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Guidelines for Morphological and Syntactic Annotation of Old Norwegian Texts

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Guidelines for Morphological and Syntactic Annotation of Old Norwegian Texts

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This series also contains a Norwegian version of the guidelines, Vol. 4, No. 1. The present English version is a translation of the Norwegian text and follows this page by page, example by example. It is intended to be fully equivalent with the Norwegian version. Some deviations and changes are unavoidable in a translation, but we believe that for the great majority of readers, the two versions will be fully compatible.

## Preface

These guidelines for morphological and syntactic annotation of Old Norwegian were developed for use by the Menotec project (2010-2012). While they were written for the annotators of the project, we hope that they will be helpful also for those who will be working with the texts in the Menotec corpus as well as for anyone with a general interest in morphological and syntactic annotation. The questions discussed in these guidelines are likely to be familiar to anyone studying the Old Norwegian language (which together with Old Icelandic constitute Old Norse, in the Scandinavian languages often referred to as norrønt). We have chosen dependency analysis as our model for syntactic annotation, and in our experience, this model has given us a surprisingly simple way of manual annotation. It also works very well with a language of relatively free word order. Recently, dependency analysis has been used for several other projects, and a number of older languages are now available in this formalism, including Ancient Greek, Latin, Classical Armenian, Gothic, Church Slavonic, Old English, Old French, Old Spanish and Old Portuguese (see e.g. the INESS treebank portal, http://iness.uib.no).

The Menotec project, led by Christian-Emil Ore at the University of Oslo, was a large infrastructure project, funded by the Research Council of Norway (Norges Forskningsråd) in the years 2010-2012. It is now being continued on a smaller scale within other contexts. The Menotec project was a collaboration between the universities of Oslo and Bergen and aimed to expand the Medieval Nordic Text Archive (Menota) with a number of Old Norwegian texts, especially law texts and diplomas. Some of these were transcribed and added to the archive without annotation, some were annotated morphologically, and some were annotated both morphologically and syntactically. Texts already in the archive, mostly from the Old Norwegian Dictionary (Gammelnorsk Ordboksverk), already complied with the new standard, so that they could be supplemented with syntactic annotation. The goal of Menotec has been to create a large, uniform and balanced corpus of Old Norwegian texts, to be used for research in philology, linguistics and lexicography and other fields. The annotation was developed in collaboration with the proiel project, led by Dag. T. Haug, who was one of the participants in the Menotec project.

The morphological guidelines are based on work done at the Old Norwegian Dictionary, where a number of Old Norwegian texts have been tagged with morphological information, in addition to the guidelines in The Menota Handbook, ch. 8 (Haugen 2008). The syntactic guidelines follow those of the proiel project, where older Indo-European
languages (Greek, Latin, Armenian, Old Church Slavonic and Gothic) have been annotated morphologically and syntactically. proiel has its own guidelines, but it soon became clear to us that it would be helpful to write new guidelines appropriate to Old Norwegian, using Old Norwegian examples. Our goal has been to develop a method of annotation in compliance with proiel, but since the languages are somewhat different, the same rules of annotation can not always be made to fit both.

Since the syntactic annotation is based on morphological annotation, we have had to change, and in some cases correct, the morphological annotation carried out at the Old Norwegian Dictionary, as discussed in The Menota Handbook, ch. 8. For example, subjunctions must be annotated as such (not as conjunctions), so that they can introduce subordinate clauses in the syntactic annotation. Not many changes have been made, however, and these only involve moving words from one class to another. Nevertheless, we have found it useful to discuss this problem in these guidelines.

The actual syntactic and morphological annotation has been made in compliance with the proiel scheme, which has been customised for the Menotec project. For texts that are only to be annotated morphologically, only the first part of these guidelines is relevant. Texts that are also to be annotated syntactically must first be analysed morphologically, in which case all of the guidelines will be useful.

The present guidelines are the result of a process that was carried out over the threeyear period of the Menotec project. During this process we have had help from many colleagues, especially Dag T. Haug and Hanne M. Eckhoff in the proiel project. In addition, we have found much support and inspiration in the annotators' mailing list as well as in meetings held in Oslo or on Skype with people from the Menotec and iswoc projects. In alphabetical order (Icelanders listed by their last names), these are: Kristin Bech, Haraldur Bernharðsson, Kristine G. Eide, Bórhallur Eypórsson, Jens Haugan, Karl G. Johansson, Kari Kinn, Eiríkur Kristjánsson and Signe Laake. Special thanks go to Hanne M. Eckhoff, who read through the guidelines in January 2013 and gave us a number of helpful comments, and to Robert K. Paulsen, Bergen, who made a careful reading of the guidelines in August 2013, and who joined us - together with Hanne M. Eckhoff - in a final discussion of our text in September 2013. We would also like to thank Dag T. Haug and Espen S. Ore who in October 2013 helped us in specifying the encoding schemes in Menotec and proiel, as subsequently detailed in the new ch. 4.

