedded in direct speech are extracted from the main clause token and stand as independent tokens (see Section 8.2.2).

```
( [rt +ta/RT ] [vt cw+a+d/VT ] [nn Lucia/NMN ] {V1} ; )
(AELIVE,I,212.46)

then said Lucy,

( 1(V [vt hlyst/VI ] [ng mines/POG r+ades/NNG ] V)1 ) (AELIVE,I,212.46)

listen my advice;
```

Some embedded imperatives are not direct speech; in these cases, they are enclosed in square brackets.

```
(V [+ and/CC ] [na +ta/PDA +ahta/NNA ] [vt ateoh/VI ] 1[V [vt loca/VI ]
2[H [wh-1 hu/WR ] %co% %ne% %rr-1% [nd +te/PED ] [vt licige/VT ] , H]2
[o min/PON leofa/JJN dohtor/NNN ] V]1 . V) (AELIVE,I,212.44)

and those possessions draw-up see how you please, my dear daughter.
```

8.2.5 Exclamations (I ... I)

Exclamations are enclosed in (I ... I), and are treated like direct questions in structure.

```
(I [wh-1 hu/WR emnlice/RM ] %rm-1% [nn-1 hit/PEN ] [vt gelomp/VT ] [pp
ymb/PP +das/PDA tu/JJA heofodricu/NNA , Asiria/NMG &/CC Romana/NMG ] ,
1[B [cs swa/RR swa/CS ] [nn we/PEN ] [rt +ar/RT ] [vt s+agdon/VT ] B]1 ,
2[T-1 [co +t+atte/CO ] [nn Ninus/NMN ] [vt ricsade/VT ] [pp on/PP
+don/PDI eastrice/NND ] [ga LII/NNA wintra/NNG ] , [o &/CC +after/PP
him/PED his/PO cwen/NNN Sameramis/NMN XLII/NNA wintra/NNG ] T]2 , I)
(OROSIU,62.9)

how equally it happened around these two empires, Assyrians and Romans,
so so-as we before said, that Ninus reigned on that eastern-kingdom 52
winters, and after him his woman Semiramis 42 winters,
```

As with declarative clauses, exclamations that are embedded in direct speech are extracted from the main clause token and stand as independent tokens (see Section 8.2.2).

8.2.6 Parentheticals [P ... P]

Parentheticals are often of the type '... he said' / 'said he ...', but occasionally contain more substantive data.

```
( [nn Ic/PEN ] [vt wene/VT ] , 1[P [vt cw+a+d/VT ] [nn Orosius/NMN ]
P]1 , 2[T [co +t+at/CO ] [nn~ nan/JJN~ wis/JJN mon/NNN ] [~ ne/NE ] [vt
sie/BT ] ... T]2 . ) (OROSIU,58.13)
```

```
I imagine, said Orosius, that no wise person not be ...
```

```
(V [rt nu/RT ] 1[B [cs gif/CS ] [nn +tu/PEN ] [na +anig/JJA +tincg/NNA ]
[vt h+afst/VT ] [pp of/PP +t+as/PDG halgan/NNG religuium/NND ] B]1 , [vt
syle/VI ] [nd me/PED ] , 2[P [nn ic/PEN ] [na +te/PEA ] [vt bidde/VT ]
P]2 . V) (AELIVE,III,142.256)
```

```
now if you any thing have of that saint relics-of-saints, give me, I you
ask.
```

8.2.7 Embedded main clause [N ... N]

There are four types of embedded main clauses in the Brooklyn Corpus:

1) complement clauses. All that-clause complements of verbs that have empty complementizers and that are not conjoined are treated as embedded main clauses, unless they are clearly part of a conjoined sequence but do not have an overt conjunction.

```
( [+ &/CC ] %nn% [vt b+adon/VT ] 1[T [co +t+at/CO ] [nn hie/PEN
ealle/JJN ] [rr gem+anelice/RR ] [vt cunnoden/VT ] , 2[N [at mehten/MT
] [nn hi/PEN ] [na heora/PO gem+anan/JJA fiend/NNA ] [pp him/PED from/PP
] [vv adon/VV ] N]2 T]1 . ) (OROSIU,118.12)
```

```
and asked that they all commonly tried, could they their common foe them
from take-away.
```

If the matrix clause is passive, the embedded main clause is coindexed with the expletive subject (but see the note on coindexing in Section 11).

```
( %ne-1% [rr Eac/RR ] [vt is/ET ] [vn funden/VN ] : 1[N-1 2[B [cs
gif/CS ] [nn mon/PMN ] [vt hafa+d/VT ] [na spere/NNA ] [pp ofer/PP
eaxle/NNA ] B]2 , 3[B [+ &/CC ] %cs% [na hine/PFA ] [nn mon/PMN ] [pa
on/PA ] [vt asnase+d/VT ] B]3 , %np% [vt gielde/VT ] [na +tone/PDA
wer/NNA ] [pp butan/PP wite/NND ] N]1 . ) (LAW2,68.36)
```

```
also is found: if one has spear over shoulder, and him(self) one on
spits, yield that man out-of punishment.
```

This contrasts with a similar construction where no arguments are missing in the matrix clause. In these cases, the two clauses are separated, and the second is bracketed as a normal main clause.

```
( [nn +d+at/PDN gewrit/NNN ] [vt w+as/ET ] [rr +tus/RR ] [vn gewriten/VN
] : ) (APOLLO,32.20.15)
```

```
that letter was thus incised:
```

```
( [o +tu/PEN goda/JJN cyngc/NNN and/CC min/PON se/PDN leofesta/JJN
f+ader/NNN ] , 1[B [cs nu/CS ] [nn +tin/PON mildheortnesse/NNN ] [nd
me/PED ] [na leafe/NNA %T-1% ] [vt sealde/VT ] 2[T-1 [co +t+at/CO ] [nn
```

ic/PEN silf/PFN] [at moste/MT] [vv ceosan/VV] 3[H [wh-1 hwilcne/WJA wer/NNA] %co% %na-1% [nn ic/PEN] [vt wolde/VT] H]3 T]2 B]1 , [nn ic/PEN] [vt secge/VT] [nd +de/PED] [pp to/PP so+dan/JJD] 4[T %co% [na +tone/PDA forlidenan/VNA man/NNA] [nn ic/PEN] [vt wille/VT] T]4 .) (APOLLO,32.20.15)

you good king and my that dearest father, now-that your loving-kindness me permission gave that I self might choose which man I wished, I say you to true that suffered-shipwreck person I wish.

2) main clauses with ‘be’, in the sense ‘it happened’. Again, the embedded clause is coindexed with the expletive subject of the matrix clause (but see the note on coindexing in Section 11).

(**%ne-1%** [rt +ta/RT] [vt w+as/BT] [pp +after/PP +a+delbehrtes/NMG for+dfore/NND] **, 1[N-1** [nn Eadbald/NMN his/PO sunu/NNN] [vt feng/VT] [pp to/PP +dam/PDD rice/NND] **N]1 ,**) (BEDE,5.110.22)

then was after A. departure, E. his son took to that rule,

(**%ne-1%** [rt +da/RT] [vt w+as/BT] [gi +ty/PDI +afteran/JJI geare/NNI] **, 1[N-1** [vt cwom/VT] [nn sum/JJN monn/NNN] [pp in/PP Nor+danhymbra/NMG m+ag+de/NNA] **N]1 ;**) (BEDE,8.122.8)

then was that second year, came some person in Northumbrians maiden;

3) subordinate V1 clauses:

([+ &/CC] 1[B [cs gyf/CS] [nn he/PEN] [na +t+at/PDA] [vt gel+aste/VT] B]1 , [rt +tonne/RT] [vt bi+d/BT] [nn he/PEN] [jn wyr+de/JJN] , 2[T [co +t+at/CO] [na hine/PEA] [nn man/PMN] [rr +te/RR] [rm bet/RM] [vt healde/VT] **, 3[N** %np% [vt wunige/VT] 4[H [wh-1 +t+ar/RL] %co% %rl-1% [nn he/PEN] [vt wunige/VT] H]4 **N]3** T]2 .) (LAW3,238.6.1)

and if he that follow, then is he worthy, that him one therefore better hold, inhabit where he inhabit.

4) V1 conditionals. Note that the PPCME1 treats these as adverbial clauses that are not embedded under prepositions.

([nn Ealle/JJN , we/PEN] [at scoldan/MT] [vv forweor+dan/VV] [gd ecan/JJD dea+de/NND] **, 1[N** %ne-1% [vt~ n+are/BT~] 2[T-1 [co +t+at/CO] [nn Crist/NMN] [pp for/PP us/PED] [na dea+d/NNA] [vt +trowode/VT] T]2 **N]1 .**) (WULF3,227.42)

all, we must perish perpetual death, not-were that Christ before us death endured.

([+ and/CC] [nn se/PDN +almihtiga/JJN God/NMN] [vt wat/VT] 1[T [co +t+at/CO] [nn ic/PEN] [at~ nelle/MT~] [vv abugan/VV] [pp fram/PP his/PO biggengum/NND] [rt +afre/RT] , [o ne/CC~ fram/PP his/PO so+tan/JJD lufe/NND] **, 2[N** [vt swelte/VT] [nn ic/PEN] **N]2 , 3[N** [vt lybbe/VT] [nn ic/PEN] **N]3** T]1 .) (AELIVE,IV,320.78) and that almighty God knows that I not-will bow from his practices ever, neither from his true love, die I, live I.

8.3 Subordinate clauses

8.3.1 Adverbial clauses [B ... B]

Adverbial clauses include those introduced by a subordinating conjunction and ‘(so) that’ purpose and result clauses. Any *(swa) swa* clause which does not clearly contain a gap is categorized as an adverbial clause.

+t+at, *+te*, and *+t+atte* as complementizers/conjunctions/subordinators in adverbial clauses are classified as ‘w:cosu’ in the morphological section of the token but POS-tagged as ‘/CO’. All others are POS-tagged as in the morphological section of the token, and syntactically bracketed as ‘cs’ with no internal structure.

([nn Seo/PDN wydewe/NNN] [vt w+as/BT] [jn unhal/JJN] **, 1[B [cs swa/RR] [co +t+at/CO]** [d hire/PED] [vt arn/VT] [nn blod/NNN] [pp geond/PP feower/JJD geare/NND f+ac/NNA] **B]1 ,**) (AELIVE,I,210.8)

that widow was sick, so that her ran blood throughout four year interval,

(1(V **2[B [cs Gif/CS]** [nn +tu/PEN] [vt gelyfst/VT] , [o modor/NNN] , [nd +tysum/PDD m+aran/JJD godspelle/NND] **B]2 ,** [vt gelyf/VI] 3[T [co +t+at/CO] [nn Agathes/NMN] [vt geearnode/VT] [pp +at/PP Criste/NMD] **, 4[B [cs +ta_/RT +da/CS]** [nn heo/PEN] [pp for/PP his/PO naman/NND] [vt +drowode/VT] **5[B [co +t+at/CO]** [nn heo/PEN] [na hine/PEA] [rt symle/RT] [vt h+abbe/VT] [pp on/PP andwerdnysse/NND] [pp on/PP ecere/JJD blysse/NND] **B]5 B]4** T]3 . V)1) (AELIVE,I,210.14)

if you allow, mother, this famous gospel, allow that Agatha earned at Christ, then when she for his name endured that she him ever have on presence on perpetual bliss.

([rr +tus/RR] [vt tihte/VT] [nn Lucia/NMN] [rt gelome/RT] [na +ta/PDA modor/NNA] **, 1[B [cs o+d_+t+at/CS]** [nn heo/PEN] [vt beceapode/VT] [na +ta/PDA scinendan/JJA gymmas/NNA , and/CC eac/RR hire/PO landare/NNA] [pp wi+d/PP licgendum/VGD feo/NND ,] **B]1**) (AELIVE,I,212.52)

thus invited Lucy often that mother, until she sold those shining gems, and also her landed-property with lying cattle,

([~ Ne/NE] [vt dreah/VT] [nn ic/PEN] [rt nu/RT] [gd +trym/JJD gearum/NND] [na~ nane/JJA~ o+tre/JJA d+ada/NNA] **, 1[B [cs butan/CS]** %nn% [nd +tam/PDD lyfigendan/JJD drihtne/NMD] [na +tas/PDA lac/NNA] [vt geoffrode/VT] **B]1 .**) (AELIVE,I,214.64)

not did I now three years no other deeds, except that living Lord these plays offered.

([rr for+ti/RR] [nn ic/PEN] [vt cw+a+d/VT] [na Godes/NMG word/NNA] **, 1[B [cs for+tan/CS] [co +te/CO]** [nn he/PEN] [pp on/PP his/PO godspelle/NND] [vt cw+a+d/VT] **,** {D1} **B]1 ,**) (AELIVE,I,214.73)

therefore I said God words, because that he on his gospel said,

(1(D [nn Ic/PEN] [vt hate/VT] 2[U [na +te/PEA] [rr ardlice/RR] [vv l+adan/VV] [pp to/PP +t+ara/PDG myltestrena/NNG huse/NND] U]2 **, 3[B [co +t+at/CO]** [nn +du/PEN] [na +tinne/POA m+ag+dhad/NNA] [vt forleose/VT] **B]3 , 4[B [co +t+at/CO]** [nn se/PDN halga/JJN gast/NNN] [pp +te/PED fram/PP] [vt fleo/VT] **, 5[B [cs +donne/CS]** [nn +tu/PEN] [rr fullice/RR] [vt byst/ET] [vn gescynd/VN] **B]5 B]4 .** D)1) (AELIVE,I,214.81)

I command you quickly lead to those prostitutes house, that you your virginity lose, that that holy breath you from flee, when you entirely are put-to-shame.

+te can be used as a subordinating conjunction; for example, when it is related to an adverb that can be used as a subordinating conjunction:

(**[rr For+ty/RR]** [vt bi+d/BT] [nn +anig/JJN +ting/NNN] [jn full/JJN] **1[B [cs +te/CS]** [nn sum/PIN] [vt bi+d/BT] [jn wana/JJN] **B]1 ,**) (BOETH,83.10)

therefore is any thing full when some is wanting,

hw+a+der can be used as a subordinating conjunction; compare the clause below with that in Section 8.2.3, where *hw+a+der* introduces a direct question.

([+ &/CC] %nn% [vt sie/BT] [pp on/PP cyninges/NNG dome/NND] **, 1[B [cs hw+a+der/CS]** [nn he/PEN] [na lif/NNA] [vt age/VT +te/CC nage/VT~] **B]1 .**) (LAW2,90.6)

and be on king doom, whether he life own or not-own.

buton can be included within a 'cs' along with another adverb or subordinating conjunction:

(Q **... 3[B [cs buton/CS for+dy/CS] [co +te/CO]** [nn hi/PEN] [vt tiohhia+d/VT] 4[T [co +t+at/CO] [nn se/PDN stemn/NNN &/CC se/PDN helm/NNN] [at mote/MT] [rr +ty/RR] [rm f+astor/RM &/CC +te/RR leng/RT] [vv stondan/VV] T]4 **B]3 ...** ? Q) (BOETH,91.25)

... except because that they determine that that voice and that protection may therefore more-firmly and therefore longer stand?

An adverbial clause introduced by two or more adverbs (often the same word repeated, e.g. *+ta +ta, swa swa*) is bracketed with the adverbial group as the subordinating conjunction, rather than as an adverb followed by an adverbial clause.

([+ And/CC] [rm egeslice/RM] [vt sp+ac/VT] [nn Gregorius/NMN] [pp be/PP +dam/PDD] **1[B [cs +ta/RT +da/CS]** [nn he/PEN] [rr +tus/RR] [vt cw+a+d/VT] : <latin> si quis ecclesiam Dei denudauerit uel sanctimonia uiolauerit , anathema sit ; ad quod respondentes omnes dixerunt , amen </latin> {D1} **B]1 .**) (WULF3,202.46)

```
and awfully spoke Gregory by that then when he thus said:
```

In general, PPs and NPs that are used as 'cs' + 'co' can be found in Clark Hall listed under the preposition or the noun:

```
( [rt +ta/RT ] [vt bes+at/VT ] [nn sio/PDN fierd/NNN ] [na hie/PEA ] [rl
+t+ar/RL ] [rr utan/RR ] 1[B [cs +ta/PDA hwile/NNA ] [co +te/CO ]
[nn hie/PEN ] [rl +t+ar/RL ] [rt lengest/RT ] [na mete/NNA ] [vt
h+afdon/VT ] B]1 . ) (CHROA2,85.894.26)

then surrounded that national-levy them there from-outside that while
that they there longest meat had.

( 1[B [cs Mid/PP +tam/PDD ] [co +te/CO ] [nn hi/PEN ] [vt
lagon/VT ] B]1 ... [rt +ta/RT ] [vt wear+d/VT ] [nn Lucia/NMN ] [pp
on/PP sl+ape/NND ] , ) (AELIVE,I,210.22)

with that that they lay ... then became Lucy on sleep,
```

Occasionally, however, the collocation is not listed in Clark Hall, but we have analyzed it as 'cs' + 'co' anyway:

```
( [+ And/CC ] [rr ealles/RR ] [nn to/RR manege/JJN halige/JJN stowa/NNN
] [rr wide/RR ] [vt forwurdan/VT ] 1[B [cs +turh/PP +t+at/PDA ]
[co +te/CO ] [nn man/PMN ] [na sume/JJA men/NNA ] [pp +ar/PP +tam/PDD
] [vt gelogode/VT ] 2[B [cs swa/CS ] [nn man/PMN ] [rr~ na/RR~ ] [~
ne/NE ] [vt scolde/VT ] , 3[B [cs gif/CS ] [nn man/PMN ] [pp on/PP
Godes/NMG gri+de/NND ] [na m+a+te/NNA ] [vv witan/VV ] [at wolde/MT ]
B]3 B]2 B]1 ; ) (WULF3,270.74)

and entirely also many holy spots widely perished through that that one
some persons before that lodged so-as one not not owed, if one on God
truce measure know would;
```

8.3.1.1 *(swa) (...) swa* clauses

(swa) (...) swa clauses are of three types:

1) free relatives, either in place or left-dislocated; see Sections 8.3.2.4 and 8.3.3.1.

2) comparative clauses, where *(swa) swa* is related to *swa* in the main clause, or where it's clear that there is a gap in the *(swa) swa* clause. See Section 8.3.7 below.

3) adverbial clauses. Note that in the morphological section of the token, the first *swa*, if it exists, is classified as 'w:av', the second as 'w:cosu'. *swa* is POS-tagged accordingly.

```
( [nn-1 Se/PDN +aresta/JJN cyning/NNN ] [vt w+as/ET ] 1[S %nn-1% [nn
Ninus/NMN ] S]1 [vn haten/VN ] , 2[B [cs swa/CS ] [nn we/PEN ] [rt
+ar/RT ] [rr beforan/RR ] [vt s+agden/VT ] B]2 . ) (OROSIU,60.11)

that first king was Ninus commanded, so-as we before before said.
```

([nn +t+at/PDN Crecisce/JJN &/CC +t+at/PDN Affricanisce/JJN] [vt w+aron/BT] **1[B [cs swa/RR swa/CS]** [nn hie/PEN] [nd him/PED] [vt hiersumedon/VT] **B]1 ...**) (OROSIU,60.7)

that Greek and that African were so so-as they them obeyed ...

Other adverbs besides *swa* can appear within the [cs ...]:

(**1[B [cs Sona/RT swa/CS]** [nn Atheniense/NMN] [vt wiston/VT] 2[T [co +t+at/CO] [nn Darius/NMN] [na hie/PEA] [pp mid/PP gefeohte/NND] [vv secan/VV] [at wolde/MT] T]2 **B]1 ,** [nn hie/PEN] [vt acuron/VT] [na endlefan/JJA +tusend/NNA monna/NNG] ,) (OROSIU,78.22)

soon so-as Athenians knew that Darius them with fight seek would, they chose eleven thousand crimes,

8.3.1.2 *na +t+at an +t+at* clauses

These clauses are invariably conjoined with a clause starting with *ac eac swilce* or *ac swilce eac*. They are treated as adverbial subordinate clauses, with the negative adverbial phrase *na +t+at an* before the complementizer *+t+at*.

([o Hlaford/NNN Apolloni/NMN] , 1[B [cs gif/CS] [nn +du/PEN] [nd +tissere/PDD hungrigan/JJD ceasterwaru/NND] [vt gehelpest/VT] B]1 , **2[B [rr~ na/RR~ +t+at/RR an/RR] [co +t+at/CO]** [nn we/PEN] [at willa+d/MT] [na +tinne/POA fleam/NNA] [vv bediglian/VV] **B]2 , [+ ac/CC] [rr eac/RR] [rr swilce/RR] ,** 3[B [cs gif/CS] [nd +te/PED] [nn neod/NNN] [vt gebira+d/VT] B]3 , [nn we/PEN] [at willa+d/MT] [vv campian/VV] [pp for/PP +dinre/POD h+alo/NND] .) (APOLLO,14.9.18)

lord Apollonius , if you this hungry burghers help, not then alone that we will your flight conceal, but also in-like-manner, if you desire happens, we will strive before your health.

([+ &/CC] [pp to/PP for+dspownisse/NND gedefre/JJG heannisse/NNG] [pp mid/PP gelomlicre/JJD stefne/NND haligre/JJG trymnisse/NNG &/CC lare/NNG &/CC mid/PP singalum/JJD bysenum/NND arf+astre/JJG wyrcnesse/NNG] [nn he/PEN] [pa on_/PA] [vt gon/VT] 1[U [vv hean/VV &/CC miclian/VV] U]1 **. 2[B [rr~ Nales/RR~ +t+at/RR an/RR] [co +t+at/CO]** [nn he/PEN] [na gem+ane/NNA %ng-1%] [vt dyde/VT] [ng-1 +t+are/PDG neowan/JJG cirican/NNG , 3[L %wh-1% [co +te/CO] %nn-1% [pp of/PP Ongolcynne/NMD] [vn gesomnod/VN] [vt w+as/ET] L]3] , [o **ac/CC swilce/RR eac/RR +tara/PDG** ealdra/JJG biggengena/NNG Bretta/NMG &/CC Scotta/NMG .] **B]2**) (BEDE,4.106.23)

and to prosperity befitting highness with repeated voice holy firmness and lore and with perpetual examples respected work he began raise and increase. not-at-all then alone that he care did that new church, that of English-people assembled was, but in-like-manner also those old inhabitants Britons and Scots.

([+ ond/CC] [nn he/PEN] [rt sona/RT] [rr micle/RR] [ng wonunge/NNG &/CC +awerdlan/NNG %ng-1%] [vt w+as/BT] [ng-1 +t+are/PDG m+arwan/JJG cyrican/NNG weaxnisse/NNG] **. 1[B** [cs For+don/CS] **[rr~ nales/RR~**

```
+t+at/RR aan/RR ] [co +t+at/CO ] [nn he/PEN ] [na Cristes/NMG
geleafan/NNA ] [pa on_/PA ] [vv fon/VV ] [~ ne/NE ] [at wolde/MT ] B]1
, 2[B [+ ac/CC ] %co% %np% [rr swylce/RR ] [rr eac/RR ] [gd
unalyfedre/JJD forlegenesse/NND &/CC egeslicre/JJD ] [vt w+as/ET ] [vn
besmiten/VN ] , 3[B [rr swa/RR ] [co +t+at/CO ] [nn he/PEN ] [vt eode/VT
] [pp to/PP his/PO f+ader/NNG wife/NND ] B]3 B]2 . ) (BEDE,5.110.22)

and he soon greatly waning and injury was that tender church increase.
because not-at-all then alone that he Christ belief take not would, but
in-like-manner also not-allowed fornication and awful was soiled, so
that he went to his father woman.
```

8.3.2 Headed relative clauses [L ... L]

Restrictive and non-restrictive headed relative clauses are not distinguished. If the relative clause is adjacent to its antecedent, it is contained within the brackets of the antecedent. If it is extraposed from an NP or a PP, it is coindexed with an empty category %L% (but see the note on coindexing in Section 11).

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN , 1[L [wh seo/PDN ]
%co% [vt w+as/ET ] [vn geciged/VN ] 2[S %nn% [nn Euthicia/NMN ] S]2 L]1
, ] [pp betwux/PP o+drum/JJD mannum/NND ] [pp to/PP +t+are/PDD
m+aran/JJD byrigene/NND ] , [o and/CC hire/PO dohtor/NNN samod/RR ,
seo/PDN ges+alige/JJN Lucia/NMN ] . ) (AELIVE,I,210.5)

then came some widow, that was called Eutychia, between other persons to
that famous grave, and her daughter simultaneously, that fortuitous
Lucy.

( ... 1[Q [wh hw+a+der/CS ] %co% [nn he/PEN ] [pp +after/PP f+ace/NND ]
[at meahte/MT ] [na o+derne/PIA %L-1% ] [vv findan/VV ] , 2[L-1 %wh-2%
[co +te/CO ] %nx-2% [nn mon/PMN ] [pp to/PP biscope/NND ] [vv hadian/VV
] [at meahte/MT ] L]2 Q]1 . ) (BEDE,1.254.13)

... whether he after interval could other find, that one to bishop
ordain could.

( [+ and/CC ] %nn% [vt b+adon/VT ] [rr +t+as/RR ] [pp on/PP mergen/NNA ]
1[T [co +t+at/CO ] [nn hi/PEN ] [at moston/MT ] [na +tone/PDA sanct/NNA
%L-1% ] [pp mid/PP arwur+dnysse/NND ] [pa under_/PA ] [vv fon/VV ] ,
2[L-1 [wh-2 +tone/PDA ] [co +te/CO ] %na-2% [nn hi/PEN ] [rt +ar/RT ]
[vt forsocon/VT ] L]2 T]1 . ) (AELIVE,III,136.187)

and asked afterwards on morn that they might that saint with reverence
receive, that that they before objected-to.
```

Relative clauses obligatorily contain both a wh- constituent and a complementizer; empty categories %wh% and %co% are used if the constituents are not overt, as in the examples above.

In general, all words within the wh- constituent are POS-tagged with their non-wh part of speech, e.g. demonstrative pronoun, locative adverb, preposition plus complement, etc. The wh- constituent, whether overt or empty, is coindexed with an empty category within the clause indicating the function of the gap (but see the note on coindexing in Section 11). If the gap is an argument of the verb, the empty category immediately follows the complementizer.

If, however, the gap is within a PP or some other constituent, the empty category appears within that constituent.

```
( [+ and/CC ] %nn% [vt b+adon/VT ] [rr +t+as/RR ] [pp on/PP mergen/NNA ]
1[T [co +t+at/CO ] [nn hi/PEN ] [at moston/MT ] [na +tone/PDA sanct/NNA
%L-1% ] [pp mid/PP arwur+dnysse/NND ] [pa under_/PA ] [vv fon/VV ] ,
2[L-1 [wh-2 +tone/PDA ] [co +te/CO ] %na-2% [nn hi/PEN ] [rt +ar/RT
] [vt forsocon/VT ] L]2 T]1 . ) (AELIVE,III,136.187)

and asked afterwards on morn that they might that saint with reverence
receive, that that they before objected-to.

( [+ &/CC ] %nn% [vt gemette/VT ] [na ane/JJA n+addran/NNA , 1[L [wh-1
+t+are/PDD ] %co% [nn he/PEN ] 2[R [vg bebeodende/VGN ] R]2 [rr
+tus/RR ] [pp to/PP %nd-1% ] [vt cw+a+d/VT ] , {V1} L]1 ] )
(GREGD3,6.24.2)

and measured one adder, that he offering thus to said,
```

Allen 1980 suggests that *+t+at* as a relative pronoun should be a complementizer rather than a wh- constituent. It isn't used frequently in Old English, but it does occur in relatives with a neuter head, relatives on temporal heads, and relatives with *eall* as head. Evidence that it is a complementizer: the temporal heads are not necessarily neuter or singular (gender/number clash); *+t+at* permits preposition stranding, like *+te* and unlike *se*. Therefore all *+t+at* relative pronouns, including those where the head of the relative clause is neuter singular, are syntactically bracketed as complementizers.

We have distinguished five types of headed relative clauses: *se* relatives, *+te* relatives, *se+te* relatives, *swa hw... swa* relatives, and locative relatives, which are discussed in more detail below.

Infinitival relatives are difficult to distinguish from infinitival purpose clauses. Therefore, we do not generally label infinitival clauses as relatives: infinitival clauses are syntactically bracketed as 'U'. An 'L' bracket is added only in cases where a clear relative clause gap occurs in the infinitival clause:

```
( 1[B [cs Gif/CS ] [nn mon/PMN ] [vt~ n+abbe/VT~ ] [rr buton/RR ] [na
anfeald/JJA hr+agl/NNA 2[L %wh-1% %co% 3[U [na hine/PFA ] [pp mid/PP
%nx-1% ] [av to/PP ] [vv wreonne/VV ] U]3 L]2 4[L [+ &/CC ] %wh-2%
%co% 5[U %nx-2% [av to/PP ] [vv werianne/VV ] U]5 L]4 ] B]1 , 6[B [+
&/CC ] %cs% [nn he/PEN ] [na hit/PEA ] [pp to/PP wedde/NND ] [vt
selle/VT ] B]6 , [pp +ar/PP sunnan/NNG setlgonge/NND ] [vt sie/ET ] [nn
hit/PEN ] [vn agifen/VN ] . ) (LAW2,38.36.1)

if one not-have outside single dress him(self) with to cover and to
guard, and he it to pledge give, before sun setting be it given.
```

8.3.2.1 *se* relatives

In these relative clauses, the wh- constituent is overt and the complementizer is empty. The case of *se* within the wh- constituent almost always matches its case of the relative clause gap. Allen 1980 says there are a few cases where the case instead matches the head of the relative clause, but these cases do not appear in the Brooklyn Corpus. Allen also notes that pied piping in *se* relatives is obligatory (no preposition stranding).

In the morphological section of the token, *se* is classified as 'w:prrl'. It is POS-tagged as '/PDc'.

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN , 1[L [wh-1 seo/PDN
] %co% [vt w+as/ET ] [vn geciged/VN ] 2[S %nn-1% [nn Euthicia/NMN ] S]2
L]1 , ] ... ) (AELIVE,I,210.5)

then came some widow, that was called Eutychia ...

( [+ and/CC ] [nn se/PDN halga/JJN Georius/NMN ] [vt si+dode/VT ] [pp
to/PP Criste/NMD , 1[L [wh-1 mid/PP +dam/PDD ] %co% %pp-1% [nn he/PEN ]
[rt a/RT ] [vt wuna+d/VT ] [pp on/PP wuldre/NND ] L]1 ] ; [o Amen/UH ]
. ) (AELIVE,I,318.179)

and that holy George went to Christ, with that he always inhabits on
glory; amen.
```

8.3.2.2 *+te* relatives

In these relative clauses, the wh- constituent is empty, and the complementizer is overt. In the morphological section of the token, *+te* is classified as 'w:prrl'; it is POS-tagged as '/CO'. Allen 1980 notes that there is no pied piping in these clauses (preposition stranding is obligatory).

```
( 1(D [~ Ne/NE ] [vt synd/BT ] [nn ge/PEN 2[L %wh-1% [co +te/CO ]
%nn-1% [rl +t+ar/RL ] [vt spreca+d/VT ] L]2 ] , D)1 ) (AELIVE,I,214.73)

not are you that there speak,
```

Included in this category are what look like headless *se +te* relative clauses, both within the clause and left-dislocated, where we have nevertheless identified *se* as the head of the relative clause; in other words, they are bracketed as NPs rather than as clauses. We have done so because they pattern with *+te* relatives: *se* is (almost) always case-marked for the main clause gap, not the relative clause gap; and there is no pied piping (preposition stranding is obligatory). In addition, the relative clause can appeared extraposed, separated from the head *se* . In the morphological section of the token, *se* is classified as 'w:prde', *+te* as 'w:prrl'; *se* is POS-tagged as '/PDC' and *+te* as '/CO'. Analysing headless *se +te* relatives in this way causes a clash with the complementation code in the morphological section of the token, since in that section they are analyzed as finite clauses rather than NPs.

```
( 1(Q [o Min/PON swustor/NNN Lucia/NMN , so+d/JJN godes/NMG m+aden/NNN ,
] [wh-1 hwi/WR ] %rr-1% [vt bitst/VT ] [nn +tu/PEN ] [pp +at/PP me/PED ]
[ng +t+as/PDG 2[L %wh-2% [co +te/CO ] %nx-2% [nn +du/PEN ] [at
miht/MT ] [ln sylf/PFN ] [vv geti+dian/VV ] L]2 ] ? Q)1 )
(AELIVE,I,210.22)

my sister Lucy, true God maiden, why ask you at me that that you can
self give?
```

Since the demonstrative pronoun is identified as the head, both the wh- constituent and the complementizer may be empty in this type of relative clause:

```
( [rt Nu/RT ] [at wille/MT ] [nn we/PEN ] [nd eow/PED ] [vv secgan/VV ]
[na +t+at/PDA 1[L %wh% %co% %nn% [jn so+d/JJN ] [vt is/BT ] [pp
be/PP +dam/PDD ] L]1 ] , ... ) (AELIVE,I,306.3)
```

```
now will we you say that true is by that, ...

( 1[B [cs Gif/CS ] [nn hi/PEN ] [na hie/PFA ] [~ ne/NE ] [vt
gesamnien/VT ] B]1 , [vt gielde/VT ] [nn se/PDN 2[L %wh-1% %co%
%nn-1% [ng +d+as/PDG w+apnes/NNG ] [pa on_/PA ] [vt lah/VT ] L]2 ] [na
+t+as/PDG weres/NNG +driddan/JJA d+al/NNA &/CC +t+as/PDG wites/NNG
+driddan/JJA d+al/NNA ] . ) (LAW2,60.19.1)

if they them(selves) not assemble, yield that that weapon lent that man
third portion and that punishment third portion.
```

In left-dislocated *se +te* relatives, *se* is often case-marked for the relative clause gap. The left-dislocated syntactic label ‘fc’ is coindexed with the resumptive pronoun only if there is a case mismatch (but see the note on coindexing in Section 11).

```
(V ... [fa +ta/PDA 1[L %wh% [co +te/CO ] %na% [nn man/PMN ] [vt
l+at/VT ] [pp to/PP dea+de/NND ] L]1 ] [vt alys/VI ] [na hi/PEA ] [pa
ut/PA ] [rt symble/RT ] . V) (AELIVE,IV,330.214)

... that that one leads to death loosen them out ever.
```

In some cases, no gap can be identified, and a Brooklyn comment to this effect is added:

```
( [nn Se/PDN ] [vt w+as/BT ] [nn Karles/NMG sunu/NNN 1[L %wh% [co
+te/CO ] [nn +a+telwulf/NMN West_Seaxna/NMG cyning/NNN ] [na his/PO
dohtor/NNA ] [vt h+afde/VT ] [d him/PED ] [pp to/PP cuene/NND ]
<BC:_no_gap_in_rel_clause,_poss_pro_his_as_resumptive_pro> L]1 ] . )
(CHROA2,78.885.18)

that was C. son that A. West-Saxons king his daughter had him to woman.
```

8.3.2.3 *se+te* relatives

In these relative clauses, both the wh- constituent and the complementizer are overt. In the morphological section of the token, both *se* and *+te* are classified as ‘w:prrl’; *se* is POS-tagged as ‘/PDC’ and *+te* as ‘/CO’, as in the *se* relatives and the *+te* relatives. As in the *se* relatives, the case of *se* normally matches the case of the relative clause gap, but occasionally matches the case of the head. Allen 1980 notes that pied piping is obligatory in these clauses (no preposition stranding).

```
( [+ and/CC ] %nn% [vt b+adon/VT ] [rr +t+as/RR ] [pp on/PP mergen/NNA ]
1[T [co +t+at/CO ] [nn hi/PEN ] [at moston/MT ] [na +tone/PDA sanct/NNA
%L-1% ] [pp mid/PP arwur+dnysse/NND ] [pa under_/PA ] [vv fon/VV ] ,
2[L-1 [wh-2 +tone/PDA ] [co +te/CO ] %na-2% [nn hi/PEN ] [rt
+ar/RT ] [vt forsocon/VT ] L]2 T]1 . ) (AELIVE,III,136.187)

and asked afterwards on morn that they might that saint with reverence
receive, that that they before objected-to.
```

8.3.2.4 *swa hw... swa* relatives

These clauses behave like the headless *se +te* clauses in Section 8.3.2.3 above, where *se* is analyzed as the head of the *+te* relative clause. (But note that left-dislocated *swa hw... swa* relative clauses behave differently; see Section 8.3.3.1) Accordingly, we have analyzed the *swa hw...* phrase as part of the main clause, and the 'hw' constituent, if it is nominal, is case-marked accordingly. The second *swa* is treated as a complementizer. In the morphological section of the token, both *swa* are classified as 'w:cosu'; the first *swa* is POS-tagged as '/CS', and the second *swa* as '/CO'.

```
(V [+ Ac/CC ] [vt syle/VI ] [rt nu/RT ] [pp on/PP gesundfulnysse/NND ]
[nd +tam/PDD so+dan/JJD H+alende/NMD ] [na swa/CS hw+at/PIA 1[L
%wh-1% [co swa/CO ] [nn +tu/PEN ] [vt gemyntest/VT ] 2[U %nx-1% [pp
on/PP for+dsi+te/NND ] [av to/PP ] [vv donne/VVD ] U]2 L]1 ] . V)
(AELIVE,I,212.50)

but give now on health that true Savior so-as anything so-as you intend
on going-forth to do.

( [+ and/CC ] [rl swa/CS hwider/RL 1[L %wh-1% [co swa/CO ]
%rl-1% [nn he/PEN ] [vt com/VT ] L]1 ] [nn he/PEN ] [vt cydde/VT ] [na
+tas/PDA wundra/NNA ] . ) (AELIVE,III,142.262)

and so-as whither so-as he came he proclaimed these wonders.
```

8.3.2.5 Locative relatives

These are analyzed just like *se* relatives, with %rl% as the empty category in the clause. *+t+ar* is the most frequently used wh- constituent. In the morphological section of the token, the adverb is classified as 'w:cosu'. It is glossed accordingly, and POS-tagged as '/RL'.

```
( %nn% [vt sende/VT ] [rt +da/RT ] [pp to/PP Scotlande/NMD , 1[L [wh-1
+t+ar/RL ] %co% %rl-1% [nn se/PDN geleafa/NNN ] [vt w+as/BT ] [rt
+da/RT ] L]1 ] , ) (AELIVE,III,128.48)

sent then to Scotland, where that belief was then,

( [rt Her/RT ] [nn Ida/NMN %L-1% ] [vt feng/VT ] [pp to/PP rice/NND ] ,
1[L-1 [wh-2 +tonon/RL ] %co% %rl-2% [nn Nor+tanhymbra/NMG cynecyn/NNN
] [pa on_/PA ] [vt woc/VT ] L]1 ) (CHROA2,16.547.1)

here I. took to rule, thence Northumbrians royal-race awoken
```

Locative relatives may have another locative adverb as their head:

```
( [rr for+dy/RR ] [vt fundia+d/VT ] [nn +alc/JJN gesceaft/NNN ] [rl
+tider/RL %L-1% ] [rr swi+dost/RR ] 1[L-1 [wh-2 +tider/CS ] %co%
%rl-2% [nn his/PO eard/NNN &/CC his/PO h+alo/NNN ] [rr swi+dost/RR ] [vt
bio+d/BT ] L]1 , ) (BOETH,92.19)

therefore tend each creatures thither most where his country and his
health most are,
```

8.3.3 Free relative clauses [H ... H]

We have distinguished four types of free relative clauses: *se +te* relatives (both in place and left-dislocated) and *swa hw... swa* relatives, which are analyzed as headed relatives (see Sections 8.3.2.4 and 8.3.3.2 above); left-dislocated *swa hw... swa* relatives; and 'hw-' relatives.

If a free relative is a subject, an [nn bracket is added so that the matrix clause has a nominative constituent:

```
( [+ And/CC ] [o loc_/UH ] [nn 1[H [wh-1 hwa/PIN ] %co% %nn-1% [na
+tone/PDA flyman/NNA ] [vt fede/VT o+d+de/CC feormie/VT ] H]1 ] , [vt
gylde/VT ] [na V/JJA pund/NNA ] [nd +tam/PDD cingce/NND ] , 2[B [cs
butan/CS ] [nn he/PEN ] [na hine/PFA ] [vt geladige/VT ] , 3[B [co
+t+at/CO ] [nn he/PEN ] [nd hine/PEA ] [gd fleame/NND ] [vt~ nyste/VT~ ]
B]3 B]2 . ) (LAW3,316.13.2)

and look anyone that fugitive feed or entertain, yield 5 pound that
king, except he him(self) exculpate-oneself, that he him flight
not-knew.
```

8.3.3.1 Left-dislocated *swa hw... swa* relatives

In these clauses, if the 'hw-' constituent is an NP, it is case-marked for the relative clause gap. In the morphological section of the token, both *swa* are classified as 'w:cosu'; the first *swa* is POS-tagged as '/CS', the second as '/CO'. The left-dislocation syntactic label 'f' is always coindexed with the resumptive pronoun to make identification of coreference easier (but see the note on coindexing in Section 11): the case of the relevant element within the wh- constituent frequently does not match the case of the resumptive pronoun.

```
( [f-1 1[H [wh-2 swa/CS hw+at/PIA ] [co swa/CO ] %na-2% [nn +tu/PEN ]
[nd minum/POD lichaman/NND ] [vt dest/VT ] H]1 ] , [~ ne/NE ] [at
m+ag/MT ] [nn-1 +t+at/PDN ] [vv belimpan/VV ] [pp to/PP me/PED ] . )
(AELIVE,I,214.92)

so-as anyone so-as you my body do, not can that concern to me.
```

8.3.3.2 'hw-' relatives

These relatives can function as subjects, complements, adjuncts, and appositives. If they are subjects, they are enclosed in [nn ...].

```
( ... 1[B [cs for+dan/CS ] [nn ic/PEN ] [rt leng/RT ] [vt~ n+abbe/VT~ ]
2[H [wh-1 hw+at/PIA ] %co% %na-1% [nn ic/PEN ] [pp on/PP his/PO
lacum/NND ] [vt aspende/VT ] H]2 B]1 . ) (AELIVE,I,214.66)

... because I longer not-have anyone I on his plays spend.

(V [+ and/CC ] [na +ta/PDA +ahta/NNA ] [vt ateoh/VI ] 1[V [vt loca/VI ]
2[H [wh-1 hu/WR ] %co% %ne% %rr-1% [nd +te/PED ] [vt licige/VT ] , H]2
[o min/PON leofa/JJN dohtor/NNN ] V]1 . V) (AELIVE,I,212.44)

and those possessions draw-up see how you please, my dear daughter.

( [+ and/CC ] %nn% [vt het/VT ] [na hine/PEA ] 1[U [vv secgan/VV ] 2[H
[wh-1 of/PP hwilcere/WJD byrig/NND ] %co% %pp-1% [nn he/PEN ] [vt
w+are/BT ] H]2 ... U]1 . ) (AELIVE,I,308.23)

and commanded him say of which fort he were ...

( [+ and/CC ] %nn% [vt rad/VT ] [pp mid/PP werode/NND ] [pp to/PP 1[H
[wh-1 +t+ar/RL ] %co% %rl-1% [nn his/PO bro+dor/NNG heafod/NNN ] [vt
```

```
stod/VT ] 2[R [pp on/PP stacan/NND ] [vn gef+astnod/VN ] R]2 H]1 ] , )
(AELIVE,III,136.164)
```

```
and rode with throng to where his brother head stood on pin fastened,
```

```
( [+ and/CC ] %nn% [vt l+adde/VT ] [pp for+d/PA mid/PP him/PED ] 1[H
[wh-1 +t+ar/RL ] %co% [nn he/PEN ] [vt fundode/VT ] [pp to/PP %rl-1% ]
H]1 . ) (AELIVE,III,138.221)
```

```
and led forth with him where he tended to.
```

```
( [+ and/CC ] %nn% [vt ges+at/VT ] 1[H [wh-1 +tar/RL ] %co% %rl-1% %ne%
[nd him/PED ] [vn get+aht/VN ] [vt w+as/ET ] H]1 [pp ongean/PP
+done/PDA cyngc/NNA ] . ) (APOLLO,22.14.19)
```

```
and sat where him shown was towards that king.
```

```
( [rt Nu/RT ] [vt bidde/VT ] [nn we/PEN ] [na +te/PEA ] 1[T [co +t+at/CO
] [nn +tu/PEN ] [vt geceose/VT ] [nd +te/PFD ] [na +anne/PIA ] [pp of/PP
us/PED +trym/JJD ] [o 2[H [wh-2 hwilcne/PIA ] %na-2% [nn +tu/PEN ] [at
wille/MT ] [d +te/PED ] [pp to/PP a+dume/NND ] [vv habban/VV ] H]2 ]
T]1 . ) (APOLLO,30.19.12)
```

```
now ask we you that you choose you(yourself) one of us three which you
will you to son-in-law have.
```

Some of these clauses could be interpreted as headed relative clauses with a missing head:

```
( [nn +t+at/PDN o+der/JJN ] [vt w+as/BT ] [ng Creca/NMG ] , 1[H [wh-1
+t+ar/RL ] %co% %rl-1% [nn Alexander/NMN ] [vt ricsade/VT ] H]1 ; )
(OROSIU,58.28)
```

```
that second was Greeks, where Alexander reigned;
```

8.3.4 Indirect questions [Q ... Q]

Indirect questions have the same internal structure as relative clauses (see Section 8.3.2). They occur as the complements of verbs and NPs. They are introduced by various wh- phrases, including *hw+a+ter*; see Sections 8.2.3 and 8.3.1 for direct questions and adverbial clauses introduced by *hw+a+ter*.

```
( 1[B [cs +ta/CS ] [nn he/PEN ] [na +d+at/PDA ] [vv secgean/VV ] [at~
nolde/MT~ ] B]1 , [rt +ta/RT ] [vt acsedon/VT ] [nn hie/PEN ] [na
hine/PEA ] 2[Q [wh-1 hu/WR fela/PIN ] %co% [rl +t+ar/RL ] [nn %nn-1%
swelcerra/JJG manna/NNG ] [vt w+are/BT ] 3[M [cs swelce/CS ] [nn he/PEN
] [vt w+as/BT ] M]3 Q]2 . ) (OROSIU,68.25)
```

```
when he that say not-would, then asked they him how many there such
persons were just-as he was.
```

```
( [rt +ta/RT ] [vt b+ad/VT ] [nn he/PEN ] [na hine/PEA ] [ng eldenne/NNG
&/CC fyrstes/NNG ] , 1[Q [wh hw+a+der/CS ] %co% [nn he/PEN ] [pp
+after/PP f+ace/NND ] [at meahte/MT ] [na o+derne/PIA %L-1% ] [vv
findan/VV ] , 2[L-1 %wh-2% [co +te/CO ] %nx-2% [nn mon/PMN ] [pp to/PP
```

biscope/NND] [vv hadian/VV] [at meahte/MT] L]2 **Q]1** .)
(BEDE,1.254.13)

then asked he him delay and period, whether he after interval could
other find, that one to bishop ordain could.

Indirect questions are also used in apposition to a demonstrative pronoun or other NP. In this case they are enclosed in [o ...] to distinguish them from verbal complements of the clause.

([nn Ic/PEN] [vt wat/VT] 1[T [co +t+at/CO] [nn +alc/PIN +tara/PDG
2[L %wh% [co +te/CO] %nn% [na +tone/PDA cr+aft/NNA] [~ ne/NE] [vt
can/VT] L]2] [at wile/MT] **[ng +t+as/PDG]** [vv wundrian/VV] **[o
3[Q** [wh forhwy/WR] %co% %rr% [nn hi/PEN] [rr swa/RR] [vt don/VT]
Q]3] T]1 .) (BOETH,132.9)

I know that each those that that strength not knows will that wonder why
they so do.

It is frequently difficult to distinguish free relatives from indirect questions that are complements of verbs. We have used the following diagnostic: if the matrix verb as it is used in the clause (e.g. negated or not) can take a ‘whether’ clause as a complement, then the complement is an indirect question; otherwise it is a free relative.

8.3.5 That-clauses [T ... T]

That-clauses occur as the complements of verbs, nouns, and adjectives. That-clause complements of verbs that have empty complementizers and that are not conjoined are treated as embedded main clauses (see Section 8.2.7). Otherwise, if the that-clause does not have an overt complementizer, an empty complementizer is inserted.

That-clause complements of verbs:

([rt +ta/RT] [vt f+agnode/VT] [nn Datianus/NMN] **1[T** [co +t+at/CO]
[nn he/PEN] [vt funde/VT] [na swylcne/JJA dry/NNA] **T]1 ,**)
(AELIVE,I,310.59)

then rejoiced Datian that he found such magician,

(1(D [nn Ic/PEN] [vt secge/VT] [nd eow/PED] [pp to/PP so+tan/JJD]
2[T [co +t+at/CO] [nn sib/NNN] [vt is/ET] [vn forgifen/VN] [nd
Godes/NMG gela+dunge/NND] **T]2 , 3[T** [+ and/CC] %co% [nn se/PDN
gramlica/JJN casere/NNN Dioclytianus/NMN] [vt is/ET] [vn gedon/VN]
[pp of/PP his/PO rice/NND] **T]3 4[T** [+ and/CC] %co% [nn
Maximianus/NMN se/PDN manfulla/JJN] [vt is/BT] [jn dead/JJN] **T]4 .**
D)1) (AELIVE,I,218.127)

I say you to true that relationship is given God calling, and that
wrathful emperor Diocletian is done of his rule and Maximian that wicked
is dead.

That-clause complements of nouns that occur adjacent to the NP are enclosed within the brackets of the NP.

([nd +te/PED] [vt is/BT] [rr so+dlice/RR] **[nn micel/JJN
+tearf/NNN 1[T** [co +t+at/CO] [nn +tu/PEN] [na +de/PFA] [vt

warnige/VT] **T]1]** , 2[B [cs for+dam/CS] [co +te/CO] [nn +du/PEN] [vt eart/ET] [vn fordemed/VN] B]2 .) (APOLLO,12.8.11)

you is truly great need that you you(yourself) warn, because that you are condemned.

That-clause complements of nouns that are extraposed from an NP or a PP are coindexed with an empty category (but see the note on coindexing in Section 11).

(... 1[B [cs nu/CS] [nn +tin/PON mildheortnesse/NNN] [nd me/PED] [na leafe/NNA **%T-1%**] [vt sealde/VT] **2[T-1** [co +t+at/CO] [nn ic/PEN silf/PFN] [at moste/MT] [vv ceosan/VV] 3[H [wh-1 hwilcne/WJA wer/NNA] %co% %na-1% [nn ic/PEN] [vt wolde/VT] H]3 **T]2** B]1 ...) (APOLLO,32.20.15)

... now-that your loving-kindness me permission gave that I self might choose which man I wished ...

That-clauses associated with the lexical item *+tearf*, whether nominative or accusative, are always enclosed within the NP brackets, even though intuitively these seem of a somewhat different type than that-clause complements like ‘the fact that ...’

([nd +te/PED] [vt is/BT] [rr so+dlice/RR] [nn micel/JJN **+tearf/NNN 1[T** [co +t+at/CO] [nn +tu/PEN] [na +de/PFA] [vt warnige/VT] **T]1**] , 2[B [cs for+dam/CS] [co +te/CO] [nn +du/PEN] [vt eart/ET] [vn fordemed/VN] B]2 .) (APOLLO,12.8.11)

you is truly great need that you you(yourself) warn, because that you are condemned.

That-clause complements of adjectives are not enclosed within the brackets of the adjective, and there is no empty category or coindexing.

(1(V ... [vt Beo/BI] [nn +du/PEN] **[jn gemindig/JJN] , 2[T** [co +t+at/CO] [nn +tu/PEN] [vt gehalige/VT] [na restend+ag/NNA] **T]2 .** V)1) (AELET3,194.126)

... be you mindful, that you hallow day-of-rest.

(**[jn Wyr+de/JJN]** [vt is/BT] [nn seo/PDN stow/NNN] [pp for/PP +tam/PDD wur+dfullan/JJD halgan/NND] **1[T** [co +t+at/CO] [na hi/PEA] [nn man/PMN] [vt wur+tige/VT] **T]1** ...) (AELIVE,IV,332.255)

worthy is that spot before that worthy saint that her one esteem ...

That-clauses ‘extraposed’ from subject position are coindexed to the expletive subject, whether overt or empty (but see the note on coindexing in Section 11).