Bergen, 1 October 2014

Odd Einar Haugen Fartein Th. Øverland

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## Part One

Morphological Annotation

## I Background for the Morphological Annotation

## I.I Word Classes and Morphological Terms

A morphological analysis specifying word class and grammatical form is a prerequisite for a syntactic analysis, so we shall open these guidelines with a discussion of the rules for the former. As a consequence of the syntactic annotation initiated in the Menotec project, we have made some changes to the rules for morphological annotation used in earlier projects (especially at the Old Norwegian Dictionary). These changes primarily refer to the definition of word classes and will be explained here.

In the xmL encoding used for the texts that constitute our corpus, every words is tagged with its word class, e.g. 'xAJ' for adjectives or 'xAP' for prepositions. Inflected word classes have longer tags, as they are marked for grammatical categories such as gender, number and case. Some classes have no inflection, in which case word class is the only tag needed. See Haugen (2008) for an introduction to this encoding style.

The word class tags always begin with a lowercase ' $x$ ', followed by two uppercase letters, e.g. 'xAJ' for adjectives. After these follow markers for various morphological categories and their respective terms. Here, the category is written in lowercase, e.g. ' $n$ ' for number and the features in uppercase, e.g. 'S' for singular and ' P ' for plural.

In the user interface, both the internal one used for tagging text as well as the external one for users of the database, this encoding is translated into longer, but more easily understood terms, abbreviations or actual words. A complete list of abbreviations follows:

## A. Word Classes

xNC noun, common
xNP noun, proper
xAJ adjective
xPE pronoun, personal
xPR pronoun, reflexive
$x \mathrm{xQ}$ pronoun, interrogative
xPI pronoun, indefinite
xDD determiner, demonstrative
xDQ determiner, quantifier
xDP determiner, possessive
xVB verb
xAV adverb, general
xAQ adverb, interrogative
xAP preposition
xCC conjunction
xCS subjunction
xIM infinitive marker
xIT interjection
xUA unassigned
xFW foreign word

## B. Morphological Terms

| p1 | person: 1. person | gM | gender: masculine |
| :---: | :---: | :---: | :---: |
| p2 | person: 2. person | gF | gender: feminine |
| p3 | person: 3. person | gN | gender: neuter |
| pU | person: unspecified | gMF | gender: masculine or feminine |
| nS | number: singular | gMN | gender: masculine or neuter |
| nP | number: plural | gFN | gender: feminine or neuter |
| nU | number: unspecified | gMFN | gender: masculine, feminine or neuter |
| tPS | tense: present | gU | gender: unspecified |
| tPT | tense: preterite |  |  |
| tU | tense: unspecified | cN | case: nominative |
|  |  | cG | case: genitive |
| mIN | mood: indicative | cD | case: dative |
| mSU | mood: subjunctive | cA | case: accusative |
| mIP | mood: imperative | cAD | case: accusative or dative |
| mINSU | mood: indicative or | cGD | case: genitive or dative |
|  | subjunctive | cAN | case: accusative or nominative |
| mINIM | mood: indicative or | cO | case: oblique |
|  | imperative | cU | case: unspecified |
| mSUIM | mood: subjunctive or |  |  |
|  | imperative | rP | degree: positive |
| mU | mood: unspecified | rC | degree: comparative |
|  |  | rS | degree: superlative |
| fF | finiteness: finite | rU | degree: unspecified |
| fI | finiteness: infinitive |  |  |
| fP | finiteness: participle | sI | definiteness: indefinite |
| fU | finiteness: unspecified | sD | definiteness: definite |
|  |  | $s \mathrm{U}$ | definiteness: unspecified |
| vA | voice: active |  |  |
| vR | voice: reflexive | inY | inflection: yes |
| vU | voice: unspecified | inN | inflection: no |

In ch. 4 below, the morphological annotation schemes in Menotec and proiel are compared. For all practical purposes, they are compatible (although using different abbreviations). We believe that it is possible to convert between the two schemes without loss of information.

## I.2 Word Classes in Modern Norwegian

Following Norsk referansegrammatikk ['Norwegian Reference Grammar'] (Faarlund, Lie and Vannebo 1997), the Language Council of Norway has established a list of recommended word classes for Modern Norwegian. It may serve as a starting point, also for Old Norwegian and Old Norse in general. This list has ten word classes:

| Traditional term | New term | Change |
| :--- | :--- | :--- |
| Noun | Noun | None |
| Verb | Verb | None |
| Adjective | Adjective | Includes ordinals |
| Pronoun | Pronoun | Change: Some subgroups of pronouns <br> become determiners, and som becomes a <br> subjunction or preposition. |
| Article | Determiner | New word class. Includes articles, some <br> pronouns, and cardinals. |
| Numeral | - | Numerals no longer a special class. <br> Cardinals become determiners, ordinals <br> become adjectives. |
| Preposition | Preposition | Includes som and enn introducing noun <br> phrases and pronominal phrases. |
| Adverb | Adverb | None |$|$| Interjection |
| :--- |

This classification may almost without exception be used for Old Norwegian, but we have chosen to differentiate between infinitive markers and subjunctions. In the syntactic analysis, we consider the infinitive marker as an auxiliary word (AUX, in these guidelines) for the infinitive, while a subjunction introduces a dependent clause and has a quite different function. It is therefore problematic to include the infinitive marker among subjunctions.