(**[nn-1 Hit/PEN]** [vt gelamp/VT] [rt +da/RT] [pp +at/PP +t+are/PDD m+assan/NND] , **1[T-1** [co +t+at/CO] [nn man/PMN] [vt r+adde/VT] [na +t+at/PDA godspell/NNA] ... **T]1 .**) (AELIVE,I,210.11)

it happened then at that mass, that one advised that gospel ...

```
( [+ and/CC ] %ne-1% [nd him/PED ] [rr eac/RR ] [rr swa/RR ] [vt
geeode/VT ] ... 2[T-1 [co +t+at/CO ] [nn his/PO swi+dre/JJN hand/NNN ]
[vt is/BT ] [jn gesundful/JJN ] [pp o+d/PP +tis/PDA ] T]2 . )
(AELIVE,III,132.98)

and him also so went ... that his stronger hand is sound to this.
```

In some cases the that-clause is coindexed with the subject, but the verb has a complementation code for a tensed clause. In the example below, the verb *ges+ad* has complementation code 4.

```
( %ne-1% [rt Nu/RT ] [vt is/ET ] [nd us/PED ] [vn ges+ad/VN ] 1[T-1
[co +t+at/CO ] [nn sum/JJN halig/JJN cyning/NNN ] [vt is/BT ] [pp on/PP
eowrum/POD earde/NND ] , 2[S %nn% [nn Oswold/NMN ] S]2 [vn gehaten/VN ]
T]1 ; ) (AELIVE,III,140.256)

now is us said that some holy king is on your country, O. commanded;

...
ges+ad_l(secgan)_m(m:pt_t:pa_w:vb)_c(4)
...
```

It is frequently difficult to determine whether the that-clause functions as the subject or as the complement of a noun or adjective. If the verb is a copula, the that-clause is coindexed with the subject (but see the note on coindexing in Section 11).

```
( 1(Q [wh-1 hw+at/WPN ] %nn-1% [vt is/BT ] [nn se/PDN intinga/NNN ]
2[T-1 [co +t+at/CO ] [nn an/JJN +tusend/NNN manna/NNG ] [na +te/PEA ]
[~ ne/NE ] [at magon/MT ] [vv astyrian/VV ] 3[R [rr swa/RR ] [jn
unstrang/JJN ] 4[M [cs swa/CS ] [nn +du/PEN ] [vt eart/BT ] M]4 R]3 T]2
? Q)1 ) (AELIVE,I,216.108)

who is that matter that one thousand persons you not can excite so weak
so-as you are?

( %ne-1% [vt~ N+as/BT~ ] [nd me/PED ] [rr~ n+afre/RR~ ] [jn
gewunelic/JJN ] 1[T-1 [co +t+at/CO ] [nn ic/PEN ] [vt worhte/VT ] [ng
fleames/NNG ] T]1 , ) (AELIVE,IV,320.78)

not-was me never usual that I prepared flight,
```

That-clauses are sometimes used in apposition to a demonstrative pronoun or other NP. In this case, the NP is identified as the argument of the verb, and the that-clause is embedded in [o ...] to distinguish it from a verbal complement, with no empty category or coindexing.

```
( [rt +ta/RT ] [vt geascade/VT ] [nn se/PDN cyng/NNN ] [na +t+at/PDA
] [o 1[T [co +t+at/CO ] [nn hie/PEN ] [pa ut/PA ] [pp on/PP
herga+d/NNA ] [vt foron/VT ] T]1 ] , ) (CHROA2,96.911.8)

then discovered that king that that they out on harrying went,

( [nn He/PEN ] [vt +tancode/VT ] [rt +da/RT ] [nd Gode/NMD ] [ng
eallra/JJG his/PO godnyssa/NNG ] , [o 1[T [co +t+at/CO ] [nn
he/PEN ] [na hine/PEA ] [vt gescylde/VT ] [pp wi+d/PP +tone/PDA
swicolan/JJA deofol/NNA ] T]1 , 2[T [+ and/CC ] %co% %nn% [nd him/PED
```

```
] [na sige/NNA ] [vt forgeaf/VT ] [pp +turh/PP so+dne/JJA geleafan/NNA ]
T]2 ] . ) (AELIVE,I,318.163)
```

```
he thanked then God all his goodnesses, that he him accused with that
guileful devil, and him victory gave through true belief.
```

8.3.6 Infinitival clauses [U ... U]

Complements of causative verbs, ECM verbs, verbs of perception, and aspectual verbs are bracketed as infinitival clauses. Complements of modals and auxiliary verbs are not bracketed as infinitival clauses.

```
( 1(D [nn Ic/PEN ] [vt hate/VT ] 2[U [na +te/PEA ] [rr ardlice/RR ] [vv
l+adan/VV ] [pp to/PP +t+ara/PDG myltestrena/NNG huse/NND ] U]2 ... D)1
) (AELIVE,I,214.81)
```

```
I command you quickly lead to those prostitutes house ...
```

```
( 1[B [cs Gif/CS ] [nn +tu/PEN ] 2[U [na me/PEA ] [rr unwilles/RR ] [vv
gewemman/VV ] U]2 [rt nu/RT ] [vt dest/VT ] B]1 , [nd me/PED ] [vt
bi+d/ET ] [nn twifeald/JJN cl+annysse/NNN ] [vn geteald/VN ] [pp to/PP
wuldre/NND ] . ) (AELIVE,I,214.90)
```

```
if you me unwillingly defile now do, me is two-fold cleanness counted to
glory.
```

```
( [+ and/CC ] %np% [vt begunnon/VT ] 1[U [na hi/PEA ] [vv teon/VV ] [pp
to/PP +t+are/PDG galnysse/NNG huse/NND ] U]1 ; ) (AELIVE,I,216.95)
```

```
and began her pull to that frivolity house;
```

```
(V [+ Ac/CC ] [vt syle/VI ] [rt nu/RT ] [pp on/PP gesundfulnysse/NND ]
[nd +tam/PDD so+dan/JJD H+alende/NMD ] [na swa/CS hw+at/PIA 1[L %wh-1%
[co swa/CO ] [nn +tu/PEN ] [vt gemyntest/VT ] 2[U %nx-1% [pp on/PP
for+dsi+te/NND ] [av to/PP ] [vv donne/VVD ] U]2 L]1 ] . V)
(AELIVE,I,212.50)
```

```
but give now on health that true Savior so-as anything so-as you intend
on going-forth to do.
```

Participials that are complements of verbs are also bracketed as infinitival clauses:

```
( 1(D 2[B [cs +teah/CS ] [nn +tu/PEN ] [vt clypige/VT ] [na tyn/JJA
+tusend/NNA manna/NNG ] B]2 , [nn hi/PEN ] [at sceolan/MT ] [en
ealle/JJN ] [vv gehyran/VV ] [na +tone/PDA halgan/JJA gast/NNA ] 3[U
[rr +tus/RR ] [vg cwe+dende/VG ] , {D2} U]3 D)1 ) (AELIVE,I,216.111)
```

```
although you speak ten thousand persons, they must all hear that holy
breath thus saying,
```

Infinitival relatives are often difficult to distinguish from infinitival purpose clauses. Therefore no distinction is generally made and infinitival clauses are simply bracketed as ‘[U’. An ‘[L’ bracket, with the accompanying wh and co empty categories, is added only in cases where a clear relative clause gap occurs in the infinitival clause:

```
( 1[B [cs Gif/CS ] [nn mon/PMN ] [vt~ n+abbe/VT~ ] [rr buton/RR ] [na
anfeald/JJA hr+agl/NNA 2[L %wh-1% %co% 3[U [na hine/PFA ] [pp mid/PP
%nx-1% ] [av to/PP ] [vv wreonne/VV ] U]3 L]2 4[L [+ &/CC ] %wh-2%
%co% 5[U %nx-2% [av to/PP ] [vv werianne/VV ] U]5 L]4 ] B]1 , 6[B [+
&/CC ] %cs% [nn he/PEN ] [na hit/PEA ] [pp to/PP wedde/NND ] [vt
selle/VT ] B]6 , [pp +ar/PP sunnan/NNG setlgonge/NND ] [vt sie/ET ] [nn
hit/PEN ] [vn agifen/VN ] . ) (LAW2,38.36.1)

if one not-have outside single dress him(self) with to cover and to
guard, and he it to pledge give, before sun setting be it given.
```

Overt accusative subjects of infinitival verbs are not contained within the [U ... U], and no distinction is made in the bracketing or structure for the different types of verbs that take infinitival complements. If the accusative subject is overt, the complementation code of the matrix verb is 5; if the subject is not overt, the complementation code is 7.

```
( [+ and/CC ] %nn% [vt het/VT ] [na hine/PEA ] 1[U [vv secgan/VV ]
2[H [wh-1 of/PP hwilcere/WJD byrig/NND ] %co% %pp-1% [nn he/PEN ] [vt
w+are/BT ] H]2 ... U]1 . ) (AELIVE,I,308.23)

and commanded him say of which fort he were ...
```

In one token in the Brooklyn Corpus, the overt NP subject could not be straightforwardly parsed as being outside the U clause:

```
( [at Uton/AT ] [vv l+atan/VV ] [rt +tonne/RT ] 1[U [vv bion/BV ] U]1
[na +ta/PDA spr+ace/NNA ] , 2[U [+ &/CC ] [vv bion/BV ] [na unc/PEA ]
[ng +d+as/PDG ] [ja orsorge/JJA ]
<BC:_acc_N_exceptionally_within_inf_clause> U]2 ... ) (BOETH,88.31)

let-us leave-behind then be that language, and be us-two that
unconcerned ...
```

Infinitivals themselves can also act as subjects; when they are extraposed, they are coindexed to the overt or empty expletive (but see the note on coindexing in Section 11).

```
( [+ and/CC ] %ne-1% [nd me/PED ] [rm bet/RM ] [vt lica+d/VT ] 1[U-1
[av to/PP ] [vv forl+atenne/VVD ] [rt nu/RT ] [na +tisne/PDA
hwilwendlican/JJA wur+dmynt/NNA ] U]1 ... ) (AELIVE,I,308.28)

and me better pleases to relinquish now this transitory honor ...
```

Infinitivals can also act as purpose clauses:

```
(V [o drihten/NMN ] , [vt efst/VI ] [nn +tu/PEN ] [rt nu/RT ] 1[U [nd
me/PED ] [av to/PP ] [vv fultumigenne/VVD ] U]1 , V) (AELIVE,I,312.89)

Lord, hasten you now me to help,
```

8.3.7 Comparative clauses [M ... M]

A clause is categorized as comparative rather than adverbial only if it has an obvious gap. Comparative clauses do not have wh- constituents, and the gap in the comparative clause is not normally indicated by an empty category (but see below for subject gaps). Extraposed comparative clauses are not coindexed with empty categories. The subordinators most frequently used are *swa* and *swelce*, although *+te* can be used as well. In the morphological section of the token, the first *swa/swelce* is classified as 'w:ajat' or 'w:av', the second as 'w:cosu', and they are POS-tagged correspondingly.

```
( ... 1[B [co +t+at/CO ] [pp on/PP swelce/JJA healfe/NNA 2[M [cs
swelce/CS ] [nn hie/PEN ] [rt +tonne/RT ] [vg winnende/VG ] [vv beon/EV
] [at woldan/MT ] ... M]2 ] ... B]1 . ) (OROSIU,106.11)

... that on such half just-as they then laboring be would ...

( [vt~ Nis/ET~ ] [nn Angelcynn/NMN ] [vn bed+aled/VN ] [ng Drihtnes/NMG
halgena/NNG ] , 1[B [cs +tonne/CS ] [pp on/PP Englalanda/NMD ] [vt
licga+t/VT ] [nn swilce/JJN halgan/NNN 2[M [cs swylce/CS ] [nn
+t+as/PDN halga/JJN cyning/NNN ] [vt is/BT ] M]2 ... B]1 . )
(AELIVE,IV,332.259)

not-is English-people deprived Lord saints, when on England lie such
saints just-as this holy king is ...

( [+ and/CC ] %nn% [vt li+d/VT ] [rl +t+ar/RL ] 1[R [rr swa/RR ] [jn
andsund/JJN ] 2[M [cs swa/CS ] [nn he/PEN ] [pa of_/PA ] [vn aslagen/VN
] [vt w+as/ET ] M]2 R]1 . ) (AELIVE,III,136.172)

and lies there so sound so-as he smitten-off was.

( [+ ac/CC ] %nn% [pa +turh_/PA ] [vt wunode/VT ] [pp on/PP gebedum/NND
] [rt swa/RR lange/RT 1[M [cs swa/CS ] [nn heo/PEN ] [vt wolde/VT ]
M]1 ] , ) (AELIVE,I,218.127)

but remained on prayers so long so-as she wished,

( [nn Ic/PEN ] [vt swerige/VT ] [pp +turh/PP +da/PDA gem+anan/JJA
h+alo/NNA ] 1[T [co +t+at/CO ] [nn ic/PEN ] [na me/PFA ] [rr~ n+afre/RR~
] [rm bet/RM ] [~ ne/NE ] [vt ba+dode/VT ] 2[M [cs +tonne/CS ] [nn
ic/PEN ] [vt dide/VT ] [rt tod+ag/RT ] M]2 T]1 ) (APOLLO,20.14.1)

I swear through that common health that I me(myself) never better not
washed when I did today

( [+~ ne/CC~ ] %nn% [pp~ to/PP nauhte/NND~ ] [~ ne/NE ] [vt weor+da+d/BT
] , 1[B [cs gif/CS ] [nn hi/PEN ] [pp~ be/PP nanum/JJD~ d+ale/NND ] [~
ne/NE ] [vt beo+d/ET ] [vn gef+astnode/VN ] [pp to/PP Gode/NMD ] . [rr
+ton/RR ma/RR 2[M [cs +te/CS ] [nn +t+as/PDG hweoles/NNG felga/NNN ]
[at magon/MT ] [vv bion/BV ] [pp on/PP +d+am/PDD f+arelte/NND ] , 3[B
[cs gif/CS ] [nn hi/PEN ] [~ ne/NE ] [vt bio+d/BT ] [jn f+aste/JJN ] [pp
on/PP +t+am/PDD spacum/NND ] , [o &/CC +ta/PDN spacan/NNN on/PP
+t+are/PDD eaxe/NND ] B]3 M]2 ] B]1 . ) (BOETH,130.8)

neither to nothing not are, if they by no portion not are fastened to
God. then more when that wheel felloes can be on that way, if they not
are fast on those spokes, and those spokes on that axis.
```

(swa) swa clauses that are clearly related to a *swa* in the main clause are treated in the same way:

```
( ... 2[B [rr~ nales/RR~ ] [rr~ na/RR~ ] [cs for_+t+am/CS ] [co +te/CO ]
[nn hio/PEN ] [pp mid/PP forheriunge/NND ] [rr swa/RR ] [vn
gebismrad/VN ] [vt w+are/ET ] 3[M [cs swa/CS ] [nn Babylonia/NMN ] [vt
w+as/ET ] M]3 B]2 ... ; ) (OROSIU,74.34)

... not-at-all not because that she with harassing so mocked were so-as
Babylon was;

( [+ and/CC ] 1[M [cs swa/RR swa/CS ] [nn +teos/PDN burh/NNN ] [vt
is/ET ] [vn gem+arsod/VN ] [pp +turh/PP me/PEA ] [pp fram/PP Criste/NMD
] M]1 , [rr swa/RR ] [vt bi+d/ET ] [nn Siracusa/NMN burh/NNN ] [pp
+turh/PP +te/PEA ] [vn gewlitegod/VN ] ... ) (AELIVE,I,212.30)

and so so-as this fort is proclaimed through me from Christ, so is
Syracuse fort through you beautified ...
```

Infinitival comparative clauses are parsed as infinitival objects of prepositions:

```
( 1[B [cs Gif/CS ] [nn hwa/PIN ] [pp to/PP hw+a+drum/PID +tissa/PDG ]
[vn genied/VN ] [vt sie/ET ] [pp on/PP woh/NNA ] , [o o+d+de/CC to/PP
hlafordsearwe/NND o+d+de/CC to/PP +angum/JJD unryhtum/JJD fultume/NND ]
B]1 , [nn +t+at/PDN ] [vt is/ET ] [rt +tonne/RT ] [jn ryhtre/JJN ] 2[U
[av to/PP ] [vv aleoganne/VV ] U]2 [pp +tonne/CS 3[U [av to/PP ]
[vv gel+astanne/VV ] U]3 ] . ) (LAW2,46.1.1)

if anyone to both these forced be on bending, or to high-treason or to
any wrong help, that is then straighter to lie when to follow.
```

As was stated above, normally gaps are not indicated in comparative clauses. However, so that all M clauses contain a nominative NP, clear subject gaps are indicated by an empty category and an empty wh- constituent.

```
( 1[B [cs Gif/CS ] [nn hwa/PIN ] [vt adelfe/VT ] [na w+aterpyt/NNA ] B]1
... 3[B [+ &/CC ] %cs% %nn% [na hine/PEA ] [rt eft/RT ] [~ ne/NE ] [vt
betyne/VT ] B]3 , %np% [vt gelde/VT ] [na swelc/JJA neat/NNA 4[M
%wh-1% [cs swelc/CS ] %nn-1% [pp +d+ar/RL on/PP ] [vt befealle/VT ]
M]4 ] , ) (LAW2,34.1.22)

if anyone dig well ... and him again not enclose, yield such animal as
there on fall,
```

8.3.8 Degree complements [G ... G]

Degree complements are frequently related to *swa*, but they can also be related to *to +ton* or *to +t+as* when these phrases mean ‘to the extent... that’. Degree clauses are never coindexed with empty categories.

```
( [rl +t+ar/RL ] [vt w+aron/BT ] [nn swa/RR m+are/JJN biscopas/NNN
manege/JJN ] [pp on/PP +dam/PDD syno+de/NND ] , 1[G [co +t+at/CO ] [nn
hy/PEN ] [vv wyrcean/VV ] [at mihtan/MT ] [na wundra/NNA ] G]1 ... )
(AELET4,3.7)

there were so famous bishops many on that synod, that they prepare
could wonders ...
```

([+ &/CC] %nn% [vt ahsode/VT] 1[Q [wh hwylc/WJN mon/NNN] %co% %nn% **[pp to/PP +d+as/RR]** [jn gedyrstig/JJN] [vt w+are/BT] **, 2[G** [co +t+at/CO] [nn he/PEN] [nd swa/RR miclum/JJD were/NND] [na swilc/JJA witu/NNA] [vt dyde/VT] **G]2** Q]1 .) (BEDE,6.114.29)

and asked which person to afterwards daring were, that he so great man such punishments did.

([+ and/CC] %nn% 1[R **[rr swa/RR]** [jn anr+ade/JJN] R]1 [pa +turh_/PA] [vt wunode/VT] **2[G** [co +t+at/CO] [nn he/PEN] [at~ nolde/MT~] [vv abugan/VV] [pp to/PP bysmorfullum/JJD leahtrum/NND] **G]2** ,) (AELIVE,IV,314.16)

and so unanimous remained that he not-would bow to infamous vices,

8.3.9 Small clauses [S ... S]

The small clause label is used for verbless constituents containing internal predication: a subject and a nominal or adjectival complement.

If the two constituents of the small clause are adjacent and the subject is before the complement, they are bracketed as they appear within small clause brackets, no matter where in the matrix clause the small clause appears.

([pp An/PP Antiochia/NMD +tare/PDD ceastre/NND] [vt w+as/BT] **1[S** [nn sum/JJN cyningc/NNN] [nn Antiochus/NMN] **S]1** [vn gehaten/VN] :) (APOLLO,2.1.1)

on Antioch that castle was some king Antiochus commanded:

If the two constituents of the small clause are separated, and the subject is before the complement, the small clause bracketing appears with the complement, and the subject is coindexed with an empty category within the small clause (but see the note on coindexing in Section 11).

([+ and/CC] **[nn-1** se/PDN munuc/NNN **]** [vt hatte/VT] **1[S %nn-1%** [nn Abbo/NMN] **S]1** .) (AELIVE,IV,314.1)

and that monk commanded Abbo.

If the complement of the small clause appears before the subject, the small clause contains two empty categories and appears after the matrix verb.

(**[nn-1** Georius/NMN] **[nn-2** ic/PEN] [vt eom/ET] [vn gehaten/VN] **1[S %nn-2% %nn-1% S]1** ,) (AELIVE,I,308.28)

George I am commanded,

If the complement of the small clause appears before the subject and the subject appears after the matrix verb, the small clause contains the subject and therefore also appears after the matrix verb:

(... [rt +da/RT] [vt w+as/ET] **[nn-1** Apollonius/NMN **]** [vn gehaten/VN] **2[S [nn** sum/JJN iung/JJN man/NNN **... %nn-1% S]2**) (APOLLO,4.4.1)

... then was Apollonius commanded some young person ...

In small clauses, PPs can function as subjects:

([na-1 +deofas/NNA] [nn we/PEN] [vt hata+d/VT] **1[S [pp o+d/PP VII/JJA men/NNA]** %na-1% **S]1 ;** [o from/PP VII/NND hlo+d/NNN o+d/PP XXXV/NNA] ;) (LAW2,94.13.1)

criminals we command to 7 persons; from 7 troop to 35;

We have found small clause complements of *hatan* with only one argument; the non-overt NP is indicated by %np%:

([+ &/CC] [nn he/PEN] [nd +d+are/PDD cirican/NND] [pp for/PP hine/PFA] [na o+derne/JJA biscop/NNA] [vt gehalgode/VT] , 1[P **2[S %np% [nn Romanus/NMN] S]2** [vt w+as/ET] [vn haten/VN] P]1 , 3[B [cs for+don/CS] [nn he/PEN] [na aldorlicnisse/NNA %T-1%] [pa on_/PA] [vt feng/VT] [pp from/PP Bonefatio/NMD +tam/PDD papan/NND] , 4[T-1 [co +t+at/CO] [nn he/PEN] [na biscopas/NNA] [vv hadian/VV] [at moste/MT] T]4 B]3 .) (BEDE,7.118.26)

and he that church before him(self) other bishop hallowed, R. was commanded, because he authority took from B. that pope, that he bishops ordain might.

For the sake of consistency, all passive clauses that fit the syntactic description of small clauses are syntactically bracketed as [S ... S], even though it may be possible to interpret the passive participle as an adjunct of one of the NPs. In the following example, the clause could be translated as ‘In the city of Antioch, there was a king called Antiochus’.

([pp An/PP Antiochia/NMD +tare/PDD ceastre/NND] [vt w+as/BT **] 1[S** [nn sum/JJN cyningc/NNN] [nn Antiochus/NMN] **S]1** [vn gehaten/VN] :) (APOLLO,2.1.1)

on Antioch that castle was some king Antiochus commanded:

Nevertheless, some cases are still ambiguous. In the example below, we have bracketed the embedded clause as an R rather than an S:

([nn We/PEN] [vt syndon/BT] [nn +tyne/PON ceastergewaran/NNN] **1[R** [pp of/PP +a+delum/JJD gebyrdum/NND] [vn geborene/VNN] **R]1**) (APOLLO,30.19.10)

we are your burghers of noble descents carried.

Impersonal verbs like *+tyncan* can take small clause complements. The nominative argument is then treated as part of the small clause, and the small clause is coindexed with an (empty) expletive in the main clause (but see the note on coindexing in Section 11).

(1(Q [cs Hwe+ter/CS] **%ne-1%** [nd +te/PED] [rt +tonne/RT] [vt +tince/VT] **2[S-1** [jn unweor+d/JJN &/CC unm+arlic/JJN] [nn sio/PDN gegaderunc/NNN +tara/PDG +driora/JJG +tinga/NNG] **S]2** 3[B [cs +tonne/CS] [nn +ta/PDN +trio/NNN] [vt bio+d/ET] [pp to/PP anum/PID] [vn gedon/VN] B]3 , Q)1) (BOETH,75.18)

```
whether you then appear unworthy and inglorious that gathering those
three things when those three are to one done,
```

This can result in the presence of an empty expletive despite the presence of a nominative NP:

```
( 1(D %ne-1% [nn-2 Se/PDN %L-3% ] [nd me/PED ] [vt +dinc+d/VT ]
2[S-1 %nn-2% [jn ges+aligra/JJN ] S]2 3[L-3 %wh-4% [co +te/CO ]
%nn-4% [na hw+athwugu/PIA ] [vt h+af+d/VT ] L]3 . D)1 ) (BOETH,119.4)

that me appears more-fortuitous that something has.
```

8.3.10 Adjunct participial/adjectival clauses [R ... R]

As with other clauses that can modify nouns and NPs, adjunct clauses that are adjacent to the constituent they modify are enclosed in the brackets of that constituent, except in the case of pronominals (either personal or demonstrative), where they are bracketed separately.

```
( ... [rt +da/RT ] [vt comon/VT ] [rl +tyder/RL ] [rt sona/RT ] [nn
his/PO agene/JJN landleode/NNN 2[R [jn geleofede/JJN ] [pp on/PP
God/NMA ] R]2 ] , ) (AELIVE,I,318.171)

... then came thither soon his own natives believing on God,

( [f 1[H [wh-1 Swa/CS hwilc/JJN man/NNN ] [co swa/CO ] [na +de/PEA ]
2[R [vg lifigende/VGA ] R]2 [pp to/PP him/PED ] [vt bring+d/VT ] H]1 ]
, [pa on_/PA ] [vt fo/VT ] [nn se/PDN ] [na fiftig/JJA punda/NNA
goldes/NNG ] . ) (APOLLO,12.8.17)

so-as which person so-as you living to him brings, take that fifty
pounds gold.
```

If adjunct clauses are separated from the constituent they modify, they are not coindexed to empty categories.

```
( [+ and/CC ] %nn% [vt geseah/VT ] [na Agathen/NMA ] [pp betwux/PP
engla/NNG werodum/NND ] , 1[R [rr +anlice/RR ] [vn gefretewode/VNA ]
R]1 , ) (AELIVE,I,210.22)

and saw Agatha between angels throngs, singularly adorned,
```

8.3.11 Absolute clauses [A ... A]

Absolute clauses are constructions with a subject different from that of the matrix clause and a verb in participial or infinitival form. When the verb of the absolute clause is a present participle, the structure of the clause is similar to that of the adjunct participial clauses (see Section 8.3.10 above), except that the latter do not have an overt subject. Absolute clauses are often translations of Latin ablative absolutes.

```
( [+ &/CC ] [rt +ta/RT ] [rt sona/RT ] [rt eft/RT ] 1[A [nd Gode/NMD ]
[vg fultomiendum/VGD ] A]1 [nn he/PEN ] [at meahte/MT ] [vv geseon/VV
&/CC sprecan/VV ] , ) (CHROA2,56.797.1)

and then soon again God helping he could see and speak,
```

8.3.12 Direct speech fragments [F ... F]

Direct speech fragments include direct speech that is not a main clause: that is, not a declarative, direct question, imperative, or exclamation. Fragments may be subordinate clauses, phrases, and even single words. Note that in the 'unpacked' Format 3 of .unpacked files, speech fragments are unpacked as clauses.

```
( [nn Hellanicus/NMN ] [vt s+ade/VT ] : 1[F 2[B [cs For+dam/CS ] [co
+te/CO ] [nn +tu/PEN ] [vt girndest/VT ] 3[T [co +t+at/CO ] [nn +tu/PEN
] [vt w+are/BT ] [nn +t+at/PDN 4[L %wh-1% %co% %nn-1% [nn se/PDN
f+ader/NNN ] [vt is/BT ] L]4 ] T]3 B]2 . F]1 ) (APOLLO,12.8.15)

Hellanicus said: because that you yearned that you were that that father
is.

( [nn Hellanicus/NMN ] [vt cw+a+d/VT ] : 1[F [nn Antiochus/NMN se/PDN
cyngc/NNN ] F]1 . ) (APOLLO,12.8.13)

Hellanicus said: Antiochus that king.

( [+ and/CC ] [nn heo/PEN ] [vt gewat/VT ] [pp to/PP Criste/NMD ] 1[B
[cs mid/PP +tam/PDD ] [co +te/CO ] [nn hi/PEN ] [vt cw+adon/VT ] 2[F [o
amen/UH ] F]2 B]1 . ) (AELIVE,I,218.149)

and she departed to Christ with that that they said amen.
```

8.3.13 Unknown clause type [X ... X]

Clauses are labelled 'X' when the syntactic structure is not clear. In the token below, the internal structure is clear, but the highest level appears to be an NP rather than a main clause.

```
( 1[X [nn +ta/PDN consulas/NNN 2[L %wh% [co +te/CO ] %nn% [pp on/PP
+d+am/PDD dagum/NND ] [na +t+at/PDA Sabinisce/JJA gewinn/NNA ] [pa
under_/PA ] [vt fengon/VT ] L]2 ] , [x +te/CO ] [nn mon/PMN ] [vt het/VT
] 3[S [na eall/JJA hiera/PO cynn/NNA ] [na Fabiane/NMA ] S]3 , 4[B [cs
for_+ton/CS ] [nn hit/PEN ] [nn ealra/JJG Romana/NMG +anlicost/JJN ] [vt
w+as/BT ] [o &/CC cr+aftegast/JJN ] B]4 X]1 . ) (OROSIU,72.8)

those consuls that on those days that Sabine labor received, that one
commanded all their kind Fabii, because it all Romans most-singular was
and strongest.
```

We have found several cases (particularly in the law documents) where a relative clause is continued without a gap, somewhat like the continuation of a normal subordinate clause without subordinating conjunction. These continuations are labelled X.

```
( [fn Se/PDN 1[L %wh-1% [co +de/CO ] %nn-1% [na hine/PEA ] [rt +tonne/RT
] [rr nedes/RR ] [pa of_/PA ] [vt sloge/VT ] [o o+d+de/CC unwillum/RM
o+d+de/CC ungewealdes/RM ] , 2[B [cs swelce/CS ] [na hine/PEA ] [nn
God/NMN ] [rr swa/RR ] [vt sende/VT ] [pp on/PP his/PO honda/NND ] B]2
L]1 ] , 3[X [+ &/CC ] [nn he/PEN ] [na hine/PEA ] [~ ne/NE ] [pa
ymb_/PA ] [vt syrede/VT ] X]3 , [vt sie/BT ] [nn he/PEN ] [ng
feores/NNG ] [jn wyr+de/JJN ] [o &/CC folcryhtre/JJG bote/NNG ] , 4[B
[cs gif/CS ] [nn he/PEN ] [na fri+dstowe/NNA ] [vt gesece/VT ] B]4 . )
(LAW2,30.13.2)
```

```
that that him then of-need struck-off or unwillingly or involuntarily,
just-as him God so sent on his hand, and he him not designed, be he life
worthy and according-to-common-law help, if he refuge seek.
```

In the example below, a clause with the function of a main clause but introduced by 'that' is labelled X:

```
( [+ &/CC ] %nn% [vt gestihtedon/VT ] 1[T [co +t+at/CO ] [nn heo/PEN ]
[rl +t+ar/RL ] [at wolden/MT ] [na +t+are/PDG wisan/NNG ende/NNA ] [vv
gebidan/VV ] T]1 . [x Ac/CC +ta/PDN arleasan/JJN cyningas/NNN nales/RR~
micelre/JJD tide/NND , 2[B [cs +after/PP +ton/PDI ] [co +te/CO ] [nn
heo/PEN ] [na +tone/PDA so+df+astnisse/NNG bodan/NNA ] [pp from/PP
him/PED ] [vt adrifon/VT ] B]2 , 3[X [co +t+at/CO ] [nn heo/PEN ] [nd
deofla/NNG big+angum/NND ] [rr freolice/RR ] [vt +teowedon/VT ] X]3 ] .
) (BEDE,5.112.31)

and ruled that they there would that way end stay. but those
dishonorable kings not-at-all great time, after that that they that
truth messenger from them drove, that they devils ways freely served.
```

8.4 Main or subordinate clause?

It must be emphasized that the clause type is not always clear. In the following example, the T clauses (apart from the first one) could also be interpreted as main clauses:

```
( [+ &/CC ] [nn ures/POG hlafordes/NNG ger+adnes/NNN &/CC his/PO
witena/NNG ] [vt is/BT ] , 1[T [co +t+at/CO ] [nn muneca/NNG gehwylc/PIN
, 2[L %wh-1% [co +te/CO ] %nn-1% [rr ute/RR ] [vt sy/BT ] [pp of/PP
mynstre/NND ] L]2 3[L [+ &/CC ] %wh-2% %co% %nn-2% [ng regoles/NNG ] [~
ne/NE ] [vt gyme/VT ] L]3 ] , [vt do/VT ] 4[B [cs swa/CS ] [nd him/PED ]
[nn +tearf/NNN ] [vt is/BT ] B]4 T]1 : 5[T %co% %nn% [vt gebuge/VT ]
[rm georne/RM ] [pp into/PP mynstre/NND ] [pp mid/PP eallum/JJD
eadmettum/NND ] T]5 6[T [+ &/CC ] %co% %nn% [ng misd+ada/NNG ] [vt
geswice/VT ] T]6 7[T [+ &/CC ] %nn% [vt bete/VT ] [rr swy+te/RR ] [rm
georne/RM ] [na +t+at/PDA 8[L %wh-3% %co% %nx-3% [nn he/PEN ] [vn
abrocen/VN ] [at h+abbe/HT ] L]8 ] T]7 ; 9[T %co% %nn% [vt ge+dence/VT
] [na word/NNA &/CC wedd/NNA , 10[L %wh-4% [co +te/CO ] %nx-4% [nn
he/PEN ] [nd Gode/NMD ] [vt bet+ahte/VT ] L]10 ] T]9 . ) (LAW3,238.5)

and our lord agreement and his sages is, that monks each, that out be of
monastery and rule not care-for, do so-as him need is: bow eagerly into
monastery with all humilities and misdeeds wander and repair very-much
eagerly that he broken have; think word and pledge, that he God
made-over.
```

Since the same lexical items can be used as subordinating conjunctions and adverbials in Old English, many more potential ambiguities arise. For example, clauses introduced by *for+t+am* are also sometimes ambiguous. The adverbial clause numbered 3 in the following example could be interpreted as a main clause introduced by the adverb *for+t+am*.

```
( [+ ac/CC ] %nn% [vt sprece/VT ] [pp to/PP +dam/PDD 1[L %wh% [co +te/CO
] %nn% [rm wel/RM ] [vt wilnia+d/VT ] 2[U [na wisdom/NNA ] [pa on_/PA ]
[vv gitan/VV ] U]2 L]1 ] ; 3[B [cs for+d+am/CS ] [nn +t+at/PDN ] [vt
bi+d/BT ] [nn tacn/NNN wisdomes/NNG ] [o 4[T [co +t+at/CO ] [na-1
hine/PEA ] [nn mon/PMN ] [vt welnige/VT ] 5[U %na-1% [vv geheran/VV ]
```

```
[vx [+ &/CC ] [pa on_/PA ] [vv gitan/VV ] ] U]5 T]4 ] B]3 . )
(BOETH,118.9)
```

```
but speak to those that well wish wisdom grasp; because that is token
wisdom that him one wish hear and grasp.
```

Similarly, some relative clauses could be interpreted as main clauses, and some *+ta* adverbial clauses could be interpreted as main clauses. The user is reminded that the syntactic scheme is not intended to represent an analysis, but is rather a tool to be used to facilitate searches; and that the dataset that is output by searches should be carefully examined to make sure that it really the dataset that the user intended.

9. Clause-internal labels

9.1 Noun phrases

Noun phrase labels

[nc ...]	NP argument
[gc ...]	NP used adverbially
[lc ...]	emphatic reflexive NP
[d ...]	dative NP of possession
[fc ...]	left-dislocated NP

In general, all finite clauses contain a nominative NP, with the exception of imperatives and *wuton* clauses. See Section 8.2.1.

Although almost all NPs have heads which are nouns, adjectives and participles can also act as heads of NPs. See in addition Section 8.3.3 for free relatives as subjects.

```
( [nn +ta/PDN godan/JJN ] [at wylla+d/MT ] [vv gehyran/VV ] [na
Godes/NMG bebodu/NNA ] ) (AELET3,70.6)
```

```
those good will hear God commands
```

```
( [+ And/CC ] [rr eac/RR ] [nn +ta/PDN halgan/JJN canones/NNN ] [nd
gehadodum/VND ] [vt forbeoda+d/VT ] [o ge/CC bisceopum/NND ge/CC
preostum/NND ] , 1[U [av to/PP ] [vv beonne/BVD ] [pp embe/PP
+teofas/NNA ] U]1 ... ) (AELIVE,IV,330.220)
```

```
and also those holy canons ordained prohibit and bishops and priests, to
be around criminals ...
```

9.1.1 NP arguments [nc ...]

Most NPs are bracketed as nc's, including arguments of verbs, benefactives, and non-emphatic reflexives (whether or not the verb is inherently reflexive). The case of the NP ordinarily matches the case of the head noun or pronoun: 'n' (nominative), 'a' (accusative), 'g' (genitive), or 'd' (dative) (instrumental NPs are not arguments).

```
( [+ ac/CC ] [nn hi/PEN ealle/JJN ] [~ ne/NE ] [at mihton/MT ] [nd
hyre/PED anre/JJD ] [vv gehelpan/VV ] . ) (AELIVE,I,210.8)
```

```
but they all not could her one help.
```

```
( 1(V [vt hlyst/VI ] [ng mines/POG r+ades/NNG ] V)1 )
(AELIVE,I,212.46)
```

listen my advice;

```
( [rr +tus/RR ] [vt tihte/VT ] [nn Lucia/NMN ] [rt gelome/RT ] [na
+ta/PDA modor/NNA ] ... ) (AELIVE,I,212.52)
```

thus invited Lucy often that mother ...

```
( ... 1[B [cs o+d/CS ] [co +t+at/CO ] [nn he/PEN ] [nd hire/PED ]
[na swingele/NNA ] [vt behet/VT ] ... B]1 . ) (AELIVE,I,214.68)
```

... until that he her whip promised ...

```
( ... 2[T [co +t+at/CO ] [nn +tu/PEN ] [na~ nanne/JJA~
brydguman/NNA ] [rr~ n+afre/RR~ ] [nd me/PED ] [~ ne/NE ] [vt
namige/VT ] T]2 ... ) (AELIVE,I,212.36)
```

... that you no bridegroom never me not name ...

```
( [rt +ta/RT ] [vt geb+ad/VT ] [nn Georius/NMN ] [na hine/PFA ]
[rm bealdlice/RM ] [pp to/PP Gode/NMD ] , {V1} ) (AELIVE,I,312.89)
```

then asked George him(self) boldly to God,

The case-marking of an NP may be done according to function rather than according to the elements it contains, if the elements are clearly modifiers of non-overt heads. In the following adjacent clauses, the first NP of the second clause is case-marked nominative rather than genitive:

```
( [nn oxan/NNG t+agl/NNN ] [vt bi+d/BT ] [ng scillinges/NNG ] [jn
weor+d/JJN ] , ) (LAW2,116.59)
```

ox tail is shilling worthy,

```
( [nn cus/NNG ] [vt bi+d/BT ] [ng fifa/NNG ] ; ) (LAW2,116.59)
```

cow is five;

Predicates of the verb ‘be’, however, are normally case-marked by form rather than by function:

```
( [nn +t+at/PDN o+der/JJN ] [vt w+as/BT ] [ng Creca/NMG ] ... )
(OROSIU,58.28)
```

that second was Greeks ...

NPs that have been moved out of other NPs or PPs are also syntactically bracketed as ‘nc’. They are coindexed with an empty category in order to distinguish them from arguments of verbs, which are not co-indexed; but see the note on coindexing in Section 11.

```
( [+ and/CC ] [vt wurdon/ET ] [nn fela/PIN %ng-1% ] [vn geh+alde/VN ]
[ng-1 untrumra/JJG manna/NNG and/CC eac/RR swilce/RR
```

nytena/NNG] [pp +turh/PP +da/PDA ylcan/JJA rode/NNA] ...)
(AELIVE,III,126.30)

and became many healed infirm persons and also in-like-manner animals through that same rood ...

([+ and/CC] %nn% [vt clypode/VT] **[nd-1 hyre/PED]** [rr +tus/RR] [pp to/PP **%nd-1%**] , 1[R [vg clypigende/VG] [rl ufenne/RL] , {Q1} R]1) (AELIVE,I,210.22)

and spoke her thus to, speaking from-above,

Within complex numbers, the first number is POS-tagged without case (/NR), and the case-marking on the syntactic constituent is taken from the second number:

(... 3[B [cs +ta/RT +ta/CS] [nn he/PEN sylf/PFN] [vt w+as/BT] [pp on/PP ylde/NND] **[nn eahta/NR and/CC +trittig/NNN geara/NNG]** B]3 B]1 .) (AELIVE,III,134.143)

... then when he self was on age eight and thirty years.

9.1.2 NPs used adverbially [gc ...]

These NPs are adjuncts, and many (but not all) are temporal adverbials.

([+ and/CC] [nn ic/PEN] [vt heold/VT] [rt nu/RT] **[ga nigon/JJA gear/NNA]** [pp wi+d/PP ealle/JJA hyn+da/NNA] [na +tines/POG f+ader/NNG gestreon/NNA]) (AELIVE,I,212.41)

and I held now nine years with all humiliations your father gains

(1[B [cs +teah/CS] [nn +tu/PEN] [na mine/POA hand/NNA] [vt ahebbe/VT] [pp to/PP +dinum/POD h+a+tengilde/NND] B]1 , 2[B [+ and/CC] %cs% %nn% [rr swa/RR] [pp +turh/PP me/PEA] [vt geoffrige/VT] **[gg mines/POG unwilles/NNG]** B]2 ...) (AELIVE,I,214.86)

although you my hand raise to your idolatry, and so through me offer my repugnance ...

([+ and/CC] %nn% [pp on/PP hire/PO naman/NND] [vt gehalgodon/VT] , [pp +tam/PDD h+alende/NMD %L-1% to/PP wur+dmynte/NND 1[L-1 [wh-2 se_/PDN] [co +de/CO] %nn-2% [rt +afre/RT] [vt rixa+d/VT] [pp on/PP ecnysse/NND] **[gn god/NMN]** L]1] ; [o AMEN/UH] .)
(AELIVE,I,218.150)

and on her name hallowed, that Savior to honor that that ever reigns on eternity God; amen.

([o Hw+at/UH] [rt +da/RT] [nn Georius/NMN] [pp to/PP eor+dan/NND] [vt abeah/VT] 1[R [rr +tus/RR] [vg biddende/VG] [na his/PO Drihten/NMA] **[gd gebigedum/VND cneowum/NND]** , {V1} R]1)
(AELIVE,I,316.134)

what then George to ground bowed thus asking his Lord bent knees,

```
( [+ and/CC ] %nn% [rm earmlice/RM ] [vt geendode/VT ] [gd yfelum/JJD
dea+de/NND ] . ) (AELIVE,IV,330.231)
```

```
and miserably ended evil death.
```

9.1.3 Emphatic reflexives [lc ...]

These NPs are reflexives used in apposition to an argument; as far as we can tell, they always contain (or consist solely of) the word 'self'. In the morphological section of the token, they are given a distinct word class 'w:prrf' (which is also used for pronouns used reflexively), and the word class is reflected in the POS tag '/PF'. Emphatic reflexives are syntactically bracketed and labelled only if they are separated from the argument NP; if they appear adjacent to the argument NP, they are simply included within it. If they are separated from the argument NP, no empty category is left inside the NP.

```
( ... [ng +t+as/PDG 2[L %wh-2% [co +te/CO ] %nx-2% [nn +du/PEN ] [at
miht/MT ] [ln sylf/PFN ] [vv geti+dian/VV ] L]2 ] ... )
(AELIVE,I,210.22)
```

```
... that that you can self give ...
```

```
( [rt Nu/RT ] [nn ic/PEN ] [at wylle/MT ] [na me/PEA sylfe/PFA ] [nd
him/PED ] [rr so+dlice/RR ] [vv geoffrian/VV ] ... ) (AELIVE,I,214.66)
```

```
now I will me self him truly offer ...
```

When emphatic reflexives contain a pronoun as well as 'self', they are generally not case-marked the same as the coreferent noun phrase:

```
( 1[B [cs +da/RT +da/CS ] [nn +t+at/PDN m+aden/NNN ] [vt gehirde/VT ]
2[T [co +t+at/CO ] %ne-1% [nd hire/PED ] [vt w+as/ET ] [vn alyfed/VN ]
[pp fram/PP hire/PO f+ader/NND ] 3[H-1 [wh-2 +t+at/PDA ] %co% %na-2%
[nn heo/PEN ] [rt +ar/RT ] [ld hyre/PED silf/PFD ] [vv gedon/VV ]
[at wolde/MT ] H]3 T]2 B]1 , [rt +da/RT ] [vt cw+a+d/VT ] [nn heo/PEN ]
[pp to/PP Apollonio/NMD ] : {D1} ) (APOLLO,24.16.7)
```

```
then when that maiden heard that her was allowed from her father that
she before her self do would, then said she to Apollonius:
```

9.1.4 Datives of possession [d ...]

Datives of possession are bracketed and labelled even when they occur adjacent to the NP that they modify:

```
( [nn +tis/PDN ] [vt com/VT ] [rt +ta/RT ] [pp to/PP earan/NND ] [d
+tam/PDD +a+delborenan/JJD cnihte/NND ... ] . )
(AELIVE,I,212.57)
```

```
this came then to ear that distinguished boy ...
```

```
( [nn Seo/PDN wydewe/NNN ] [vt w+as/BT ] [jn unhal/JJN ] , 1[B [cs
swa/RR ] [co +t+at/CO ] [d hire/PED ] [vt arn/VT ] [nn blod/NNN ]
[pp geond/PP feower/JJD geare/NND f+ac/NNA ] B]1 , ) (AELIVE,I,210.8)
```

```
that widow was sick, so that her ran blood throughout four year
interval,
```

```
( [+ and/CC ] %nn% [na hine/PEA ] [rm arwur+dlice/RM ] [pa under_/PA ]
[vt feng/VT ] [d his/PO folce/NND ] [pp to/PP +dearfe/NND ] ... )
(AELIVE,III,128.60)
```

```
and him reverentially received his people to need ...
```

The distinction between datives of possession and other datives is not always clear. Some datives of possession could be interpreted as dative arguments of nouns:

```
( [rt +ta/RT ] [vt het/VT ] [nn Datianus/NMN ] 1[U [na +da/PDA
h+a+denan/JJA ] [vv gegaderian/VV ] [pp to/PP his/PO deofolgildum/NND ]
[d his/PO Drihtne/NMD ] [pp on/PP teonan/NND ] U]1 , )
(AELIVE,I,308.8)
```

```
then commanded Datian those heathen gather to his idolatries his Lord on
injury,
```

```
( [rt +da/RT ] [vt aspende/VT ] [nn he/PEN ] [na his/PO feoh/NNA ] [rm
unforh/RM ] [pp on/PP +almyssum/NND ] [nd hafenleasum/JJD mannum/NND ]
[d +tam/PDD h+alende/NMD ] [pp to/PP lofe/NND ] , )
(AELIVE,I,308.12)
```

```
then spent he his cattle fearlessly on alms destitute persons that
Savior to praise,
```

9.1.5 Left-dislocated NPs [fc ...]

Left-dislocated NPs are normally associated with a resumptive pronoun or NP in the body of the clause; the two are coindexed only if there is a mismatch of case (but see the note on coindexing in Section 11). As with all NPs, the left-dislocated NP is given internal structure only if it contains a clause.

```
( [fn Babylonisce/JJN +t+at/PDN +areste/JJN &/CC Romane/NMG +t+at/PDN
si+dmeste/JJN ] [nn hie/PEN ] [vt w+aron/BT ] [pp swa/CS f+ader/NNN
&/CC sunu/NNN ] , 1[B [cs +tonne/CS ] [nn hie/PEN ] [nd heora/PO
willan/NND ] [at moton/MT ] [rm wel/RM ] [vv wealdan/VV ] B]1 . )
(OROSIU,60.5)
```

```
Babylonian that first and Romans that latest they were so-as father and
son, when they their mind may well rule.
```

```
( [fn-1 Se/PDN cirlisca/JJN mon/NNN ... ] , [vt slea/VT ] [nd-1
him/PED ] [nn mon/PMN ] [na hond/NNA ] [pa of/PA ] [o o+d+de/CC
fot/NNA ] . ) (LAW2,104.37)
```

```
that common person ... , strike him one hand off or foot.
```

If there is a case mismatch between the left-dislocated NP and the resumptive element, and if no coindexing is possible because the resumptive element is not independently bracketed but rather appears within another constituent, the left-dislocated NP is labelled simply as ‘f’ and not case-marked. In the example below, the resumptive element is *+d+as* within the nominative NP.

```
( [f Cyninges/NNG horswealh/NNN ... ] , [nn +d+as/PDG
wergield/NNN ] [vt bi+d/BT ] [nn CC/NNN scillinga/NNG ] . )
(LAW2,102.33)
```

```
king groom ..., that compensation is 200 shillings.
```

Left-dislocated NPs which are coreferential with an argument of a subordinate clause are included within the subordinate clause.

```
( 1[B [fn Cierlisc/JJN mon/NNN ] [cs gif/CS ] [nn he/PEN ] [rt
oft/RT ] [vn betygen/VN ] [vt w+are/ET ] B]1 , 2[B [cs gif/CS ] [nn
he/PEN ] [pp +at/PP si+destan/JJD ] [vt sie/ET ] [vn gefongen/VN ] B]2 ,
[vt slea/VT ] [nn mon/PMN ] [na hond/NNA o+d+de/CC fot/NNA ] . )
(LAW2,96.18)
```

```
common person if he often covered were, if he at latest be taken, strike
one hand or foot.
```

9.2 Prepositional phrases [pp ...]

No distinction is made between complement and adjunct PPs, because there are no precise and replicable criteria for distinguishing them.

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN ... ] [pp
betwux/PP o+drum/JJD mannum/NND ] [pp to/PP +t+are/PDD
m+aran/JJD byrigene/NND ] ... ) (AELIVE,I,210.5)
```

```
then came some widow, that was called Eutychia, between other persons to
that famous grave ...
```

Not all PPs contain a preposition:

```
( [+ ac/CC ] %nn% [vt stod/VT ] [pp swa/RR swa/CS munt/NNN ] )
(AELIVE,I,216.100)
```

```
but stood so so-as mountain.
```

```
( [+ &/CC ] [nn hi/PEN ] [rt sy+d+don/RT ] [vt wunodon/VT ] [pp on/PP
rihton/JJD geleauon/NND ] [pp o+d_/CS +de/CO Diaclitianes/NMG
rice/NNN ] . ) (CHROA2,8.167.1)
```

```
and they afterwards inhabited on straight beliefs until that D. rule.
```

In these PPs, the objects can be clausal:

```
( ... 3[B [cs swa/CS ] [nn he/PEN ] [na lyft/NNA ] [pa on_/PA ] [vt
styrge/VT ] B]3 4[B [+ ond/CC ] %cs% %nn% [na his/PO hond/NNA ] [pp
swa/RR swa/CS 5[U [na us/PEA ] [av to/PP ] [vv sleanne/VV ]
U]5 ] ... B]4 ... ) (BEDE,3.270.2)
```

```
... so-as he air move and his hand so so-as us to strike ...
```

Infinitival comparative clauses are parsed as infinitival objects within prepositional phrases:

(1[B [cs Gif/CS] [nn hwa/PIN] [pp to/PP hw+a+drum/PID +tissa/PDG] [vn genied/VN] [vt sie/ET] [pp on/PP woh/NNA] , [o o+d+de/CC to/PP hlafordsearwe/NND o+d+de/CC to/PP +angum/JJD unryhtum/JJD fultume/NND] B]1 , [nn +t+at/PDN] [vt is/ET] [rt +tonne/RT] [jn ryhtre/JJN] 2[U [av to/PP] [vv aleoganne/VV] U]2 **[pp +tonne/CS 3[U [av to/PP] [vv gel+astanne/VV] U]3]** .) (LAW2,46.1.1)

if anyone to both these forced be on bending, or to high-treason or to any wrong help, that is then straighter to lie when to follow.

Postpositional PPs with *+t+ar/her* objects are labelled as adverbs when they are written as one word (see Section 6.8). When they are written as separate words, or when the adverbial object is separated from the preposition, they are labelled PPs.

([+ &/CC] %nn% [rt +ta/RT] **[pp +t+ar/RL to/PP]** [vt eodon/VT] ;) (CHROA2,48.755.23)

and then there to went;

([nn same/JJN <HC:_sume_IN_BATELY_EDITION_1986:55> men/NNN] [vt cwe+ta+t/VT] [pp on/PP Englisc/JJA] 1[T [co +t+at/CO] [nn hit/PEN] [vt sie/BT] [nn feaxede/JJN steorra/NNN] . 2[B [cs for+t+am/CS] **[rl-1 +t+ar/RL]** [vt stent/VT] [nn lang/JJN leoma/NNN] **[pp %rl-1% of/PP]** , [rt hwilum/RT] [pp on/PP ane/JJA healfe/NNA] [o hwilum/RT on/PP +alce/JJA healfe/NNA] B]2 T]1 :) (CHROA2,82.892.3)

some persons say on English that it be hairy star. because there stands long ray-of-light of, sometimes on one half sometimes on each half:

([+ &/CC] %nn% [vt hergodon/VT] [pp on/PP Nor+t_Wealas/NMA] [rl +aghw+ar/RL %L-1%] [pp be/PP +tam/PDD s+a/NND] , 1[L-1 [wh-2 **+t+ar/RL**] %co% %ne% [na hie/PEA] [rt +tonne/RT] **[pp on/PP %rl-2%]** [vt hagode/VT] L]1 ;) (CHROA2,98.918.1)

and ravaged on North-Welsh everywhere by that sea, where they then on pleased;

9.3 Verbs

The following labels are used for verbs:

[at ...]	finite auxiliary verb (modals, *habban*, *wuton*)
[av ...]	non-finite auxiliary verb (modals, *habban*, *wuton*, and *to* followed by an infinitive)
[vt ...]	finite lexical verb (including ‘be’, with/without participle)
[vv ...]	infinitival lexical verb (including ‘be’, with/without participle)
[vg ...]	present participle (all verb types)
[vn ...]	past participle (all verb types)

In a finite clause, one verb is finite; the other verbs in the sequence, if any, are non-finite.

([nd +tinre/POD meder/NND] **[vt geheolp/VT]** [nn +tin/PON halga/JJN geleafa/NNN] ,) (AELIVE,I,212.28)

your mother helped your holy belief,

([+ ac/CC] [nn hi/PEN ealle/JJN] [~ ne/NE] **[at mihton/MT]** [nd hyre/PED anre/JJD] **[vv gehelpan/VV]** .) (AELIVE,I,210.8)

but they all not could her one help.

(... 1[B [cs swa/CS] [nn Datianus/NMN] [nd him/PED] **[vn gediht/VN] [at h+afde/HT]** B]1 ...) (AELIVE,I,316.158)

... so-as Datian them arranged had ...

Non-finite verbs (infinitives, present participles, and past participles) may be marked for case.

([nn L+asse/JJN pleoh/NNN] [vt is/BT] 1[U [av to/PP] [vv **+dicganne/VVD**] [na +t+at/PDA husol/NNA] U]1 [pp +tonne/CS 2[U [av to/PP] [vv **halgienne/VVD**] U]2] .) (AELET3,180.95)

less danger is to take that Eucharist when to sanctify.

([+ &/CC] [rl +t+ar/RL] [vt wear+d/BT] [nn +tara/PDG Denescra/JJG micle/RR ma/PIN] [pa of_/PA] [vn **slegenra/VNG**] . 1[B [cs +teah/CS] [co +de/CO] [nn hie/PEN] [na w+alstowe/NNG geweald/NNA] [vt ahtan/VT] B]1 .) (CHROA3,132.1001.9)

and there was those Danish greatly more struck-off. although that they battlefield might owned.

(1(D [at~ Nabbe/HT~] [nn ge/PEN] [rr~ na/RR~] [na godne/JJA timan/NNA] [vn **aredodne/VNA**] . D)1) (APOLLO,30.19.13)

not-have you not good time made-ready.

Imperative verbs are categorized as finite.

(V **[vt Gehrepa/VI]** [na hire/PO byrigene/NNA] , V) (AELIVE,I,210.19)

touch her grave,

habban ‘have’ can be either an auxiliary or a lexical verb, depending upon use.

(... 1[B [cs swa/CS] [nn Datianus/NMN] [nd him/PED] [vn gediht/VN] **[at h+afde/HT]** B]1 ...) (AELIVE,I,316.158)

... so-as Datian them arranged had ...

(... 5[B [co +t+at/CO] [nn heo/PEN] [na hine/PEA] [rt symle/RT] **[vt h+abbe/VT]** [pp on/PP andwerdnysse/NND] [pp on/PP ecere/JJD blysse/NND] B]5 ... V)1) (AELIVE,I,210.14)

... that she him ever have on presence on perpetual bliss.

All forms of ‘be’ are categorized as lexical verbs, whether or not they are used with (past or present) participles; their use can be determined by their POS tag. Note that this differs from the PPCME1 practice.

```
( [+ and/CC ] [nn +tu/PEN ] [vt bist/BT ] [rt sona/RT ] [jn hal/JJN ]
. ) (AELIVE,I,210.19)

and you are soon hale.

( [+ and/CC ] [rr efne/RR ] [nn heo/PEN ] [vt is/ET ] [vn geh+aled/VN
] [rr halwendlice/RR ] [pp +durh/PP Crist/NMA ] . ) (AELIVE,I,212.28)

and even she is healed salutarily through Christ.

( [rt +ta/RT ] [vt w+as/ET ] [rl +t+ar/RL ] [nn an/JJN m+aden/NNN ]
[vg licgende/VG ] [pp on/PP paralisyn/NND ] 1[R [rt lange/RT ] [vn
gebrocod/VNN ] R]1 ; ) (AELIVE,III,138.213)

then was there one maiden lying on paralysis long crushed;
```

to when followed by an inflected infinitive is POS-tagged as '/PP' but syntactically bracketed as 'av':

```
( [+ and/CC ] %ne-1% [nd me/PED ] [rm bet/RM ] [vt lica+d/VT ] 1[U-1
[av to/PP ] [vv forl+atenne/VVD ] [rt nu/RT ] [na +tisne/PDA
hwilwendlican/JJA wur+dmynt/NNA ] U]1 ... ) (AELIVE,I,308.28)

and me better pleases to relinquish now this transitory honor ...
```

Verbal and adjectival past and present participles are not distinguished because of the difficulty in making this judgement consistently.

9.4 Verb projections [vx ...]

See Section 10 on conjunction.

9.5 Negation

[~ ne/NE] is used for the negative particle *ne*.

```
( [+ ac/CC ] [nn hi/PEN ealle/JJN ] [~ ne/NE ] [at mihton/MT ] [nd
hyre/PED anre/JJD ] [vv gehelpan/VV ] . ) (AELIVE,I,210.8)

but they all not could her one help.
```

~ is generally appended to other syntactic labels for NPs, Vs, adverbs, conjunctions, etc. when they are or contain negative elements.

```
( ... 2[T [co +t+at/CO ] [nn +tu/PEN ] [na~ nanne/JJA~
brydguman/NNA ] [rr~ n+afre/RR~ ] [nd me/PED ] [~ ne/NE ] [vt
namige/VT ] T]2 , 3[T [+~ ne/CC~ ] %co% %nn% [pp of/PP minum/POD
lichaman/NND ] [na deadlicne/JJA w+astm/NNA ] [~ ne/NE ] [vt sece/VT ]
T]3 ; ) (AELIVE,I,212.36)

... that you no bridegroom never me not name , neither of my body mortal
growth not seek;

( ... 2[B [cs gif/CS ] [nn heo/PEN ] [vv suwian/VV ] [at~ nolde/MT~ ]
B]2 ... . ) (AELIVE,I,214.68)
```

```
... if she be-silent not-would.
```

([+ ac/CC] [nn heo/PEN] **[vt~ n+as/ET~]** [vn astyrod/VN] ,)
(AELIVE,I,216.100)

```
but she not-was excited,
```

(**[+~ ne/CC~] [pp~ on/PP na+tre/JJD~ healfe/NND]** [nn he/PEN]
[~ ne/NE] [vt ahylde/VT] [na his/PO +teawas/NNA] ,)
(AELIVE,IV,314.16)

```
neither on neither half he not bent his usages,
```

([+ and/CC] %nn% [na hine/PEA] [vt l+adde/VT] [rl ham/RL] [pp
mid/PP him/PED] , 1[B **[cs~ na/RR~ swilce/CS]** [nn he/PEN] [nn
cuma/NNN] [vt w+are/BT] B]1 2[B [+ ac/CC] [cs swilce/CS] [nn he/PEN
] [nn his/PO a+dum/NNN] [vt w+are/BT] B]2 .) (APOLLO,34.22.1)

```
and him led home with him, not just-as he stranger were but just-as he
his son-in-law were.
```

However, if the negation does not have sentential scope, it is not indicated on the syntactic label of the constituent containing the negative element:

(1[B [cs Gif/CS] [nn mon/PMN] [na folcleasunge/NNA] [vt gewyrce/VT]
B]1 , 2[B [+ &/CC] %cs% [nn hio/PEN] [pp on/PP hine/PEA] [jn
geresp/JJN] [vt weor+de/BT] B]2 , %np% **[pp mid/PP nanum/JJD~
leohtran/JJD +dinge/NND]** [vt gebete/VT] 3[M [cs +tonne/CS] [nd
him/PED] [nn mon/PMN] [vt aceorfe/VT] [na +ta/PDA tungon/NNA] [pa
of/PA] M]3 , 4[B [co +t+at/CO] [na hie/PEA] [nn mon/PMN] [rr~ na/RR~
] [gd undeorran/JJD weor+de/NND] [at moste/MT] [vv lesan/VV] , 5[M
[cs +donne/CS] [na hie/PEA] [nn mon/PMN] [pp be/PP +tam/PDD were/NND
] [vt geeahtige/VT] M]5 B]4 .) (LAW2,66.32)

```
if one slander prepare, and she on him convicted-of be, with no lighter
thing repair when him one cut-off that tongue off, that her one not
cheaper value might loosen, when her one by that man estimate.
```

9.6 Verb particles [pa ...]

Adverbial particles associated with verbs are labelled ‘pa’. Diagnostics for distinguishing particles from other adverbs are not easy to make precise. One criterion that we have used is that the items on this list appear as verbal prefixes in Old English dictionaries, and yet may appear separated from their verbs in Old English texts. The following are all of the Old English lexical items we have identified as particles, and which are tagged as particles regardless of the verb with which they are associated: *adun(e), +after, aweg, (of)dune, fore, for+t, fram, geond, in, mid, ni+ter, of, ofer, ongean, on, onweg, to, +turh, under, up, ut, wi+t, wi+ter, ymb(e).*

(... 2[B [cs for/PP +tan/PDI] [co +te/CO] [nn +tu/PEN] [na hit/PEA]
[~ ne/NE] [at miht/MT] [pp mid/PP +te/PED] **[pa aweg/PA]** [vv
l+adan/VV] B]2 .) (AELIVE,I,212.46)

```
... before that that you it not can with you away lead.
```

(... [rt +ta/RT] [vt het/VT] [nn he/PEN] 2[U [vv spannan/VV] [na oxan/NNA] **[pa to/PA]** U]2 ,) (AELIVE,I,216.106)

... then commanded he join oxen thereto,

([+ and/CC] [rt sona/RT] [rt +ta/RT] **[pa inn/PA]** [vt eode/VT] [nn an/PIN +t+as/PDG cyninges/NNG +tegna/NNG ...] ,) (AELIVE,III,130.87)

and soon then in went one that king servants that his alms kept,

([+ and/CC] %nn% [vt gelogodon/VT] [na hi/PEA] **[pa upp/PA]** ;) (AELIVE,III,136.190)

and lodged them up;

When the particle appears immediately before a PP, it is interpreted as part of the PP and bracketed with it, rather than separately:

([pp +after/PP +disum/PDD gebede/NND] [vt b+arst/VT] [pp **ut/PA** of/PP heofonum/NND] [nn swy+de/RR f+arlic/JJN fyr/NNN] ,) (AELIVE,I,316.141)

after this prayer broke out of skies very-much sudden fire,

Because particles play an important role in determining syntactic structure, we have bracketed particles as separate constituents even when they appear joined to the verb in the text. In these cases, we have added an underline ('_') to the particle to indicate that it is joined to the next word. Note that in the gloss and the morphological section of the token, the particle+verb appears as one word, not two.

(... 2[B [co +t+at/CO] [nn hi/PEN] [na +t+at/PDA Godes/NMG m+aden/NNA] [pp mid/PP heora/PO galdrum/NND] **[pa ofer_/PA]** [vt swy+ddon/VT] B]2 .) (AELIVE,I,216.103)

... that they that God maiden with their sounds overpowered.

oferswy+ddon_l(oferswi+tan)_m(m:in_n:pl_t:pa_w:vb)_c(2)_p(ofer)

To distinguish particles from PPs where the pronominal or relativized object does not appear immediately after the preposition: if there exists a constituent that can be interpreted as an object of a preposition, the particle is bracketed as a PP containing an empty category:

([nn Oswold/NMN] **[nd-1 him/PED]** [vt com/VT] **[pp to/PP %nd-1%]** ,) (AELIVE,III,126.14)

O. him came to,

If, however, the particle was separated from the verb as described above, it is categorized as a particle regardless of whether a potential object of a preposition occurs in the clause. In the example below, note the underline '_' indicating that the particle *wi+d* was attached to the verb *feaht* in the text.

([+ and/CC] %nn% **[nd him/PED]** [rm cenlice/RM] **[pa wi+d_/PA]** [vt feaht/VT] [pp mid/PP lytlum/JJD werode/NND] ,) (AELIVE,III,126.14)

and him boldly fought-against with little throng,

Prepositions without complements are POS-tagged as particles, even if the particle is not listed as a prefix on the verb in Old English dictionaries.

([+ &/CC] [rt +ta/RT] [vt feng/VT] [nn Cenwalh/NMN] **[pa to/PA]** ,) (CHROA2,2.14)

and then took C. to,

9.7 Predicate Adjectives [jc ...]

Predicate adjectives are bracketed as such and marked for case when they are complements of verbs, heads of small clause predicates (see Section 8.3.9), and heads of adjunct adjectival clauses (see Section 8.3.10).

([nn Seo/PDN wydewe/NNN] [vt w+as/BT] **[jn unhal/JJN]** ...) (AELIVE,I,210.8)

that widow was sick ...

(... 3[L [wh se/PDN] [co +te/CO] %nn% [vt hylt/VT] 4[S [d Eadmunde/NMD] **[ja halne/JJA]** [na his/PO lichaman/NNA] S]4 ... L]3 ...) (AELIVE,IV,332.250)

... that that holds Edmund hale his body ...

([nn Heo/PEN] [vt stod/VT] [rt +ta/RT] 1[R **[jn unforht/JJN]** R]1 [pp on/PP +tam/PDD fyre/NND]) (AELIVE,I,216.119)

she stood then fearless on that fire

The complements and adjuncts of adjectives, like those of verbs, are bracketed separately whether they occur before or after the adjective, and no empty categories are used if the complements/adjuncts are not adjacent to the adjective.

([nn oxan/NNG t+agl/NNN] [vt bi+d/BT] [ng scillinges/NNG] [jn weor+d/JJN] ,) (LAW2,116.59)

ox tail is shilling worthy,

([nn He/PEN] [vt w+as/BT] [jn cystig/JJN] [nd w+adlum/NND and/CC wydewum/NND] [pp swa/RR swa/CS f+ader/NNN] ,) (AELIVE,IV,314.22)

he was charitable beggars and widows so so-as father,

9.8 Adverbs

To determine the category of the adverbs in the corpus, we have simply used the adverb word class used in the morphological section of the token:

[rl ...] locative adverbs

[rm ...] manner adverbs
[rt ...] temporal adverbs
[rr ...] all other adverbs

Unless the adverb is clearly part of the next or previous constituent, it is bracketed separately.

```
( [+ and/CC ] [rr~ na/RR~ ] [rt leng/RT ] [nn heo/PEN ] [~ ne/NE ]
[vt gebad/VT ] 1[B [cs +donne/CS ] [nn hit/PEN ] [nn d+ag/NNN ] [vt
w+as/BT ] B]1 , ) (APOLLO,28.18.1)

and not longer she not stayed when it day was,

( [rr Eac/RR ] [rr swylce/RR ] [nn +ta/PDN sacerdas/NNN ] [vt
suncon/VT ] [pa for+d/PA ] [rr mid/RR ] , [o and/CC sume/JJN +da/PDN
h+a+denan/JJN 1[L %wh% [co +te/CO ] %nn% [rl +t+ar/RL ] [rl
gehende/RL ] [vt stodon/VT ] L]1 ] ; ) (AELIVE,I,316.145)

also in-like-manner those priests sank forth with, and some those
heathen that there near stood;

( [rt Eft/RT ] [rt +ta/RT ] [nn Pascasius/NMN ] [rm orgellice/RM
] [vt befran/VT ] , {Q1} ) (AELIVE,I,214.76)

again then Paschasius proudly questioned,

( [rt +ta/RT ] [vt wear+d/ET ] [nn se/PDN w+alhreowa/JJN ] [rm
wodlice/RM ] [vn geancsumod/VN ] ... ) (AELIVE,I,216.124)

then became that cruel madly vexed ...
```

Postpositional PPs with *+t+ar/her* objects joined to the preposition are labelled as adverbs:

```
( [+ and/CC ] [nn he/PEN ] [rl +t+arbinnan/RL ] [vt wunode/VT ] ...
; ) (AELIVE,III,134.134)

and he therein inhabited ...
```

9.9 Complementizers, wh- constituents, conjunctions, etc.

[co ...] complementizers
[wh ...] wh- constituents
[cs ...] subordinating conjunctions
[+ ...] coordinating conjunctions

9.9.1 Complementizers [co ...]

Complementizers include invariant *+t+at*, *+t+atte*, and *+te* used to introduce that-clauses, relative clauses, adverbial clauses, and degree complements:

```
( 1(D [~ Ne/NE ] [vt synd/BT ] [nn ge/PEN 2[L %wh-1% [co +te/CO ]
%nn-1% [rl +t+ar/RL ] [vt spreca+d/VT ] L]2 ] , D)1 ) (AELIVE,I,214.73)

not are you that there speak,
```

```
(V ... [fa +ta/PDA 1[L %wh% [co +te/CO ] %na% [nn man/PMN ] [vt
l+at/VT ] [pp to/PP dea+de/NND ] L]1 ] [vt alys/VI ] [na hi/PEA ] [pa
ut/PA ] [rt symble/RT ] . V) (AELIVE,IV,330.214)
```

... that that one leads to death loosen them out ever.

```
( [+ and/CC ] %nn% [vt b+adon/VT ] [rr +t+as/RR ] [pp on/PP mergen/NNA ]
1[T [co +t+at/CO ] [nn hi/PEN ] [at moston/MT ] [na +tone/PDA
sanct/NNA %L-1% ] [pp mid/PP arwur+dnysse/NND ] [pa under_/PA ] [vv
fon/VV ] , 2[L-1 [wh-2 +tone/PDA ] [co +te/CO ] %na-2% [nn hi/PEN ]
[rt +ar/RT ] [vt forsocon/VT ] L]2 T]1 . ) (AELIVE,III,136.187)
```

and asked afterwards on morn that they might that saint with reverence receive, that that they before objected-to.

```
( 1(D [nn Ic/PEN ] [vt hate/VT ] 2[U [na +te/PEA ] [rr ardlice/RR ] [vv
l+adan/VV ] [pp to/PP +t+ara/PDG myltestrena/NNG huse/NND ] U]2 , 3[B
[co +t+at/CO ] [nn +du/PEN ] [na +tinne/POA m+ag+dhad/NNA ] [vt
forleose/VT ] B]3 ... D)1 ) (AELIVE,I,214.81)
```

I command you quickly lead to those prostitutes house, that you your virginity lose ...

```
( [+ and/CC ] %nn% 1[R [rr swa/RR ] [jn anr+ade/JJN ] R]1 [pa +turh_/PA
] [vt wunode/VT ] 2[G [co +t+at/CO ] [nn he/PEN ] [at~ nolde/MT~ ]
[vv abugan/VV ] [pp to/PP bysmorfullum/JJD leahtrum/NND ] G]2 , )
(AELIVE,IV,314.16)
```

and so unanimous remained that he not-would bow to infamous vices,

In *swa hw... swa* headed relative clauses, the second *swa* is a complementizer.

```
( [+ and/CC ] [rl swa/CS hwider/RL 1[L %wh-1% [co swa/CO ] %rl-1% [nn
he/PEN ] [vt com/VT ] L]1 ] [nn he/PEN ] [vt cydde/VT ] [na +tas/PDA
wundra/NNA ] . ) (AELIVE,III,142.262)
```

and so-as whither so-as he came he proclaimed these wonders.

Subordinating conjunctions are frequently used together with complementizers in adverbial clauses:

```
( ... 1[B [cs o+d/CS ] [co +t+at/CO ] [nn he/PEN ] [nd hire/PED ]
[na swingele/NNA ] [vt behet/VT ] ... B]1 . ) (AELIVE,I,214.68)
```

... until that he her whip promised ...

Both a wh- constituent and a complementizer, either overt or empty, are obligatory for relative clauses:

```
( [+ and/CC ] %nn% [vt b+adon/VT ] [rr +t+as/RR ] [pp on/PP mergen/NNA ]
1[T [co +t+at/CO ] [nn hi/PEN ] [at moston/MT ] [na +tone/PDA sanct/NNA
%L-1% ] [pp mid/PP arwur+dnysse/NND ] [pa under_/PA ] [vv fon/VV ] ,
2[L-1 [wh-2 +tone/PDA ] [co +te/CO ] %na-2% [nn hi/PEN ] [rt +ar/RT
] [vt forsocon/VT ] L]2 T]1 . ) (AELIVE,III,136.187)
```

```
and asked afterwards on morn that they might that saint with reverence
receive, that that they before objected-to.
```

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN , 1[L [wh-1
seo/PDN ] %co% [vt w+as/ET ] [vn geciged/VN ] 2[S %nn-1% [nn
Euthicia/NMN ] S]2 L]1 , ] ... ) (AELIVE,I,210.5)
```

```
then came some widow, that was called Eutychia ...
```

```
( 1(D [~ Ne/NE ] [vt synd/BT ] [nn ge/PEN 2[L %wh-1% [co +te/CO ]
%nn-1% [rl +t+ar/RL ] [vt spreca+d/VT ] L]2 ] , D)1 ) (AELIVE,I,214.73)
```

```
not are you that there speak,
```

When complementizers are repeated, the second occurrence is labelled as [x:

```
( [vt H+afde/VT ] [nn he/PEN ] [vx [+ &/CC ] [vt w+ag/VT ] ] [pp mid/PP
hine/PEA ] [na twiecge/JJA handseax/NNA ge+attred/VNA ] , 1[B [co
+t+at/CO ] 2[B [cs gif/CS ] [nn seo/PDN wund/NNN ] [rr to/RR ] [rr
lyt/RR ] [vt genihtsumode/VT ] [pp to/PP +t+as/PDG cyninges/NNG
dea+de/NND ] B]2 , [x +t+at/CO ] [nn +t+at/PDN attor/NNN ] [vt
gefultmade/VT ] B]1 . ) (BEDE,8.122.11)
```

```
had he and carried with him two-edged dagger poisoned, that if that
wound also little sufficed to that king death, that that poison helped.
```

9.9.2 wh- constituents [wh ...]

All direct and indirect wh- questions and headed and headless relative clauses obligatorily contain a wh- constituent, which is coindexed with the gap in the clause (but see the note on coindexing in Section 11). There is no internal bracketing within the wh- constituent. Words within the wh- constituent are POS-tagged as in their normal, non-wh use if such a use exists (see below).

```
( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN , 1[L [wh-1
seo/PDN ] %co% [vt w+as/ET ] [vn geciged/VN ] 2[S %nn-1% [nn
Euthicia/NMN ] S]2 L]1 ... ) (AELIVE,I,210.5)
```

```
then came some widow, that was called Eutychia ...
```

```
( [+ and/CC ] [nn se/PDN halga/JJN Georius/NMN ] [vt si+dode/VT ] [pp
to/PP Criste/NMD , 1[L [wh-1 mid/PP +dam/PDD ] %co% %pp-1% [nn
he/PEN ] [rt a/RT ] [vt wuna+d/VT ] [pp on/PP wuldre/NND ] L]1 ] ; [o
Amen/UH ] . ) (AELIVE,I,318.179)
```

```
and that holy George went to Christ, with that he always inhabits on
glory; amen.
```

```
( %nn% [vt sende/VT ] [rt +da/RT ] [pp to/PP Scotlande/NMD , 1[L [wh-1
+t+ar/RL ] %co% %rl-1% [nn se/PDN geleafa/NNN ] [vt w+as/BT ] [rt
+da/RT ] L]1 ] , ) (AELIVE,III,128.48)
```

```
sent then to Scotland, where that belief was then,
```

([f-1 1[H **[wh-2 swa/CS hw+at/PIA]** [co swa/CO] %na-2% [nn +tu/PEN] [nd minum/POD lichaman/NND] [vt dest/VT] H]1] , [~ ne/NE] [at m+ag/MT] [nn-1 +t+at/PDN] [vv belimpan/VV] [pp to/PP me/PED] .) (AELIVE,I,214.92)

so-as anyone so-as you my body do, not can that concern to me.

(... 1[B [cs for+dan/CS] [nn ic/PEN] [rt leng/RT] [vt~ n+abbe/VT~] 2[H **[wh-1 hw+at/PIA]** %co% %na-1% [nn ic/PEN] [pp on/PP his/PO lacum/NND] [vt aspende/VT] H]2 B]1 .) (AELIVE,I,214.66)

... because I longer not-have anyone I on his plays spend.

In cases of structural ambiguity, pied-piping is assumed:

([+ And/CC] [nn Apollonius/NMN] [rt sona/RT] [vt gemette/VT] [na o+derne/JJA cu+dne/JJA man/NNA %L-1%] 1[U [pp ongean/PP hine/PEA] [vv gan/VV] U]1 2[L-1 **[wh-2 +t+as/PDG nama/NNN]** %co% [vt w+as/ET] 3[S %nn-2% [nn Stranguilio/NMN] S]3 [vn gehaten/VN] L]2 .) (APOLLO,12.9.1)

and Apollonius soon measured other known person towards him go that name was Stranguilio commanded.

Three POS tags are used only for wh- constituents: WJ, WR, and WP.

(1(Q **[wh-1** On/PP **hwilcum/WJD** godum/NND **]** [vt tihst/VT] [nn +tu/PEN] [na us/PEA] 2[U %pp-1% [av to/PP] [vv gelyfenne/VVD] U]2 ? Q)1) (AELIVE,I,316.145)

on which gods invite you us to allow?

(Q **[wh-1 Hu/WR]** %rr-1% [at magon/MT] [nn hi/PEN] [vv ahreddan/VV] [na +de/PEA] [pp fram/PP frecednyssum/NND] , 1[B [cs +tonne/CS] [nn hi/PEN] [~ ne/NE] [at mihton/MT] [na hi/PEA sylfe/PFA] [vv ahreddan/VV] B]1 ? Q) (AELIVE,I,316.149)

how can they save you from harms, when they not could them selves save?

(1(Q **[wh-1 Hw+ar/WR]** %rl-1% [vt eart/BT] [nn +tu/PEN] [rt nu/RT] [o gefera/NNN] ? Q)1) (AELIVE,IV,324.148)

where are you now associate?

(1(Q **[wh-1 hw+at/WPN]** %nn-1% [vt is/BT] [nn se/PDN intinga/NNN] 2[T-1 [co +t+at/CO] [nn an/JJN +tusend/NNN manna/NNG] [na +te/PEA] [~ ne/NE] [at magon/MT] [vv astyrian/VV] 3[R [rr swa/RR] [jn unstrang/JJN] 4[M [cs swa/CS] [nn +du/PEN] [vt eart/BT] M]4 R]3 T]2 ? Q)1) (AELIVE,I,216.108)

who is that matter that one thousand persons you not can excite so weak so-as you are?

9.9.3 Subordinating conjunctions [cs ...]

The label 'cs' is a catch-all category which is used for all non-complementizer material introducing adverbial and comparative clauses. There is no internal bracketing within the 'cs' constituent.

([+ and/CC] 1[M **[cs swa/RR swa/CS]** [nn +teos/PDN burh/NNN] [vt is/ET] [vn gem+arsod/VN] [pp +turh/PP me/PEA] [pp fram/PP Criste/NMD] M]1 , [rr swa/RR] [vt bi+d/ET] [nn Siracusa/NMN burh/NNN] [pp +turh/PP +te/PEA] [vn gewlitegod/VN] ...) (AELIVE,I,212.30)

and so so-as this fort is proclaimed through me from Christ, so is Syracuse fort through you beautified ...

([nn Seo/PDN wydewe/NNN] [vt w+as/BT] [jn unhal/JJN] , 1[B **[cs swa/RR]** [co +t+at/CO] [d hire/PED] [vt arn/VT] [nn blod/NNN] [pp geond/PP feower/JJD geare/NND f+ac/NNA] B]1 ,) (AELIVE,I,210.8)

that widow was sick, so that her ran blood throughout four year interval,

(1(V 2[B **[cs Gif/CS]** [nn +tu/PEN] [vt gelyfst/VT] , [o modor/NNN] , [nd +tysum/PDD m+aran/JJD godspelle/NND] B]2 , [vt gelyf/VI] 3[T [co +t+at/CO] [nn Agathes/NMN] [vt geearnode/VT] [pp +at/PP Criste/NMD] , 4[B **[cs +ta_/RT +da/CS]** [nn heo/PEN] [pp for/PP his/PO naman/NND] [vt +drowode/VT] 5[B [co +t+at/CO] [nn heo/PEN] [na hine/PEA] [rt symle/RT] [vt h+abbe/VT] [pp on/PP andwerdnysse/NND] [pp on/PP ecere/JJD blysse/NND] B]5 B]4 T]3 . V)1) (AELIVE,I,210.14)

if you allow, mother, this famous gospel, allow that Agatha earned at Christ, then when she for his name endured that she him ever have on presence on perpetual bliss.

(1[B **[cs Mid/PP +tam/PDD]** [co +te/CO] [nn hi/PEN] [vt lagon/VT] B]1 2[B [+ and/CC] %cs% %co% %nn% [vt gelencgdon/VT] [na +da/PDA gebedu/NNA] B]2 , [rt +ta/RT] [vt wear+d/VT] [nn Lucia/NMN] [pp on/PP sl+ape/NND] ,) (AELIVE,I,210.22)

with that that they lay and lengthened those prayers, then became Lucy on sleep,

([rr +tus/RR] [vt tihte/VT] [nn Lucia/NMN] [rt gelome/RT] [na +ta/PDA modor/NNA] , 1[B **[cs o+d_+t+at/CS]** [nn heo/PEN] [vt beceapode/VT] [na +ta/PDA scinendan/JJA gymmas/NNA , and/CC eac/RR hire/PO landare/NNA] [pp wi+d/PP licgendum/VGD feo/NND ,] B]1) (AELIVE,I,212.52)

thus invited Lucy often that mother, until she sold those shining gems, and also her landed-property with lying cattle,

([~ Ne/NE] [vt dreah/VT] [nn ic/PEN] [rt nu/RT] [gd +trym/JJD gearum/NND] [na~ nane/JJA~ o+tre/JJA d+ada/NNA] , 1[B **[cs butan/CS]** %nn% [nd +tam/PDD lyfigendan/JJD drihtne/NMD] [na +tas/PDA lac/NNA] [vt geoffrode/VT] B]1 .) (AELIVE,I,214.64)

```
not did I now three years no other deeds, except that living Lord these
plays offered.

( [rr for+ti/RR ] [nn ic/PEN ] [vt cw+a+d/VT ] [na Godes/NMG word/NNA ]
, 1[B [cs for+tan/CS ] [co +te/CO ] [nn he/PEN ] [pp on/PP his/PO
godspelle/NND ] [vt cw+a+d/VT ] , {D1} B]1 , ) (AELIVE,I,214.73)

therefore I said God words, because that he on his gospel said,
```

9.9.4 Coordinating conjunctions [+ ...]

Coordinating conjunctions may join words, phrases, main clauses, or subordinate clauses. For a complete description of conjunction in the Brooklyn Corpus, see Section 10.

9.10 Floated quantifiers [ec ...]

Quantifiers are bracketed and labelled only if they are separated from the rest of the NP. No empty category is left within the associated NP, and there is no coindexing.

```
( 1(D 2[B [cs +teah/CS ] [nn +tu/PEN ] [vt clypige/VT ] [na tyn/JJA
+tusend/NNA manna/NNG ] B]2 , [nn hi/PEN ] [at sceolan/MT ] [en
ealle/JJN ] [vv gehyran/VV ] [na +tone/PDA halgan/JJA gast/NNA ] 3[U
[rr +tus/RR ] [vg cwe+dende/VG ] , {D2} U]3 D)1 ) (AELIVE,I,216.111)

although you speak ten thousand persons, they must all hear that holy
breath thus saying,

( [+ ac/CC ] [nn hi/PEN ealle/JJN ] [~ ne/NE ] [at mihton/MT ] [nd
hyre/PED anre/JJD ] [vv gehelpan/VV ] . ) (AELIVE,I,210.8)

but they all not could her one help.

( [at h+afde/HT ] [nn se/PDN cyning/NNN ] [na his/PO fierd/NNA ] [pp
on/PP tu/NNA ] [pa to_/PA ] [vn numen/VN ] , 1[B [cs swa/RR ] [co
+t+at/CO ] [nn hie/PEN ] [vt w+aron/BT ] [rt simle/RT ] [en
healfe/JJN ] [pp +at/PP ham/NND ] , [o healfe/JJN ute/RR ] , [pp
butan/PP +t+am/PDD monnum/NND 2[L %wh% [co +te/CO ] %nn% [na +ta/PDA
burga/NNA ] [vv healdan/VV ] [at scolden/MT ] L]2 ] B]1 . )
(CHROA2,84.894.15)

had that king his national-levy on two separated, so that they were ever
half at village, half out, out-of those persons that those forts hold
must.
```

Floated quantifiers usually follow their NP, but they may precede it:

```
( 1[B [cs gif/CS ] [nn he/PEN ] [ng horses/NNG ] [pa on_/PA ] [vt
l+ane/VT ] B]1 , [ea ealne/JJA ] [nn he/PEN ] [na hine/PEA ] [vt
gylde/VT ] . ) (LAW2,102.29)

if he horse lend, all he him yield.
```

Floated quantifiers may appear in clauses where they do not modify an overt NP, as in *wuton* clauses.

([at Uton/AT] [rr eac/RR] **[en ealle/JJN]** [pp ymbe/PP fri+des/NNG bote/NNA &/CC feos/NNG bote/NNA] [vv smeagan/VV] [rr swy+de/RR] [rm georne/RM] : [o swa/RR embe/PP fri+des/NNG bote/NNA , 1[M [cs swa/CS] %ne% [nd +dam/PDD bondan/NND] [vt si/BT] [jn selost/JJN] M]1 2[M [+ &/CC] %cs% %ne% [nd +tam/PDD +teofan/NND] [vt si/BT] [jn la+tast/JJN] M]2 ; and/CC swa/RR embe/PP feos/NNG bote/NNA , 3[G [co +t+at/CO] [nn an/JJN mynet/NNN] [vt gange/VT] [pp ofer/PP ealle/JJA +tas/PDA +teode/NNA] [pp butan/PP +alcan/JJD false/NND] G]3 ; 4[G [+ &/CC] %co% [na +t+at/PDA] [nn~ nan/JJN~ man/NNN] [~ ne/NE] [vt forsace/VT] G]4] .) (LAW3,314.7.8)

let-us also all around peace help and cattle help think very-much eagerly : so around peace help, so-as those householders be best and those criminals be most-hated; and so around cattle help, that one coin go over all this nation out-of each falsehood; and that no person not object-to.

9.11 Left-dislocated phrases [f ...]

If these are NPs, they are case-marked (see Section 9.1.5 above). If the left-dislocated phrase is not an NP, it is labelled ‘f’. Left-dislocated phrases are given internal structure when they contain a clause.

(**[f-1** 1[H [wh-2 swa/CS hw+at/PIA] [co swa/CO] %na-2% [nn +tu/PEN] [nd minum/POD lichaman/NND] [vt dest/VT] H]1 **]** , [~ ne/NE] [at m+ag/MT] [nn-1 +t+at/PDN] [vv belimpan/VV] [pp to/PP me/PED] .) (AELIVE,I,214.92)

so-as anyone so-as you my body do, not can that concern to me.

(**[f** 1[H [wh-1 Swa/CS hwilc/JJN man/NNN] [co swa/CO] [na +de/PEA] 2[R [vg lifigende/VGA] R]2 [pp to/PP him/PED] [vt bring+d/VT] H]1 **]** , [pa on_/PA] [vt fo/VT] [nn se/PDN] [na fiftig/JJA punda/NNA goldes/NNG] .) (APOLLO,12.8.17)

so-as which person so-as you living to him brings, take that fifty pounds gold.

9.12 Other [o ...]

Words and phrases that do not directly participate in the structure of the clause are bracketed ‘o’. There is no internal structure inside [o ...], unless it contains a clause, and no coindexing. Some of the types of ‘o’ constructions are listed below.

1) vocatives:

(1(V 2[B [cs Gif/CS] [nn +tu/PEN] [vt gelyfst/VT] **, [o modor/NNN]** , [nd +tysum/PDD m+aran/JJD godspelle/NND] B]2 ... V)1) (AELIVE,I,210.14)

if you allow, mother, this famous gospel ...

2) exclamations:

(1(Q [vt Eart/BT] [nn +tu/PEN] **[o la/UH]** [nn God/NMN] ? Q)1) (AELIVE,I,214.72)

are you lo God?

3) afterthoughts:

(1(D [nn Hluttor/JJN offrung/NNN] [nn-1 +t+at/PDN] [vt is/BT] **, [o and/CC licwur+de/JJN Gode/NMD] ,** 2[T-1 [co +t+at/CO] [nn mann/PMN] [na wydewan/NNA] [vt geneosige/VT] T]2 3[T-1 [+ and/CC] %co% %nn% [na wreccan/NNA] [vt gefrefrige/VT] T]3 , 4[T-1 [+ and/CC] %co% %nn% [nd steopbearnum/NND] [vt gehelpe/VT] [pp on/PP heora/PO gedrefednyssum/NND] T]4 . D)1) (AELIVE,I,212.60)

pure sacrifice that is, and pleasing God, that one widows visit and fugitives cheer, and orphans help on their tribulations.

([o Hw+at/UH] [rt +da/RT] [nn Datianus/NMN] [vt wear+d/ET] [rr f+arlice/RR] [pa of_/PA] [vn slagen/VN] [pp mid/PP heofonlicum/JJD fyre/NND] **, [o and/CC his/PO geferan/NNN samod/RR] ...**) (AELIVE,I,318.179)

what then Datian became suddenly struck-off with heavenly fire, and his associates simultaneously ...

([rr Eac/RR] [rr swylce/RR] [nn +ta/PDN sacerdas/NNN] [vt suncon/VT] [pa for+d/PA] [rr mid/RR] **, [o** and/CC sume/JJN +da/PDN h+a+denan/JJN 1[L %wh% [co +te/CO] %nn% [rl +t+ar/RL] [rl gehende/RL] [vt stodon/VT] L]1 **] ;**) (AELIVE,I,316.145)

also in-like-manner those priests sank forth with, and some those heathen that there near stood;

4) appositives separated from their coreferential NP:

([nn-1 Hit/PEN] [vt gelamp/VT] [pp on/PP sumne/JJA s+al/NNA] 1[T-1 [co +t+at/CO] **[nn hi/PEN]** [vt s+aton/VT] [rr +atg+adere/RR] **, [o Oswold/NMN and/CC Aidan/NMN]** [pp on/PP +tam/PDD halgan/JJD easterd+age/NND] T]1 ;) (AELIVE,III,130.87)

it happened on some time that they sat together, O. and Aidan on that holy Easter-day;

5) clauses used as appositives on NPs, whether or not they are separated from the NP. Note that it is not uncommon for demonstrative pronouns to have clausal appositives.

([rt +ta/RT] [vt geascade/VT] [nn se/PDN cyng/NNN] **[na +t+at/PDA] [o 1[T** [co +t+at/CO] [nn hie/PEN] [pa ut/PA] [pp on/PP herga+d/NNA] [vt foron/VT] **T]1] ,**) (CHROA2,96.911.8)

then discovered that king that that they out on harrying went,

([nn He/PEN] [vt +tancode/VT] [rt +da/RT] [nd Gode/NMD] **[ng eallra/JJG his/PO godnyssa/NNG] , [o 1[T** [co +t+at/CO] [nn he/PEN] [na hine/PEA] [vt gescylde/VT] [pp wi+d/PP +tone/PDA swicolan/JJA deofol/NNA] **T]1 ...**) (AELIVE,I,318.163)

he thanked then God all his goodnesses, that he him accused with that guileful devil ...

6) glosses or expansions on words or phrases, often introduced by 'that is ...':

([+ &/CC] [nn +t+as/PDG wealles/NNG micelness/NNN &/CC f+astness/NNN] [vt is/BT] [jn ungeliefedlic/JJN] 1[U [av to/PP] [vv secgenne/VV] U]1 **: [o +t+at/PDN is/BT ,** 2[T [co +t+at/CO] [nn he/PEN] [vt is/BT] [ga L/NNA elna/NNG] [jn brad/JJN] , [o &/CC II/JJA hund/NNA elna/NNG heah/JJN] T]2 , 3[T [+ &/CC] %co% [nn his/PO ymbgong/NNN] [vt is/BT] [nn hundseofontig/NNN mila/NNG &/CC seofe+da/JJN d+al/NNN anre/JJG mile/NNG] T]3 , 4[T [+ &/CC] %co% [nn he/PEN] [vt is/ET] [vn geworht/VN] [pp of/PP tigelan/NND &/CC of/PP eor+dtyrewan/NND] T]4 **]** ,) (OROSIU,74.11)

and that wall greatness and firmness is incredible to say: that is, that he is 50 fore-arms broad, and 2 hundred fore-arms high, and his circuit is seventy miles and seventh portion one mile, and he is prepared of crock and of earth-tar,

(<latin> Scelere vereor , materna carne vescor </latin> **; [o +t+at/PDN is/BT** on/PP englisc/JJA **:]** [na Scylde/NNA] [nn ic/PEN] [vt +tolige/VT] ,) (APOLLO,6.4.13)

, ; that is on English: offense I suffer,

7) miscellaneous:

(V [+ and/CC] [vt draga+d/VI] [na hine/PEA] 1[R [ja niwelne/JJA] R]1 **[o his/PO neb/NNA to/PP eor+dan/NND]** [pp geond/PP ealle/JJA +das/PDA str+at/NNA and/CC st+anene/JJA wegas/NNA] , V) (AELIVE,I,316.151)

and drag him precipitous his bill to ground throughout all these streets and made-of-stone ways,

([nn He/PEN] [vt geb+ad/VT] [rr eac/RR] [rr swylce/RR] [pp for/PP eall/JJA Cristen/JJA folc/NNA] , **[o** [+ and/CC] 1[T [co +t+at/CO] [nn God/NMN] [vt forgeafe/VT] [nd +t+are/PDD eor+dan/NND] [na renas/NNA] ... T]1 **]** .) (AELIVE,I,318.166)

he asked also in-like-manner before all Christian people, and that God gave that ground rains ...

([+ ac/CC] [nn +du/PEN] [vt~ n+afst/VT~] [rr swa/RR] [rr +teah/RR] [na mine/POA sawle/NNA] , **[o ac/CC God/NMN]** .) (AELIVE,I,314.99)

but you not-have so however my soul, but God.

Two adjacent 'o' phrases that have clearly different functions are bracketed separately. In the example below, the first is a vocative, the second an appositive that-clause.

(1(D [~ Ne/NE] [vt gewur+de/VT] [nn +t+at/PDN] , **[o** hlaford/NNN] , **[o** 2[T [co +t+at/CO] [nn ic/PEN] [na mede/NNA] [vt nime/VT] [pp +at/PP +de/PED] [pp for/PP +tisum/PDD +tingum/NND] T]2] , 3[B [cs for+don/CS] [co +te/CO] [pp mid/PP godum/JJD mannum/NND] [vt~ nis/ET~] [nn~ na+der/CC~ ne/CC~ gold/NNN ne/CC~ seolfor/NNN] [pp wi+d/PP godes/JJG mannes/NNG freondscipe/NND] [pa wi+d_/PA] [vn meten/VN] B]3 . D)1) (APOLLO,12.8.27)

not become that, lord, that I reward take at you before these things, because that with good persons not-is neither neither gold neither silver with good person friendship compared-with.

Exclamations and vocatives, however, are generally bracketed together:

(1(D **[o** Eala/UH +tu/PEN s+a/NNG Neptune/NMN , manna/NNG bereafigend/NNN and/CC unsc+a+d+digra/JJG beswicend/NNN **]** , [nn +tu/PEN] [vt eart/BT] [jn w+alreowra/JJN] [pp +tonne/CS Antiochus/NMN se/PDN cyngc/NNN] . D)1) (APOLLO,16.12.4)

alas you sea Neptune, persons dispoiler and innocent deceiver, you are crueler when Antiochus that king.

9.13 Unknown [x ...]

This label is used when the category or structure of the constituent cannot be determined.

([+ and/CC] [nn he/PEN] [vt gecwemde/VT] [nd me/PED] **[x manna/NNG]** [rm betst/RM] [pp on/PP +dam/PDD plegan/NND] , <BC:_manna_bracketed_with_he_or_betst?>) (APOLLO,24.15.7)

and he gratified me persons best on that motion,

When complementizers are repeated, the second occurrence is labelled as [x:

([vt H+afde/VT] [nn he/PEN] [vx [+ &/CC] [vt w+ag/VT]] [pp mid/PP hine/PEA] [na twiecge/JJA handseax/NNA ge+attred/VNA] , 1[B **[co +t+at/CO]** 2[B [cs gif/CS] [nn seo/PDN wund/NNN] [rr to/RR] [rr lyt/RR] [vt genihtsumode/VT] [pp to/PP +t+as/PDG cyninges/NNG dea+de/NND] B]2 , **[x +t+at/CO]** [nn +t+at/PDN attor/NNN] [vt gefultmade/VT] B]1 .) (BEDE,8.122.11)

had he and carried with him two-edged dagger poisoned, that if that wound also little sufficed to that king death, that that poison helped.

10. Conjunction

10.1 Word and phrasal conjunction

Conjoined words and phrases that are contiguous are where possible treated as a single constituent, and there is no internal bracketing. The conjoined words and phrases are usually of the same category.

(... [rt +DA/RT] [vt ASPRANG/VT] [nn AGATHEN/NMG HLISA/NNN] [pp OFER/PP **LAND/NNA AND/CC S+A/NNA**] ...) (AELIVE,I,210.1)

```
... then sprang-up Agatha sound over earth and sea ...
```

```
( [rt +ta/RT ] [pp +after/PP +t+are/PDD m+assan/NND ] [nn seo/PDN
modor/NNN and/CC seo/PDN dohtor/NNN ] [vt astrehton/VT ] [na
hi/PFA ] [pp on/PP gebedum/NND ] [pp +at/PP +t+are/PDD byrgene/NND ] . )
(AELIVE,I,210.20)

then after that mass that mother and that daughter extended them(selves)
on prayers at that grave.
```

But this is not always the case. When the two conjuncts are of different categories, the label is that of the first conjunct.

```
( [+ &/CC ] [nn +ta/PDN ] [vt s+aton/VT ] [rl +tara/RL &/CC
innan/PP Ionan/NMA ] [ga tu/JJA winter/NNA ] [pp on/PP +tam/PDD
twam/JJD stedum/NND ] ; ) (CHROA2,80.887.1)

and those sat there and from-within I. two winters on those two places;
```

10.2 Clausal conjunction

Conjoined main clauses with no empty elements are simply treated as two separate tokens.

```
( [nn He/PEN ] [vt wear+d/ET ] [rt +ta/RT ] [vn gebroht/VN ] [pp on/PP
bendum/NND ] [pp to/PP Rome/NMD ] , ) (AELIVE,I,218.143)

he became then brought on bonds to Rome,

( [+ and/CC ] [nn +ta/PDN witan/NNN ] [vt heton/VT ] 1[U [na hine/PEA
] [vv beheafdian/VV ] U]1 ... ) (AELIVE,I,218.143)

and those sages commanded him behead ...
```

Because of the lack of a VP constituent, VP conjunction is where possible treated as if it were clausal, i.e., as if a conjunction reduction transformation had applied to the second conjunct, leaving behind some empty categories. The conjunction is included within the brackets of the second conjunct, and empty subjects and verbs (usually auxiliaries, but sometimes main verbs and participles) are inserted to fill out the structure. In the following examples, sequences of main clauses that are separated in the corpus by blank lines are printed in the documentation with no space and with the combined gloss after both clauses in order to indicate that they comprise a single example.

```
( ... [rt +ta/RT ] [vt wear+d/VT ] [nn Lucia/NMN ] [pp on/PP sl+ape/NND
] , ) (AELIVE,I,210.22)
( [+ and/CC ] %nn% [vt geseah/VT ] [na Agathen/NMA ] [pp betwux/PP
engla/NNG werodum/NND ] , 1[R [rr +anlice/RR ] [vn gefretewode/VNA ] R]1
, ) (AELIVE,I,210.22)

... then became Lucy on sleep, and saw Agatha between angels throngs,
singularly adorned,

( 1(D [nn +t+as/PDG lifigendan/JJG Godes/NMG word/NNN ] [~ ne/NE ] [at
magon/MT ] [vv geswican/VV ] , D)1 ) (AELIVE,I,214.70)
```

(**[+~ ne/CC~] %nn% %at%** [vn forsuwode/VN] [vv beon/EV])
(AELIVE,I,214.70)

that living God words not can wander, neither suppressed be.

(... [vt wear+t/ET] [nn se/PDN manfulla/JJN Pascasius/NMN] [pp mid/PP
racenteagum/NND] [vn gebunden/VN] ,) (AELIVE,I,218.139)
(**[+ and/CC] %nn% %vt%** [pp beforan/PP +dam/PDD m+adene/NND] [vn
gel+ad/VN] .) (AELIVE,I,218.139)

... became that wicked Paschasius with chains tied, and before that
maiden led.

Note that the first part of correlative conjunction (e.g. of the type 'either ... or') can occur clause-internally, rather than clause-initially:

([+ &/CC] %nn% [na +ta/PDA scipu/NNA eall/JJA] **[+ o+d+te/CC]** [pa
to_/PA] [vt br+acon/VT] ,) (CHROA2,86.894.48)
(**[+ o+t+te/CC]** %nn% %na% [vt forb+arndon/VT] ,)
(CHROA2,86.894.48)

and those ships all or broke-in-pieces, or caused-to-burn,

Conjoined subordinate clauses may have empty 'wh', 'cs', and/or 'co' categories, depending on the clause type and the constituents of the first conjunct; the empty categories of the second conjunct reflect the overt categories of the first conjunct.

(1[B **[cs Mid/PP +tam/PDD] [co +te/CO]** [nn hi/PEN] [vt lagon/VT
] B]1 2[B [+ and/CC] **%cs% %co%** %nn% [vt gelencgdon/VT] [na +da/PDA
gebedu/NNA] B]2 , [rt +ta/RT] [vt wear+d/VT] [nn Lucia/NMN] [pp
on/PP sl+ape/NND] ,) (AELIVE,I,210.22)

with that that they lay and lengthened those prayers, then became Lucy
on sleep,

(1[B **[cs +teah/CS]** [nn +tu/PEN] [na mine/POA hand/NNA] [vt
ahebbe/VT] [pp to/PP +dinum/POD h+a+tengilde/NND] B]1 , 2[B **[+
and/CC] %cs%** %nn% [rr swa/RR] [pp +turh/PP me/PEA] [vt
geoffrige/VT] [gg mines/POG unwilles/NNG] B]2 , [nn ic/PEN] [vt
beo/BT] [rr +teah/RR] [jn unscyldig/JJN] [pp +atforan/PP +dam/PDD
so+dan/JJD Gode/NMD ...] .) (AELIVE,I,214.86)

although you my hand raise to your idolatry, and so through me offer my
repugnance, I am however guiltless before that true God ...

Since both 'wh' and 'co' are obligatory in relative clauses, a conjoined relative clause must have both constituents, either overt or empty.

(... 1[B [cs for+dam/CS] [nn +alc/PIN +t+ara/PDG %L-1%] [vt bi+d/BT]
[nn Godes/NMG feond/NNN] 2[L-1 %wh% [co +te/CO] %nn% [vt bi+d/BT] [nn
Godes/NMG cyrcena/NNG feond/NNN] L]2 , 3[L-1 [+ &/CC] **%wh% [co
+de/CO]** %nn% [na Godes/NMG cyrcena/NNG riht/NNA] [vt wana+d/VT
o+d+de/CC wyrde+d/VT] L]3 B]1 .) (WULF3,202.43)

... because each those is God foe that is God churches foe, and that God churches right diminishes or spoils.

(... [nn muneca/NNG gehwylc/PIN , 2[L %wh-1% [co +te/CO] %nn-1% [rr ute/RR] [vt sy/BT] [pp of/PP mynstre/NND] L]2 3[L [+ &/CC] **%wh-2% %co%** %nn-2% [ng regoles/NNG] [~ ne/NE] [vt gyme/VT] L]3 ...) (LAW3,238.5)

... monks each, that out be of monastery and rule not care-for ...

Since ‘co’ is obligatory in that-clauses, a conjoined that-clause must have a ‘co’, either overt or empty.

([o Eala/UH] , %ne-1% [rt gefyrn/RT] [vt is/BT] 1[T-1 [co +t+at/CO] [pp +durh/PP deofol/NNA] [nn fela/PIN +tinga/NNG] [vt misfor/VT] T]1 , 2[T-1 [+ &/CC] **[co +t+at/CO]** [nn mancynn/NNN] [rr to/RR] [rr swy+de/RR] [nd Gode/NMD] [vt mishyrde/VT] T]2 , 3[T-1 [+ &/CC] **[co +t+at/CO]** [nn h+a+denscype/NNN] [rr ealles/RR] [rr to/RR] [rr wide/RR] [rr swy+de/RR] [vt gederede/VT] T]3 4[T-1 [+ &/CC] **%co%** %nn% [rr gyt/RR] [vt dere+d/VT] [rr wide/RR] T]4 .) (WULF4,221.2)

alas, formerly is that through devil many things went-wrong, and that mankind also very-much God heard-amiss, and that paganism entirely also widely very-much damaged and yet damages widely.

For conjoined subordinate clauses, the conjunction is included inside the clause boundary of the conjoined clause, as shown in the examples above, except when the sentence begins with a conjunction and a subordinate clause.

(**[+ Ac/CC]** 1[B [cs +da_/RT +ta/CS] [nd him/PED] [nn~ naht/NNN~] [~ ne/NE] [vt speow/VT] B]1 , [rt +ta/RT] [vt het/VT] [nn he/PEN] 2[U [vv spannan/VV] [na oxan/NNA] [pa to/PA] U]2 ,) (AELIVE,I,216.106)

but then when them nothing not succeeded, then commanded he join oxen thereto,

10.3 Verbal conjunction and clausal conjunction

Not all verbal conjunction can be treated as clausal conjunction: the verbs may share some or all of the conjuncts and adjuncts, and the constituent order of the clause may be such that the bracketing and use of empty categories obscures the structure. In these cases, therefore, we have used a ‘vx’ phrasal category, which is VP-like and contains a coordinating conjunction and a verb and may contain one or more complements and adjuncts. These vx’s don’t fit neatly into the syntax of the clause. They are bracketed separately to provide information about verb-complement/adjunct word order, and for that reason the non-clausal constituents within them are bracketed and labelled.

The following guidelines explain the use of verb, verb projection, and clausal conjunction in the Brooklyn Corpus:

1) When finite verbs are adjacent and conjoined, share the subject and all complements and adjuncts (or have no complements and adjuncts), they are simply bracketed within a single [vt ...]:

```
( [+ &/CC ] %nn% [vt wicode/VT ] [rl +t+ar/RL ] 1[B [cs +ta/PDA
hwile/NNA ] [co +te/CO ] [nn man/PMN ] [na +ta/PDA burg/NNA ] [vt
worhte/VT &/CC getimbrede/VT ] [pp +at/PP Witham/NMD ] B]1 ; )
(CHROA2,96.913.3)

and dwelled there that while that one that fort prepared and constructed
at W.;
```

Notice that in the example below, there is no overt conjunction:

```
( 1(V [vt Blissa/VI , blissa/VI ] , [o Apolloni/NMN ] , 2[B [cs
for/PP +dam/PDD ] [co +te/CO ] [nn min/PON dohtor/NNN ] [vt gewilna+d/VT
] [ng +t+as/PDG 3[L %wh-1% [co +de/CO ] %nn-1% [nn min/PON willa/NNN ]
[vt is/BT ] L]3 ] B]2 . V)1 ) (APOLLO,34.21.16)

rejoice , rejoice, Apollonius, before that that my daughter wishes that
that my mind is.
```

2) When finite verbs are conjoined and share a subject but not complements and adjuncts, the second conjunct is if possible treated as a conjoined clause with an empty subject:

```
( [rt +ta/RT ] [vt geaxode/VT ] [na +t+at/PDA ] [nn Athanasius/NMN
se/PDN dry/NNN ] , ) (AELIVE,I,310.50)

then discovered that Athanasius that magician,

( [+ and/CC ] %nn% [vt com/VT ] [pp to/PP +dam/PDD casere/NND ] , )
(AELIVE,I,310.50)

and came to that emperor,

( ... 3[T-1 [+ &/CC ] [co +t+at/CO ] [nn h+a+denscype/NNN ] [rr
ealles/RR ] [rr to/RR ] [rr wide/RR ] [rr swy+de/RR ] [vt gederede/VT ]
T]3 4[T-1 [+ &/CC ] %co% %nn% [rr gyt/RR ] [vt dere+d/VT ] [rr wide/RR
] T]4 . ) (WULF4,221.2)

... and that paganism entirely also widely very-much damaged and yet
damages widely.
```

In the case of particle verbs, the verbs must be separated, since the verbs do not share the particle.

3) When finite verbs are conjoined but not adjacent and share a subject and some but not all complements and adjuncts, a vx constituent is used to isolate the second verb and its associated complements and adjuncts. Shared complements and adjuncts are bracketed with the first verb.

```
( [+ And/CC ] [nn se/PDN Ceadwalla/NMN ] [vt sloh/VT ] [vx [+ and/CC
] [pp to/PP sceame/NND ] [vt tucode/VT ] ] [na +ta/PDA
Nor+dhymbran/JJA leode/NNA ] [pp +after/PP heora/PO hlafordes/NNG
fylle/NND ] , 1[B [cs o+t_+t+at/CS ] [nn Oswold/NMN se/PDN eadiga/JJN ]
[na his/PO yfelnysse/NNA ] [vt adw+ascte/VT ] B]1 . )
(AELIVE,III,126.11)
```

```
and that Cadwalla struck and to shame disturbed those Northumbrian men
after their lord fall, until O. that wealthy his wickedness quenched.
```

([vt H+afde/VT] [nn he/PEN] **[vx [+ &/CC] [vt w+ag/VT]]** [pp mid/PP hine/PEA] [na twiecge/JJA handseax/NNA ge+attred/VNA] , 1[B [co +t+at/CO] 2[B [cs gif/CS] [nn seo/PDN wund/NNN] [rr to/RR] [rr lyt/RR] [vt genihtsumode/VT] [pp to/PP +t+as/PDG cyninges/NNG dea+de/NND] B]2 , [x +t+at/CO] [nn +t+at/PDN attor/NNN] [vt gefultmade/VT] B]1 .) (BEDE,8.122.11)

```
had he and carried with him two-edged dagger poisoned, that if that
wound also little sufficed to that king death, that that poison helped.
```

Note that this procedure is used in the case of verbs and their particles, since the verbs do not share the particle:

([+ and/CC] [fn se/PDN rica/JJN , 1[L %wh% [co +te/CO] %nn% **[vt beryp+d/VT] [vx** [+ and/CC] [pp myd/PP re+dnysse/NND] **[pa of_/PA] [vt sitt/VT]**] [na +ta/PDA unscildigan/JJA menn/NNA] L]1] , ...) (AELET3,200.137)

```
and that strong, that despoils-of and with cruelty presses-down those
guiltless persons, ...
```

([+ o+d+de/CC] [ga +tridde/JJA wend/NNA] , %nn% **[pa on_/PA] [vt gite/VT] [vx** [+ &/CC] **[vt gelefe/VT]**] 1[T [co +t+at/CO] [nn wit/PEN] [pp on/PP riht/NNA] [vt spyrigen/VT] T]1 .) (BOETH,118.12)

```
or third event, grasp and allow that we-two on right go.
```

4) When non-finite verbs are conjoined and adjacent, occur before the finite verb, and share all complements and adjuncts, they are bracketed as a conjoined V:

(... 1[G [co +t+at/CO] [nn a+dor/PIN +d+ara/PDG] [na +tenunga/NNA] **[vv gegodian/VV o+d+don/CC gemycclian/VV]** [at m+age/MT] G]1 .) (WULF3,177.40)

```
not again not-is any so famous neither so holy life that someone those
services improve or increase can.
```

5) When non-finite verbs are conjoined and occur before the finite verb but have different complements and adjuncts, the second verb with its complements and adjuncts is bracketed as ‘vx’. Shared complements and adjuncts are bracketed with the first verb.

(... 3[L %wh% [co +te/CO] %nx% [nn man/PMN] [rr wide/RR] [rt nu/RT] **[vv geseon/VV] [vx** [+ &/CC] [pp +durh/PP heora/PO yfel/NNA] **[vv gecnawan/VV]**] [at m+ag/MT] ... L]3] .) (WULF4,116.10)

```
... that one widely now see and through their evil know can ...
```

6) When non-finite verbs are conjoined and adjacent, occur after the finite verb, and share all complements and adjuncts, they are bracketed as a conjoined V:

(... 1[B [co +t+at/CO] [nn he/PEN] [rl +d+ar/RL] [at meahte/MT] [rm freolslice/RM] [pp in/PP singalum/JJD gebedum/NND] [nd his/PO

```
sceppende/NMD ] [vv heran/VV &/CC +deowigan/VV ] B]1 . )
(BEDE,13.434.27)
```

```
that he there could festively in perpetual prayers his Creator hear and
serve.
```

7) When non-finite verbs are conjoined and both occur after the finite verb and have different complements and adjuncts, the second conjunct is treated as a conjoined clause with empty constituents:

```
( 1(D [nn +t+as/PDG lifigendan/JJG Godes/NMG word/NNN ] [~ ne/NE ] [at
magon/MT ] [vv geswican/VV ] , D)1 ) (AELIVE,I,214.70)
```

```
that living God words not can wander,
```

```
( [+~ ne/CC~ ] %nn% %at% [vn forsuwode/VN ] [vv beon/EV ] )
(AELIVE,I,214.70)
```

```
neither suppressed be.
```

8) When non-finite verbs are conjoined and both occur after the finite verb and share some but not all complements and adjuncts, the second conjunct is bracketed as ‘vx’. Shared complements and adjuncts are bracketed with the first verb.

```
( [nn Ge/PEN ] [at sceolan/MT ] [vv cunnan/VV ] [rm gemindelice/RM ]
[vx [+ and/CC ] [nd mannum/NND ] [rr eac/RR ] [vv secgan/VV ] ] [na
+ta/PDA tyn/JJA +anlican/JJA word/NNA ... ) (AELET3,188.120)
```

```
you must know memorably and persons also say those ten only words ...
```

This procedure is used for particle verbs, since the verbs do not share the particle:

```
( ... 5[B [co +t+at/CO ] [nn he/PEN ] [at wolde/MT ] [pp mid/PP his/PO
l+afnesse/NND &/CC mid/PP his/PO bl+atsunge/NND ] [na +t+at/PDA
willsume/JJA weorc/NNA ] [pa on_/PA ] [vv ginnan/VV ] [vx [+ &/CC
] [vv gefyllan/VV ] ] ... B]5 . ) (BEDE,12.418.22)
```

```
... that he would with his permission and with his consecration that
desirable work begin and fill ...
```

9) When non-finite verbs are conjoined and share some or all complements and adjuncts, and one verb occurs before the finite verb and the other after the finite verb, the second verb is bracketed as ‘vx’. Shared complements and adjuncts are bracketed with the first verb.

```
( ... 2[B [cs +ar/CS ] [nn hio/PEN ] [ng hiere/PO anwaldes/NNG ] [vn
benumen/VN ] [vt wurde/ET ] [vx [+ &/CC ] [vn beswicen/VN ] ] [pp
from/PP Arbate/NMD hiere/PO agnum/JJD ealdormenn/NND &/CC Me+ta/NMG
cyninge/NND ] B]2 ... ) (OROSIU,62.15)
```

```
... before she her authority taken became and deceived from Arbatus her
own ruler and Medes king ...
```

11. Empty categories

Empty categories are indicated by %z% or %Z%, where 'z' and 'Z' are the appropriate syntactic labels. In contrast to the PPCME1 practice, empty categories contain nothing but the label and, depending on use, an index. If the empty category contains an index, the format is %z-i% or %Z-i%, where i is an integer.

A note on coindexing: we had intended to coindex empty (and some overt) categories based on the descriptions in this section and in other parts of this manual. However, we simply ran out of time, and so not all categories that should be coindexed are in fact coindexed. We have coindexed the cases that are difficult to understand, and in many cases we have not coindexed the cases that are obvious. We could have removed the existing indices and not done any coindexing at all, but we decided that it would be better to supply some valid information than none. Users should therefore be aware that they will not find indices in all places where they might expect them.

11.1 Empty non-clausal categories

%nc%	empty case-marked NP
%np%	empty NP with no explicit antecedent
%nx%	empty NP with unknown case
%ne%	empty expletive
%rl%, %rt%, %rr%	adverbial gap in wh- clause
%cs%	empty complementizer/subordinating conjunction
%wh%	empty wh- constituent in wh- clause
%co%	empty complementizer in subordinate clause
%at%	empty finite auxiliary verb
%vt%	empty finite lexical verb

11.1.1 Subjects

Finite clauses normally contain a subject. Infinitival clauses (including ECM clauses) do not contain subjects within the clause; an accusative NP that acts as the subject of an infinitive is bracketed as an accusative object of the matrix clause verb.

```
( [+ and/CC ] %nn% [vt het/VT ] [na hine/PEA ] 1[U [vv secgan/VV ]
2[H [wh-1 of/PP hwilcere/WJD byrig/NND ] %co% %pp-1% [nn he/PEN ] [vt
w+are/BT ] H]2 ... U]1 . ) (AELIVE,I,308.23)

and commanded him say of which fort he were ...
```

Imperative clauses and clauses with the verb *wuton* do not necessarily contain subjects.

```
(V [vt Gemyne/VI ] 1[T [co +t+at/CO ] [nn +du/PEN ] [vt gehalgige/VT ]
[na +tone/PDA r+asted+ag/NNA ] T]1 ; V) (LAW2,26.1.3)

remember that you hallow that day-of-rest;

( [+ ac/CC ] [at utan/AT ] [vv don/VV ] 1[B [cs swa/CS ] [nd us/PED ]
[nn +tearf/NNN ] [vt is/BT ] B]1 , ) (WULF3,181.123)

but let-us do so-as us need is,
```

No empty expletives are inserted in existentials which may require an overt expletives in Modern English, as long as there is a nominative NP in the clause:

```
( ... 3[B [cs swa/RR swa/CS ] [nd us/PED ] [nn +tearf/NNN ] [vt is/BT
] B]3 ... ) (WULF3,201.32)

so so-as us need is,
```

In all finite clauses except those discussed above, if there is no nominative NP subject, an empty category is inserted according to the conditions listed below.

11.1.1.1 Empty subjects with overt antecedents: %nn%

If the clause has the same subject as the previous clause, %nn% is inserted, with no coindexing. This is particularly frequent for conjoined clauses.

```
( [rt +ta/RT ] [vt geaxode/VT ] [na +t+at/PDA ] [nn Athanasius/NMN
se/PDN dry/NNN ] , ) (AELIVE,I,310.50)

then discovered that Athanasius that magician,

( [+ and/CC ] %nn% [vt com/VT ] [pp to/PP +dam/PDD casere/NND ] , )
(AELIVE,I,310.50)

and came to that emperor,
```

However, a conjoined clause with a missing *wuton* does not get an empty subject.

```
( 1(D [at Uton/AT ] [vv feallan/VV ] [pp to/PP +d+are/PDD rode/NND ] ,
D)1 ) (AELIVE,III,126.17)

let-us fall to that rood

( [+ and/CC ] %at% [na +tone/PDA +almihtigan/JJA ] [vv biddan/VV ] [T
[co +t+at/CO ] [nn he/PEN ] [na us/PEA ] [vt ahredde/VT ] [pp wi+d/PP
+tone/PDA modigan/JJA feond/NNA ... T] . ) (AELIVE,III,126.17)

and that almighty ask that he us save with that spirited foe ...
```

In conjoined clauses with empty expletives, both clauses contain %ne%.

11.1.1.2 Empty subjects without overt antecedents: %np%

Empty subjects which don't correspond (usually in number, sometimes in reference) to the subject of the previous sentence are indicated by %np%.

```
( [rt Her/RT ] [pp on/PP +tysum/PDD geare/NND ] [vt w+as/BT ] [nn
micel/JJN unfri+d/NNN ] [pp on/PP Angelcynnes/NMG londe/NND ] [pp
+turh/PP sciphere/NNA ] , ) (CHROA3,132.1001.1)

here on this year was great breach-of-peace on English-people earth
through naval-force,

( [+ &/CC ] %np% [rl welgehw+ar/RL ] [vt hergedon/VT ] )
(CHROA3,132.1001.1)

and everywhere ravaged
```

```
( [+ &/CC ] [rl +t+ar/RL ] [vt wear+d/BT ] [nn +tara/PDG
Denescra/JJG micle/RR ma/PIN ] [pa of_/PA ] [vn slegenra/VNG ] .
1[B [cs +teah/CS ] [co +de/CO ] [nn hie/PEN ] [na w+alstowe/NNG
geweald/NNA ] [vt ahtan/VT ] B]1 . ) (CHROA3,132.1001.9)

and there was those Danish greatly more struck-off. although that they
battlefield might owned.

( [+ &/CC ] %np% [vt foran/VT ] [rt +da/RT ] [rr +tanon/RR ] [rl
west/RL ] 1[B [cs o+t_+t+at/CS ] [nn hy/PEN ] [vt coman/VT ] [pp to/PP
Defenan/NMD ] B]1 , ) (CHROA3,132.1001.11)

and went then thence westwards until they came to D.'s,

( [rl inne/RL ] [pp on/PP +t+am/PDD f+astenne/NND ] [vt s+aton/VT ] [nn
feawa/JJN cirlisce/JJN men/NNN ] [pa on/PA ] , ) (CHROA2,84.893.9)

in on that fastness sat few common persons on,

( [+ &/CC ] %np% [vt w+as/BT ] [jn sam_worht/JJN ] . )
(CHROA2,84.893.9)

and was unfinished.

( [rt Her/RT ] [vt b+ad/VT ] [nn Burgred/NMN Miercna/NMG cyning/NNN &/CC
his/PO wiotan/NNN ] [na +a+telwulf/NMA cyning/NNA ] 1[T [co +t+at/CO ]
[nn he/PEN ] [nd him/PED ] [vt gefultumade/VT ] 2[B [co +t+at/CO ] %np%
[nd him/PED ] [na Nor+t_Walas/NMA ] [vt gehiersumade/VT ] B]2 T]1 ; )
(CHROA2,64.853.1)

here asked B. Mercians king and his sages A. king that he them helped
that them North-Welsh obeyed;
```

In small clause complements of *hatan* with only one argument where no movement is involved, the non-overt NP is indicated by %np%:

```
( [+ &/CC ] [nn he/PEN ] [nd +d+are/PDD cirican/NND ] [pp for/PP
hine/PFA ] [na o+derne/JJA biscop/NNA ] [vt gehalgode/VT ] , 1[P 2[S
%np% [nn Romanus/NMN ] S]2 [vt w+as/ET ] [vn haten/VN ] P]1 , 3[B [cs
for+don/CS ] [nn he/PEN ] [na aldorlicnisse/NNA %T-1% ] [pa on_/PA ] [vt
feng/VT ] [pp from/PP Bonefatio/NMD +tam/PDD papan/NND ] , 4[T-1 [co
+t+at/CO ] [nn he/PEN ] [na biscopas/NNA ] [vv hadian/VV ] [at moste/MT
] T]4 B]3 . ) (BEDE,7.118.26)

and he that church before him(self) other bishop hallowed, R. was
commanded, because he authority took from B. that pope, that he bishops
ordain might.
```

11.1.1.3 Subject gaps in wh- clauses: %nn-i%

In wh- clauses with subject gaps, %nn% is inserted and coindexed with the wh- constituent.

```
( [nn +tis/PDN ] [vt com/VT ] [rt +ta/RT ] [pp to/PP earan/NND ] [d
+tam/PDD +a+delborenan/JJD cnihte/NND 1[L %wh-1% [co +te/CO ] %nn-1%
[vt awogode/VT ] [na Lucian/NMA ] L]1 ... ] . ) (AELIVE,I,212.57)
```

```
this came then to ear that distinguished boy that wooed Lucy ...
```

11.1.1.4 Extraposed clausal subjects: %ne-i%

If the subject is itself a (finite or non-finite) clause and extraposed, the clause is coindexed with an empty expletive %ne%.

```
( %ne-1% [vt~ N+as/BT~ ] [nd me/PED ] [rr~ n+afre/RR~ ] [jn
gewunelic/JJN ] 1[T-1 [co +t+at/CO ] [nn ic/PEN ] [vt worhte/VT ] [ng
fleames/NNG ] T]1 , ) (AELIVE,IV,320.78)

not-was me never usual that I prepared flight,

( ... 2[T [co +t+at/CO ] %ne-1% [nd men/NND ] [vt sie/ET ] [vn
alefed/VN ] 3[U-1 [na yfel/NNA ] [av to/PP ] [vv donne/VVD ] U]3 T]2
... ) (BOETH,121.17)

that person be allowed evil to do ...
```

11.1.1.5 Empty subjects in clauses with impersonal verbs: %ne%

If the verb is used as an impersonal verb and has no nominative argument, %ne% is inserted.

```
( %ne% [nd +te/PED ] [vt mis+ting+d/VT ] . ) (APOLLO,22.14.29)

you is-mistaken.
```

Note that a clause, finite or non-finite, may act as the subject of an impersonal verb, and thus be coindexed with %ne% if it is extraposed.

```
( ... 3[B [rr swa/RR ] [co +t+at/CO ] %ne-3% [nd eow/PED sylfum/PFD ]
[vt +ting+d/VT ] , 4[T-3 [co +t+at/CO ] [nd eow/PED ] [nn~ nan/JJN~
syn/NNN ] [~ ne/NE ] [vt sy/BT ] ... T]4 B]3 .... ) (AELET3,102.83)

so that you selves appears, that you no injury not be ...

( 1(D %ne-1% [nd Us/PED ] [vt gedafena+d/VT ] 2[U-1 [av to/PP ] [vv
offrigenne/VVD ] [nd +tam/PDD undeadlicum/JJD Gode/NMD ] . U]2 D)1 )
(AELIVE,I,314.125)

us beseems to offer that immortal God.

( 1(Q [cs Hwe+ter/CS ] %ne-1% [nd +te/PED ] [rt +tonne/RT ] [vt
+tince/VT ] 2[S-1 [jn unweor+d/JJN &/CC unm+arlic/JJN ] [nn sio/PDN
gegaderunc/NNN +tara/PDG +driora/JJG +tinga/NNG ] S]2 3[B [cs +tonne/CS
] [nn +ta/PDN +trio/NNN ] [vt bio+d/ET ] [pp to/PP anum/PID ] [vn
gedon/VN ] B]3 , Q)1 ) (BOETH,75.18)

whether you then appear unworthy and inglorious that gathering those
three things when those three are to one done,
```

11.1.1.6 Empty subjects in comparative clauses: %nn-i%

In comparative clauses, gaps are not normally indicated. However, in order to ensure that all comparative clauses contain a nominative NP, clear subject gaps are indicated by coindexed %wh% and %nn%:

```
( 1[B [cs Gif/CS ] [nn hwa/PIN ] [vt adelfe/VT ] [na w+aterpyt/NNA ] B]1
... 3[B [+ &/CC ] %cs% %nn% [na hine/PEA ] [rt eft/RT ] [~ ne/NE ] [vt
betyne/VT ] B]3 , %np% [vt gelde/VT ] [na swelc/JJA neat/NNA 4[M
%wh-1% [cs swelc/CS ] %nn-1% [pp +d+ar/RL on/PP ] [vt befealle/VT ]
M]4 ] , ) (LAW2,34.1.22)

if anyone dig well ... and him again not enclose, yield such animal as
there on fall,
```

11.1.2 Non-subject NPs: %nc% or %nx%

In conjoined clauses, NPs in the second or later conjunct may be ‘deleted under identity’ with an NP in the previous clause. In clauses where this is clear, %nc% is inserted in the conjunct, where the case of the empty NP matches the case of the NP in the previous clause. Note that the verb in the second conjunct may take an object with different case-marking: what is indicated here is that, for example, there was an accusative object in the previous clause that serves as the object for the conjoined clause, regardless of the case-marking that would occur if the object were actually present in the conjunct.

```
( [o Hw+at/UH ] [nn +ta/PDN arleasan/JJN ] [rt +ta/RT ] [na
Eadmund/NMA ] [vt gebundon/VT ] , ) (AELIVE,IV,322.106)

what those dishonorable then Edmund tied,

( [+ and/CC ] %nn% %na% [vt gebysmrodon/VT ] [rm huxlice/RM ] , )
(AELIVE,IV,322.106)

and mocked shamefully,
```

If an object is clearly missing but there is no overt evidence for what case it should be, %nx% is inserted in the clause. This happens most frequently in wh- clauses without wh- constituents where the gap is an object of a verb or of a preposition:

```
( [+ and/CC ] %nn% [vt cw+a+t/VT ] 1[T [co +t+at/CO ] %ne-1% [nd him/PED
] [nn r+ad/NNN ] [vt +tuhte/VT ] 2[T-1 [co +t+at/CO ] [nn he/PEN ] [pp
to/PP +tam/PDD %L% ] [vt gebuge/VT ] 3[L %wh-2% [co +te/CO ] %nx-2%
[nd him/PED ] [vt bead/VT ] [nn Hinguar/NMN ] L]3 T]2 T]1 . )
(AELIVE,IV,318.59)

and said that him advice appeared that he to that bow that him commanded
Hingwar.

(V [+ Ac/CC ] [vt syle/VI ] [rt nu/RT ] [pp on/PP gesundfulnysse/NND ]
[nd +tam/PDD so+dan/JJD H+alende/NMD ] [na swa/CS hw+at/PIA 1[L %wh-1%
[co swa/CO ] [nn +tu/PEN ] [vt gemyntest/VT ] 2[U %nx-1% [pp on/PP
for+dsi+te/NND ] [av to/PP ] [vv donne/VVD ] U]2 L]1 ] . V)
(AELIVE,I,212.50)

but give now on health that true Savior so-as anything so-as you intend
on going-forth to do.
```

```
( [+ and/CC ] %nn% %na% [vt l+addan/VT ] [pp to/PP +t+are/PDD byrig/NND
1[L %wh-1% [co +te/CO ] [nn he/PEN ] [pp on/PP %nx-1% ] [vt
+drowode/VT ] L]1 ] , ) (AELIVE,I,318.171)

and led to that fort that he on endured,
```

11.1.3 wh- constituents, complementizers in wh- clauses: %wh-i%, %co%

All wh- clauses (whether or not conjoined) have both a wh- constituent and a complementizer, except for direct wh- questions, which have only a wh- constituent. If these constituents are not present, empty categories %wh% and %co% are inserted.

```
( 1(D [~ Ne/NE ] [vt synd/BT ] [nn ge/PEN 2[L %wh-1% [co +te/CO ]
%nn-1% [rl +t+ar/RL ] [vt spreca+d/VT ] L]2 ] , D)1 ) (AELIVE,I,214.73)

not are you that there speak,

( [rt +ta/RT ] [vt com/VT ] [nn sum/JJN wydewe/NNN , 1[L [wh-1 seo/PDN ]
%co% [vt w+as/ET ] [vn geciged/VN ] 2[S %nn-1% [nn Euthicia/NMN ] S]2
L]1 ... ) (AELIVE,I,210.5)

then came some widow, that was called Eutychia ...

( [rt Nu/RT ] [at wille/MT ] [nn we/PEN ] [nd eow/PED ] [vv secgan/VV ]
[na +t+at/PDA 1[L %wh% %co% %nn% [jn so+d/JJN ] [vt is/BT ] [pp be/PP
+dam/PDD ] L]1 ] ... ) (AELIVE,I,306.3)

now will we you say that true is by that ...
```

11.1.4 Subordinating conjunctions, complementizers in non wh- clauses: %cs%, %co%

Subordinate clauses other than wh- clauses may contain both a ‘cs’ (subordinating conjunction) and a ‘co’ (complementizer). If neither is present, empty categories %cs% and %co% are inserted as follows:

1) All non-conjoined that-clause complements of nouns or adjectives in the Brooklyn Corpus have overt complementizers, so no empty categories are needed. In contrast, there do exist (non-conjoined) that-clause complements of verbs which have empty complementizers, but these are treated as embedded main clauses (see Section 8.2.7).

2) For conjoined clauses, the pattern of the first conjunct is followed: if the first conjunct contains both a ‘cs’ and a ‘co’, it is assumed that second and later conjuncts are the same; if the first contains only a ‘cs’ or a ‘co’, it is assumed that second and later conjuncts are the same.

```
( [+ ac/CC ] [nn Godes/NMG miht/NNN ] [vt wear+d/ET ] [vn geswutelod/VN
] [rt sona/RT ] [pp on/PP +tam/PDD m+adene/NND ] , 1[B [cs swa/RR ]
[co +t+at/CO ] [nn se/PDN halga/JJN gast/NNN ] [na hi/PEA ] [vt
heold/VT ] B]1 2[B [+ and/CC ] %cs% %co% %nn% %na% [pp mid/PP hefe/NND
] [vt gef+astnode/VT ] , 3[B [co +t+at/CO ] [nn +ta/PDN manfullan/JJN ]
[~ ne/NE ] [at mihton/MT ] [na +t+at/PDA m+aden/NNA ] [vv astyrian/VV ]
B]3 B]2 . ) (AELIVE,I,216.95)
```

```
but God might became shown soon on that maiden, so that that holy breath
her held and with weight fastened, that those wicked not could that
maiden excite.
```

```
( [nn Seo/PDN eadiga/JJN Lucia/NMN ] [pp on/PP +t+are/PDD ylcan/JJD
stowe/NND %L% ] [vt wunode/VT ] 1[L %wh% [co +te/PO ] %rl% [nn heo/PEN ]
[pa of_/PA ] [vn slagen/VN ] [vt w+as/ET ] L]1 , 2[B [cs o+d+t+at/CS
] [nn sacerdas/NNN ] [vt coman/VT ] B]2 3[B [+ and/CC ] %cs% %nn% [na
hi/PEA ] [vt gehusloden/VT ] [pp mid/PP haligre/JJD gerynu/NNA ] B]3 . )
(AELIVE,I,218.146)
```

```
that wealthy Lucy on that same spot inhabited that she struck-off was,
until priests came and her administered-the-sacrament with holy
mysteries.
```

```
(V [+ and/CC ] [na +tas/PDA earman/JJA anlicnyssa/NNA ] [pp mid/PP
ealle/JJI ] [vt fordo/VI ] , 1[B [cs swa/RR swa/CS ] [nn wex/NNN ] [vt
formylt/VT ] [pp for/PP hatan/JJD fyre/NND ] B]1 , 2[B [co +t+at/CO ]
[nn menn/NNN ] [na +de/PEA ] [pa on_/PA ] [vt cnawan/VT ] B]2 3[B [+
and/CC ] %co% %nn% [pp on/PP +de/PED ] [vt gelyfan/VT ] 4[T [co
+t+at/CO ] [nn +tu/PEN ] [vt eart/BT ] [nn ana/JJN God/NMN ,
+almihtig/JJN scyppend/NMN ] T]4 B]3 . V) (AELIVE,I,316.134)
```

```
and these poor resemblances with all undo, so so-as wax dissolves before
hot fire, that persons you understand and on you allow that you are one
God, almighty Creator.
```

11.1.5 Gapped constituents in wh- clauses

The gapped constituent in a wh- clause is indicated by an empty category coindexed to the (possibly empty) wh- constituent.

1) If the gapped constituent is the subject, the empty constituent is %nn%.

```
( [+ and/CC ] [nn ge/PEN ] [nd him/PED ] [na weardas/NNA %L% ] [vt
setta+d/VT ] 1[L %wh-1% [co +te/CO ] %nn-1% [na hi/PEA ] [vt
bewacia+d/VT ] [pp wi+d/PP +teofas/NNA ] L]1 . ) (AELIVE,I,308.20)
```

```
and you them watchings set that them watch with criminals.
```

2) If the gapped constituent is a non-subject NP and the wh- constituent is overt and case-marked, the empty constituent is %nc%.

```
( [+ and/CC ] %nn% [vt b+adon/VT ] [rr +t+as/RR ] [pp on/PP mergen/NNA ]
1[T [co +t+at/CO ] [nn hi/PEN ] [at moston/MT ] [na +tone/PDA sanct/NNA
%L-1% ] [pp mid/PP arwur+dnysse/NND ] [pa under_/PA ] [vv fon/VV ] ,
2[L-1 [wh-2 +tone/PDA ] [co +te/CO ] %na-2% [nn hi/PEN ] [rt +ar/RT
] [vt forsocon/VT ] L]2 T]1 . ) (AELIVE,III,136.187)
```

```
and asked afterwards on morn that they might that saint with reverence
receive, that that they before objected-to.
```

3) If the gapped constituent is a non-subject NP and the wh- constituent is not overt, the empty constituent is %nx%.

```
( [+ and/CC ] %nn% %na% [vt l+addan/VT ] [pp to/PP +t+are/PDD byrig/NND
1[L %wh-1% [co +te/CO ] [nn he/PEN ] [pp on/PP %nx-1% ] [vt
+drowode/VT ] L]1 ] , ) (AELIVE,I,318.171)
```

```
and led to that fort that he on endured,
```

4) In wh- clauses where the gap is not an NP, the empty category may be %pp% (if the wh-constituent is a PP), or %rl% or %rt% for clear locatives or temporals; otherwise, %rr% is used to indicate an adjunct gap.

```
( [+ and/CC ] %nn% [vt het/VT ] [na hine/PEA ] 1[U [vv secgan/VV ] 2[H
[wh-1 of/PP hwilcere/WJD byrig/NND ] %co% %pp-1% [nn he/PEN ] [vt
w+are/BT ] H]2 ... U]1 . ) (AELIVE,I,308.23)
```

```
and commanded him say of which fort he were ...
```

```
( %nn% [vt sende/VT ] [rt +da/RT ] [pp to/PP Scotlande/NMD , 1[L [wh-1
+t+ar/RL ] %co% %rl-1% [nn se/PDN geleafa/NNN ] [vt w+as/BT ] [rt
+da/RT ] L]1 ] , ) (AELIVE,III,128.48)
```

```
sent then to Scotland, where that belief was then,
```

```
( [+ and/CC ] %nn% [pp on/PP eallum/JJD d+adum/NND ] [na his/PO
Drihten/NMA ] [vt arwur+dode/VT ] , 1[B [cs o+d_+t+at/CS ] [nn he/PEN ]
[pa of_/PA ] [vn slagen/VN ] [vt wear+d/ET ] [pp for/PP his/PO
folces/NNG ware/NND ] , [pp on/PP +tam/PDD nigo+dan/JJD geare/NND 2[L
%wh-1% [co +te/CO ] %rt-1% [nn he/PEN ] [ng rices/NNG ] [vt geweold/VT
] L]2 ] , 3[B [cs +ta/RT +ta/CS ] [nn he/PEN sylf/PFN ] [vt w+as/BT ]
[pp on/PP ylde/NND ] [nn eahta/NR and/CC +trittig/NNN geara/NNG ] B]3
B]1 . ) (AELIVE,III,134.143)
```

```
and on all deeds his Lord honored, until he struck-off became before his
people sea, on that ninth year that he rule ruled, then when he self was
on age eight and thirty years.
```

```
( 1(Q [o Min/PON swustor/NNN Lucia/NMN , so+d/JJN godes/NMG m+aden/NNN ,
] [wh-1 hwi/WR ] %rr-1% [vt bitst/VT ] [nn +tu/PEN ] [pp +at/PP
me/PED ] [ng +t+as/PDG 2[L %wh-2% [co +te/CO ] %nx-2% [nn +du/PEN ] [at
miht/MT ] [ln sylf/PFN ] [vv geti+dian/VV ] L]2 ] ? Q)1 )
(AELIVE,I,210.22)
```

```
my sister Lucy, true God maiden, why ask you at me that that you can
self give?
```

11.1.6 The position of empty non-clausal categories

Since empty categories are not visible in the surface string, their position cannot be determined, especially given the extensive word order variation in Old English. For consistency, the rules listed below have been followed. It should be emphasized, however, that no significance should be placed on the position of empty categories.

11.1.6.1 Within matrix wh- clauses

Within matrix wh- clauses (direct questions and exclamations), the wh- constituent appears clause-initially, and the empty coindexed category is positioned immediately following it.

(1(Q [wh-1 Hw+ar/WR] **%rl-1%** [vt eart/BT] [nn +tu/PEN] [rt nu/RT] [o gefera/NNN] ? Q)1) (AELIVE,IV,324.148)

where are you now associate?

The only exception is when the wh- constituent has clearly originated within another constituent, in which case the empty category is positioned within the constituent in which it has originated.

(1(Q [wh-1 On/PP hwilcum/WJD godum/NND] [vt tihst/VT] [nn +tu/PEN] [na us/PEA] 2[U **%pp-1%** [av to/PP] [vv gelyfenne/VVD] U]2 ? Q)1) (AELIVE,I,316.145)

on which gods invite you us to allow?

11.1.6.2 Within embedded wh- clauses

Within embedded wh- clauses, the wh- element and the complementizer follow the order wh > co. The empty category coindexed with the wh- constituent immediately follows the complementizer, except where it has clearly originated within another constituent, in which case the empty category is positioned within the constituent in which it has originated.

(%nn% [vt sende/VT] [rt +da/RT] [pp to/PP Scotlande/NMD , 1[L **[wh-1 +t+ar/RL] %co% %rl-1%** [nn se/PDN geleafa/NNN] [vt w+as/BT] [rt +da/RT] L]1] ,) (AELIVE,III,128.48)

sent then to Scotland, where that belief was then,

(V [+ Ac/CC] [vt syle/VI] [rt nu/RT] [pp on/PP gesundfulnysse/NND] [nd +tam/PDD so+dan/JJD H+alende/NMD] [na swa/CS hw+at/PIA 1[L **%wh-1%** [co swa/CO] [nn +tu/PEN] [vt gemyntest/VT] 2[U **%nx-1%** [pp on/PP for+dsi+te/NND] [av to/PP] [vv donne/VVD] U]2 L]1] . V) (AELIVE,I,212.50)

but give now on health that true Savior so-as anything so-as you intend on going-forth to do.

([+ and/CC] %nn% %na% [vt l+addan/VT] [pp to/PP +t+are/PDD byrig/NND 1[L **%wh-1%** [co +te/CO] [nn he/PEN] [pp on/PP **%nx-1%**] [vt +drowode/VT] L]1] ,) (AELIVE,I,318.171)

and led to that fort that he on endured,

11.1.6.3 Within direct yes/no questions

Within direct yes/no questions, empty elements appear clause initially, i.e. before the finite verb.

(Q **%ne-1%** [vt lica+d/VT] [nd +te/PED] , 1[T-1 [co +t+at/CO] [nn we/PEN] [vt synt/ET] [rr +tus/RR] [vn atogene/VN] T]1 , 2[T-1 [+ &/CC] %co% [nn +tu/PEN] [na us/PEA] [at~ nylt/MT~] [rr~ no/RR~] [vv scyldan/VV] T]2 ? Q) (GREGD4,43.2)

pleases you, that we are thus drawn-up, and you us not-will not protect?

11.1.6.4 Within non-wh subordinate clauses

Within non-wh subordinate clauses, cs > co, whether the categories are overt or empty.

(... 1[B **[cs for+tan/CS] [co +te/CO]** [nn he/PEN] [pp on/PP his/PO godspelle/NND] [vt cw+a+d/VT] , {D1} B]1 ,) (AELIVE,I,214.73)

... because that he on his gospel said,

(1[B [cs Mid/PP +tam/PDD] [co +te/CO] [nn hi/PEN] [vt lagon/VT] B]1 2[B [+ and/CC] **%cs% %co%** %nn% [vt gelencgdon/VT] [na +da/PDA gebedu/NNA] B]2 , [rt +ta/RT] [vt wear+d/VT] [nn Lucia/NMN] [pp on/PP sl+ape/NND] ,) (AELIVE,I,210.22)

with that that they lay and lengthened those prayers, then became Lucy on sleep,

11.1.6.5 Empty verbal categories

Empty finite verbs appear after the subject, empty non-finite verbs after the finite verb.

([+ and/CC] [nn leohtfatu/NNN] **%vt%** [vg byrnende/VG] [pp on/PP eowrum/POD handum/NND] .) (AELET3,82.26)

and lanterns burning on your hands.

([+ and/CC] %nn% **%vt%** [pp beforan/PP +dam/PDD m+adene/NND] [vn gel+ad/VN] .) (AELIVE,I,218.139)

and before that maiden led.

([+~ ne/CC~] %nn% **%at%** [vn forsuwode/VN] [vv beon/EV]) (AELIVE,I,214.70)

neither suppressed be.

11.1.6.6 Empty subjects

Empty subjects are generally the first constituent of the clause, with the exception of conjunctions, complementizers, and wh- constituents.

(**%nn%** [vt sende/VT] [rt +da/RT] [pp to/PP Scotlande/NMD , 1[L [wh-1 +t+ar/RL] %co% %rl-1% [nn se/PDN geleafa/NNN] [vt w+as/BT] [rt +da/RT] L]1] ,) (AELIVE,III,128.48)

sent then to Scotland, where that belief was then,

([+ and/CC] **%nn%** [pp on/PP eallum/JJD d+adum/NND] [na his/PO Drihten/NMA] [vt arwur+dode/VT] ...) (AELIVE,III,134.143)

and on all deeds his Lord honored ...

(... 1[B [cs butan/CS] **%nn%** [nd +tam/PDD lyfigendan/JJD drihtne/NMD] [na +tas/PDA lac/NNA] [vt geoffrode/VT] B]1 .) (AELIVE,I,214.64)

... except that living Lord these plays offered.

```
( ... 1[L-1 [wh-2 se_/PDN ] [co +de/CO ] %nn-2% [rt +afre/RT ] [vt
rixa+d/VT ] [pp on/PP ecnysse/NND ] [gn god/NMN ] L]1 ] ... )
(AELIVE,I,218.150)

... that that ever reigns on eternity God ...
```

Empty subjects are generally preceded by conjunctions, vocatives, exclamations, left-dislocated phrases, and other constituents that do not directly participate in the structure of the clause.

11.1.6.7 Empty objects

Empty objects appear in the position of empty subjects, i.e. after conjunctions, complementizers, and wh- constituents but before the remainder of the clause. If the subject is also empty, the empty object appears after the empty subject rather than before it.

```
( ... 2[H [wh-1 hw+at/PIA ] %co% %na-1% [nn ic/PEN ] [pp on/PP his/PO
lacum/NND ] [vt aspende/VT ] H]2 ... ) (AELIVE,I,214.66)

... anyone I on his plays spend.

( ... 7[T [+ &/CC ] %nn% %na% [pp in/PP ymbhwyrfte/NND ] [pa ymb_/PA ]
[vt sealde/VT ] T]7 . ) (BEDE,3.264.21)

... and in rotation surrounded.
```

11.2 Empty clausal categories

Only two clausal categories are normally coindexed to empty categories: relative clauses extraposed from NPs (%L%) and that-clauses extraposed from NPs (%T%). Note that for that-clause complements of verbs and adjectives, movement is never indicated by an empty category.

```
( [~ Ne/NE ] [at sceal/MT ] [nn~ nan/JJN~ preost/NNN ] [na his/PO
cyricean/NNA %L-1% ] [vv forl+atan/VV ] , 1[L-1 %wh-2% [co +te/CO ]
[nn he/PEN ] [pp to/PP %nx-2% ] [vn gehadod/VN ] [vt bi+d/ET ] L]1 )
(AELET3,142.207)

not must no priest his church relinquish, that he to ordained is

( [+ and/CC ] [nn +t+at/PDN word/NNN %T-1% ] [vt sprang/VT ] [pp
geond/PP eal/JJA +t+at/PDA land/NNA ] 1[T-1 [co +t+at/CO ] [nn
Apollonius/NMN , se/PDN m+ara/JJN cyngc/NNN ] , [at h+afde/HT ] [vn
funden/VN ] [na his/PO wif/NNA ] T]1 , ) (APOLLO,38.49.9)

and that word jumped throughout all that earth that Apollonius, that
famous king, had found his woman,
```

Section IV: Morphological Annotation of the Brooklyn Corpus

12. Morphological annotation

This section briefly describes the morphological annotation of part 3 of the tokens in Format 1 files of the Brooklyn Corpus. For more complete documentation, and for a version of the Old English Section of the Helsinki Corpus that is annotated only with morphological information, contact Ans van Kemenade (a.v.kemenade@let.kun.nl).

As was stated above, part 3 contains the Old English data with morphological annotation. The data are written one Old English word per line, with the following fields:

Field 1: the Old English word as it appears in the text
Field 2 (beginning with '_l'): the Old English lemma corresponding to the word
Field 3 (beginning with '_m'): the morphological annotation
Field 4 (beginning with '_p'): for verbs with (separable) particles only, the particle.
Field 5 (beginning with '_c'): for lexical verbs only, the complementation code

An example is given below:

```
+ta_l(+ta)_m(w:avti)
com_l(cuman)_m(m:in_n:sg_p:3_t:pa_w:vb)_c(1)
sum_l(sum)_m(c:nm_n:sg_w:ajat)
wydewe_l(wuduwe)_m(c:nm_n:sg_w:nono)
seo_l(se)_m(c:nm_g:fm_n:sg_w:prrl)
w+as_l(beon)_m(m:in_n:sg_p:3_t:pa_w:vbax)
geciged_l(geciegan)_m(m:pt_t:pa_w:vb)_c(8)
Euthicia_l(euthicia)_m(c:nm_n:sg_w:nona)
betwux_l(betwux)_m(w:pp)
o+drum_l(o+ter)_m(c:dt_n:pl_w:ajat)
mannum_l(mann)_m(c:dt_n:pl_w:nono)
to_l(to)_m(w:pp)
+t+are_l(se)_m(c:dt_g:fm_n:sg_w:prde)
m+aran_l(m+are)_m(c:dt_n:sg_w:ajat)
byrigene_l(byrgen)_m(c:dt_n:sg_w:nono)
and_l(and)_m(w:coco)
hire_l(hire)_m(w:prpo)
dohtor_l(dohtor)_m(c:nm_n:sg_w:nono)
samod_l(samod)_m(w:av)
seo_l(se)_m(c:nm_g:fm_n:sg_w:prde)
ges+alige_l(ges+alig)_m(c:nm_n:sg_w:ajat)
Lucia_l(lucia)_m(c:nm_n:sg_w:nona)
```

The table below lists the morphological tags and their meanings, along with the corresponding POS tag used in part 1 of the token in Format 1 (and therefore in Formats 2-4 as well).

Morphological Tag		Corresponding POS Tag
_w:	**word class**	
_w:aj	**adjective**	JJc
_w:ajat(ng)	attributive adjective	JJc(~)
_w:ajpr	predicative adjective	JJc
_w:ajai	interrogative adjective	WJc
_w:av	**adverb**	RR
_w:avma	manner adverb	RM
_w:avti	adverb of time	RT

_w:avpl	adverb of place	RL
_w:avng	negative adverb	RR~ or NE
_w:avit	interrogative adverb	WR
_w:no	**noun**	
_w:nona	name	NMc
_w:nono	common noun	NNc
_w:nr	**number**	NR
_w:nr	first part of a complex numeral	NR
_w:nrcd	cardinal number	JJc
_w:nrno	nominal number	NNc
_w:nrod	ordinal number	JJc
_w:pr	**pronoun**	
_w:prde	demonstrative	PDc
_w:prpo	possessive	PO(c)
_w:prpe	personal	PEc
_w:prid(ng)	indefinite	PIc(~) or PMc (*man*)
_w:prrl	relative	PR
_w:prrf	reflexive	PFc
_w:prit	interrogative	WPc
_w:vb	**verb**	
_w:vb(ng)	main verb	Vx(~), where x = V/T/I/G/N
_w:vbax(ng)	auxiliary verb	Hx(~), Ex(~), or Ax
_w:vbmo(ng)	modal	Mx(~)
_w:vbcp(ng)	copula	Bx(~)
_w:co	**conjunction**	
_w:coco	coordinating conjunction	CC(~)
_w:cosu	subordinating conjunction	CS
_w:cogr	part of a conjunction group	CO
_w:ij	interjection/ exclamation	UH
_w:pp	preposition	PP
_w:pa	(verb) particle	PA

_c:	**case**
_c:nm	nominative
_c:ac	accusative
_c:gn	genitive
_c:dt	dative
_c:is	instrumental

_g:	**gender**
_g:ma	masculine
_g:fm	feminine
_g:nt	neuter

_p:	**person**
_p:1	first
_p:2	second
_p:3	third

_n:	**number**
_n:sg	singular
_n:dl	dual
_n:pl	plural

_m:	**mood**
_m:in	indicative
_m:su	subjunctive
_m:pt	participle
_m:im	imperative
_m:ib	bare infinitive
_m:ii	inflected infinitive

_t:	**tense**
_t:pr	present
_t:pa	past

The table below lists the complementation codes for lexical verbs and their meanings:

Complementation codes:

_c(1)	intransitive
_c(2)	monotransitive
_c(3)	ditransitive
_c(4)	NP + finite clause
_c(5)	NP + non-finite clause
_c(6)	finite clause
_c(7)	non-finite clause
_c(8)	complex transitive (small clause object)
_c(9)	impersonal

Section V: Using and Searching the Brooklyn Corpus

13. Searching the Brooklyn Corpus

The Brooklyn Corpus is searchable in three different ways, each of which is suitable for different formats of the corpus files (see Section 3.1):

- Method 1: using search functions within word-processing programs and editors such as Word, WordPerfect, or emacs. For this method, all corpus files (extensions .o2/.o23/.o24/.o3/.o34, .oe, .unpacked, and .psd) are suitable as input to the searches (Formats 1-4).
- Method 2: using the PERL scripts supplied with the Brooklyn Corpus. For this method, corpus files with extensions .oe and .unpacked are suitable as input to the searches (Formats 2-3).
- Method 3: using CorpusSearch, a powerful search engine developed specifically for searching syntactically annotated corpora. For this method, corpus files with extension .psd are suitable as input to the searches (Format 4).

Methods 2 and 3 are the best ways of searching the corpus, since they produce output files that contain the tokens matching the search criteria. Method 1 is useful for those who are familiar with particular word-processing software and who feel comfortable using that software to do simple or complex searches. Method 1 will not be discussed further here; users should consult the manuals of the software that they use for additional help and advice.

13.1 Search method 2: PERL scripts

Two PERL scripts are supplied with the Brooklyn Corpus for searching files with .oe and .unpacked extensions: oe_print_if and oe_print_unless. The original scripts were written by Ann Taylor for the PPCME1, and then modified for the Brooklyn Corpus. The scripts can be used on UNIX systems, PCs, or Macintoshes that have PERL interpreters or compilers. The descriptions below are for UNIX systems.

For both scripts, wildcards can be used instead of 'textfile' in the command line, i.e. *.oe can be used to search all files with the extension .oe. The output of the scripts can be used as input for a new search.

13.1.1 oe_print_if

Usage: `oe_print_if "pattern" textfile > outputfile`
This script prints all the tokens that match the pattern. The pattern must be enclosed in double quotation marks ("...") and must be a PERL regular expression (see Section 13.2.3). Text inside <BC:...>, <HC:...>, <Latin> ... </Latin>, and <heading> ... </heading> (i.e. comments, Latin text, headings) is not searched.

Examples:

1. `oe_print_if "\[L" *.unpacked > rclauses.out`
will write to file rclauses.out all relative clauses in all files with extension .unpacked

2. `oe_print_if "\[nn [a-zA-Z]+\/PE" *.oe > pro-nom.out`
will write to file pro-nom.out all tokens in all files with extension .oe that contain a personal pronoun within a non-coindexed nominative noun phrase.

13.1.2 oe_print_unless

Usage: `oe_print_unless "pattern" textfile > outputfile`
This script prints all the tokens that do not match the pattern. As with oe_print_if, the pattern must be enclosed in double quotation marks (“...”) and must be a PERL regular expression (see Section 13.2.3). Text inside <BC:...>, <HC:...>, <Latin> ... </Latin>, and <heading> ... </heading> (i.e. comments, Latin text, headings) is not searched.

Example:
`oe_print_unless "%wh" rclauses.out > rclauses.wh`
will write to file rclauses.wh all relative clauses from file rclauses.out that do not contain an empty wh constituent.

13.1.3 PERL regular expressions

For a complete list, consult any PERL manual.

Characters which have a special meaning in regular expressions are matched by preceding them with the backslash character \. For matching in the corpus, the most important special characters are ‘[‘ ‘]’ ‘(‘ ‘)’ ‘-‘ ‘+’ ‘.’.

. matches any character except newline
[xyz] matches any character in the set. For example, [ab] matches a or b; [cdef] matches any of c, d, e, or f; [a-z] matches any lower case letter; [0-9] matches any digit; [a-z0-9] matches any lower case character or digit; [A-Z] matches any upper case letter.
[^xyz] matches any character not in the set. E.g., [^ab] matches anything except a or b.
\d matches a digit
\D matches a non-digit
\w matches an alphanumeric character (A-Z, a-z, 0-9, and _)
\W matches a non-alphanumeric character
\s matches a whitespace character (space, table, newline, formfeed)
\S matches a non-whitespace character
\b matches a word boundary
\B matches except at a word boundary
\n matches a new line
\r matches a carriage return
(xyz) anything in parentheses is remembered for back-reference (see next item).
\1 matches contents of first set of parentheses, \2 matches contents of second set of parentheses, etc. For example, the expression “(abc)x\1” will match the string “abcxabc”; the expression “(ab(c))x\1\2” will match the string “abcxabcc”.
x? matches 0 or 1 x’s
x* matches 0 or more x’s
x+ matches 1 or more x’s
x{m,n} matches at least m x’s but no more than n x’s
ab|cde|x matches ab or cde or x

13.2 Search method 3: CorpusSearch

CorpusSearch is a powerful search engine, developed by Beth Randall for searching syntactically annotated corpora. CorpusSearch can be used to search Brooklyn Corpus files with the extension .psd. CorpusSearch permits complex searches on structure as well as on strings, and uses a search language that is much more transparent than the regular expressions of the PERL scripts of search method 2. CorpusSearch is without doubt the best, easiest, most flexible, and most efficient way of searching the Brooklyn Corpus. It can be ordered from the website of the second edition of the Penn-Helsinki Parsed Corpus of Middle English (PPCME2): http://www.ling.upenn.edu/mideng.

It should be noted that when CorpusSearch is used on Brooklyn Corpus .psd files, the results of searches will be output in the 'vertical' format of the PPCME2.

Appendix A: Corpus Texts

The text files of the Brooklyn Corpus are labelled with their Helsinki Corpus name. Each text is represented by four different files, all with the same name but with a different extension, one file for each Format (see Section 3.1). All files begin with the prefix ‘co’. Format 1 files have an extension beginning with ‘o’ followed by the Helsinki Corpus time period that the text belongs to. If ‘o’ is followed by one number, the date of composition and the date of the manuscript fall within the same period; when ‘o’ is followed by two numbers, the first is the period of the date of composition, the second of the manuscript. The four time periods of the Old English Section of the Helsinki Corpus are 1=before 850, 2=850-950, 3=950-1050, and 4=1050-1150.

Format 2 files have the extension ‘.oe’. Format 3 files have the extension ‘.unpacked’. Format 4 files have the extension ‘.psd’ (for ‘parsed’).

The texts in alphabetic order are the following. All of the information given below except for the word count and the token reference format is contained in the header block of each Format 1 file.

coaelet3.o3
AELFRIC’S FIRST AND SECOND LETTERS TO WULSTAN. DIE HIRTENBRIEFE AELFRICS IN ALTENGLISCHER UND LATEINISCHER FASSUNG. BIBLIOTHEK DER ANGELSAECHSISCHEN PROSA, IX. ED. B. FEHR. HAMBURG: VERLAG VON HENRI GRAND, 1914. PP. 68.12 - 144.2 (IV; LWSTAN1); PP. 146.1 - 220.7 (V; LWSTAN2) (SAMPLE 1)
word count: 7960
token reference format: page.line, where line = line within text

coaelet4.o34
AELFRIC’S LETTER TO WULFSIGE. DIE HIRTENBRIEFE AELFRICS IN ALTENGLISCHER UND LATEINISCHER FASSUNG. BIBLIOTHEK DER ANGELSAECHSISCHEN PROSA, IX. ED. B. FEHR. HAMBURG: VERLAG VON HENRI GRAND, 1914. PP. 1.15 - 34.9 (I) (SAMPLE 2)
word count: 3230
token reference format: page.line, where line = line within text

coaelive.o3
AELFRIC’S LIVES OF SAINTS, BEING A SET OF SERMONS ON SAINTS’ DAYS FORMERLY OBSERVED BY THE ENGLISH CHURCH, VOLS. I-II. EARLY ENGLISH TEXT SOCIETY, O.S. 76, 82, 94, 114. ED. W. W. SKEAT. LONDON, 1966 (1881-1900). PP. 210.1 - 218.152 (IX) (SAMPLE 1); PP. 306.1 - 318.184 (XIV) (SAMPLE 2); PP. 124.1 - 142.288 (XXVI) (SAMPLE 3); PP. 314.1 - 334.276 (XXXII) (SAMPLE 4)
word count: 6980
token reference format: page.line, where line = line within life

coapollo.o3
THE OLD ENGLISH ‘APOLLONIUS OF TYRE’. ED. P. GOOLDEN. LONDON: OXFORD UNIVERSITY PRESS, 1958. PP. 2.1 - 42.31
word count: 6530
token reference format: page.section.line, where line = line within section

cobede.o2

BEDE'S ECCLESIASTICAL HISTORY. THE OLD ENGLISH VERSION OF 'BEDE'S ECCLESIASTICAL HISTORY OF THE ENGLISH PEOPLE', PARTS I,1; I,2. EARLY ENGLISH TEXT SOCIETY, O.S. 95, 96. ED. T. MILLER. LONDON, 1959 (1890; 1891). PP. 104.12 - 124.24 (SAMPLE 1); PP. 252.4 - 272.18 (SAMPLE 2); PP. 418.22 - 436.19 (SAMPLE 3)
word count: 10170
token reference format: section.page.line, where line = line within page

coboeth.o2
ALFRED'S BOETHIUS. KING ALFRED'S OLD ENGLISH VERSION OF BOETHIUS DE CONSOLATIONE PHILOSOPHIAE. ED. W. J. SEDGEFIELD. OXFORD: THE CLARENDON PRESS, 1899. PP. 74.15 - 79.7 (XXXIII) (SAMPLE 1); PP. 82.18 - 89.3 (XXXIV) (SAMPLE 2); PP. 89.24 - 94.13 (SAMPLE 3); PP. 117.1 - 124.1 (XXXVIII) (SAMPLE 4); PP. 126.28 - 135.21 (XXXIX) (SAMPLE 5)
word count: 10920
token reference format: page.line, where line = line within page

cochroa2.o2
CHRONICLE MS A EARLY (O2). TWO OF THE SAXON CHRONICLES PARALLEL, VOL. I. ED. C. PLUMMER. OXFORD: THE CLARENDON PRESS, 1965 (1892). PP. 2.1 - 112.5
word count: 13460
token reference format: page.(year).line, where line = line within year

cochroa3.o3
CHRONICLE MS A LATE (O3). TWO OF THE SAXON CHRONICLES PARALLEL, VOL. I. ED. C. PLUMMER. OXFORD: THE CLARENDON PRESS, 1965 (1892). PP. 112.6 - 132.29
word count: 670
token reference format: page.(year).line, where line = line within year

cogregd3.o23
GREGORY THE GREAT, DIALOGUES (MS H). BISCHOFS WAERFERTH VON WORCESTER UEBERSETZUNG DER DIALOGE GREGORS DES GROSSEN. BIBLIOTHEK DER ENGELSAECHSISCHEN PROSA, V. ED. H. HECHT. LEIPZIG: GEORG H. WIGAND'S VERLAG, 1900. PP. 16.6 - 25.28 (SAMPLE 1); PP. 51.32 - 61.19 (SAMPLE 2); PP. 134.22 - 143.23 (SAMPLE 3)
word count: 5170
token reference format: section.page.line, where line = line within page

cogregd4.o24
GREGORY THE GREAT, DIALOGUES (MS C). BISCHOFS WAERFERTH VON WORCESTER UEBERSETZUNG DER DIALOGE GREGORS DES GROSSEN. BIBLIOTHEK DER NGELSAECHSISCHEN PROSA, V. ED. H. HECHT. LEIPZIG: GEORG H. WIGAND'S VERLAG, 900. PP. 34.23 - 43.17 (SAMPLE 1); PP. 70.34 - 79.7 (SAMPLE 2); PP. 123.17 - 133.12 (SAMPLE 3)
word count: 5100
token reference format: page.line, where line = line within page

colaw2.o2
ALFRED'S INTRODUCTION TO LAWS, LAWS (ALFRED), AND LAWS (INE). DIE GESETZE DER ANGELSACHSEN, VOL. I. ED. F. LIEBERMANN. HALLE: MAX NIEMEYER, 1903. PP. 26.17 - 46.23 (ALFRED'S INTRODUCTION TO LAWS) AND PP. 46.17 - 88.7 (LAWS (ALFRED)) (SAMPLE 1); PP. 88.25 - 122.32 (LAWS (INE)) (SAMPLE 2)

word count: 1950 + 3300 + 2670 = 7920
token reference format: page.section.subsection, where subsection either follows Liebermann's numbering or else is the sentence number within the section.

colaw3.o3
LAWS (ELEVENTH CENTURY). DIE GESETZE DER ANGELSACHSEN, VOL. I. ED. F. LIEBERMANN. HALLE: MAX NIEMEYER, 1903. PP. 236.23 - 246.4 (V AETHELRED) PP. 246.9 - 256.27 (VI AETHELRED) PP. 278.10 - 296.5 (I CNUT) PP. 308.1 - 326.12 (II CNUT) PP. 380.1 - 385.5 (NORTHYMBRA PREOSTA LAGU)
word count: 6900
token reference format: page.section.subsection, where subsection either follows Liebermann's numbering or else is the sentence number within the section.

colaw4.o34
LAWS (LATE). DIE GESETZE DER ANGELSACHSEN, VOL. I. ED. F. LIEBERMANN. HALLE: MAX NIEMEYER, 1903. PP. 444.10 - 453.6 (RECTITUDINES) AND PP. 453.10 - 455.48 (GEREFA) (SAMPLE 1); PP. 483.1 - 484.24 (WILLIAM I) (SAMPLE 2)
word count: 2100 + 220 = 2320
token reference format: page.section.subsection, where subsection either follows Liebermann's numbering or else is the sentence number within the section.

coorosiu.o2
ALFRED'S OROSIUS. KING ALFRED'S OROSIUS, PART I. EARLY ENGLISH TEXT SOCIETY, O.S. 79. ED. H. SWEET. LONDON, 1959 (1883). PP. 58.13 - 78.30 (SAMPLE 1); PP. 102.1 - 120.18 (SAMPLE 2); PP. 228.1 - 238.14 (SAMPLE 3)
word count: 8640
token reference format: page.line, where line = line within page

cowulf3.o3
WULFSTAN'S HOMILIES (O3). THE HOMILIES OF WULFSTAN. ED. D. BETHURUM. OXFORD: THE CLARENDON PRESS, 1957. PP. 175.3 - 184.180 (VIIIc) PP. 200.3 - 210.203 (Xc) PP. 225.3 - 232.106 (XIII) PP. 267.7 - 275.202 (XX)
word count: 6950
token reference format: page.line, where line = line within homily

cowulf4.o34
WULFSTAN'S HOMILIES (O3/4). THE HOMILIES OF WULFSTAN. ED. D. BETHURUM. OXFORD: THE CLARENDON PRESS, 1957. PP. 116.3 - 118.40 (Ib) PP. 119.28 - 122.73 (II) PP. 123.4 - 127.80 (III) PP. 221.3 - 224.95 (XII) PP. 242.8 - 245.79 (XVII)
word count: 3290
token reference format: page.line, where line = line within homily

Total word count: 106,210

Appendix B: Copyright Matters and Conditions of Use

Potential users of the Brooklyn Corpus may not download or use the corpus unless they agree to the following conditions:

1. The user acknowledges that the Brooklyn Corpus and the Helsinki Corpus of English Texts are subject to copyright restrictions and agrees to abide by them. The user acknowledges that violations of copyright restrictions may result in legal liability.
2. The user agrees to notify all associates who access the downloaded copy of the Brooklyn Corpus of the copyright restrictions and of their obligation to respect the provisions of this agreement as additional users.
3. The user will make no commercial use of the Brooklyn Corpus without prior permission.
4. The user will not redistribute the downloaded Brooklyn Corpus to others except in limited passages under the normal standards of scholarly citation.
5. The user will not disclose the password needed for downloading the corpus files to others.
6. The user will acknowledge the Brooklyn Corpus and the Helsinki Corpus in any written work or oral presentation based on research using these materials.
7. The user acknowledges that the creators and distributors of the Brooklyn Corpus make no warranties, express or implied, concerning the Brooklyn Corpus, including but not limited to their ownership, merchantability, or fitness for a particular purpose. The creators and distributors shall not be liable for any direct, consequential, punitive or other damages suffered by the user or any other person resulting from the use of the distributed materials.

Appendix C: Bibliography

Allen, Cynthia L. 1980. *Topics in Diachronic English Syntax*. New York: Garland Press.

Clark Hall, J.R. 1960. *A Concise Anglo-Saxon Dictionary*. Fourth edition. Toronto, Buffalo, London: University of Toronto Press.

Kroch, Anthony and Ann Taylor. 1994. *Penn-Helsinki Parsed Corpus of Middle English*. First edition. Philadelphia: Department of Linguistics, University of Pennsylvania.

Kytö, Merja. 1993. *Manual to the Diachronic Part of the Helsinki Corpus of English Texts: Coding Conventions and Lists of Source Texts*. Second Edition. Helsinki: Department of English, University of Helsinki.