We do not count sem and en as prepositions, since they do not govern cases. They are therefore taken to be subjunctions.

## I. 3 Maximising Homonymy

There is a small number of fairly common words which belong to more than one class of words, notably at, which can be a preposition, subjunction, infinitive marker, an adverb,
or even a noun, as in peir komu at landi 'they reached land', hann sá at peir komu at landi 'he saw that they reached land', hann x́tlaði at fara 'he intended to leave', at meir 'the more' and Yggs at 'Odin's fight'. As we will see in ch. 3.1, there are many more words like this.

A certain amount of homonymy is unavoidable in the morphological analysis, but we recommend that, if possible, words are assigned to only one word class. This is the principle of maximising homonymy. For example, we do not wish to differentiate morphologically between adjectives used as adjectives or as adverbs, e.g. langr vegr 'a long way' vs. hann gekk langt 'he walked far [a long way]'. In the first example, langr is an attribute of vegr, in the second example it is an adverbial with gekk. In both cases we regard langr as belonging to the word class adjectives. It will be left to the syntactic annotation to describe the difference between the two types of usage.

Furthermore, we will not differentiate between sá as a personal pronoun, (1), and as a demonstrative, (2). We take pá (masc. plur. acc of sá) as a demonstrative in both cases. In the syntactic analysis, pá will be an object of a preposition in (1), and a determiner in a noun phrase in (2):
(1) Ek vil tala við pá.
'I wish to speak to them.'
(2) Um pá daga var par jafnan úfriðr ok bardagar.
'In those days, there were constant hostilities and fighting.'

As we do not give numerals and articles their own class, but mark both as determiners, there is no need to distinguish between einn as a numeral, article or quantifier. This is a syntactic distinction, and will be shown in the syntactic analysis. But we will still make a distinction between einn as a determiner and as a quantifier (cf. ch. 2.3.4 comment 3).

There are good arguments to be made for distinguishing between pronouns and determiners with respect to some words, e.g. engi, in examples like par var engi 'no one was there' and par var engi madr 'no man was there'. In the first instance, one can say that engi functions as a noun, in the other as an adjective, and that in the first instance it should be tagged as a pronoun, but as a determiner in the second. Such a distinction is purely syntactic, and can therefore be deduced from this analysis. In the morphological analysis, the distinction will require an extra effort; if it could be done is such a clear manner that each and every annotator would agree on the analysis, a mechanical solution could probably be formulated, e.g. that if engi depends on a noun (here: maðr), it is a determiner, or else a pronoun. Such a solution would not yield much new information, which could in any case be gleaned from the syntactic analysis. We therefore think that it is defensible to take words like engi, hverr, hvárr as belonging to one and only one word class, and we have chosen the determiner class, since these words most often are used like adjectives (unlike pronouns, which never function as adjectives).

The example par var engi has a parallel in the substantival use of adjectives, e.g.:

## (3) Ríkir báðu hennar.

'Powerful [men] wooed her.'

Here, the adjective rikir has an implicit head (menn). Morphologically, we analyse rikir in both ríkir bádu bennar and ríkir menn bádu hennar identically, namely as an adjective in the masculine plural nominative of the indefinite form, $\mathrm{xAJ} \mathrm{gM} \mathrm{nP} \mathrm{cN} \mathrm{sI}$.

## I.4 One or More Words? Splitting and Merging Words

The question of word boundaries is an important one both in old and new Norwegian. In Old Norwegian, there is a stronger tendency to split words, if the primary sources are anything to go by. In his edition of the Old Norwegian Homily Book in AM $6194^{\circ}$, Gustav Indreb $\varnothing$ (1931) chose to use a hyphen to show split words in the manuscript which he believed should be written as one word. A quick glance at his edition shows how often Indreb $\varnothing$ wanted to join words, e.g. eldre-en for eldrinn 'the fire', and-lát for andlát 'death', drotens-degi for dróttinsdegi 'Sunday' etc.

In the texts from the Old Norwegian Dictionary (Gammalnorsk ordboksverk), split words usually have been put in a single word element, e.g. <w lemma="dróttinsdagr"> drotens degi $\langle/ \mathrm{w}\rangle$, which means that the annotator does not need to merge many words. Ideally, the decision whether to write words as compound or split should be taken before the text is being annotated.

Complex prepositions are a special problem, e.g. í móti, á millum, as well as complex subjunctions, e.g. pó at, pví at, fyrir pví at. Our solution is to give each word its own tag. For the syntactic analysis of each of these, see ch. 8.6 below.

## I. 5 Syncretism

In Old Norwegian, there is a great deal of syncretism in many word classes, especially in the weak inflections. Take these four nouns for example; the first two are strong, the next two weak:

| Nom. | fjorðr | land | granni | herra |
| :--- | :--- | :--- | :--- | :--- |
| Acc. | fjorð | land | granna | herra |
| Dat. | firði | landi | granna | herra |
| Gen. | fjarðar | lands | granna | herra |

These nouns have four, three, two and no distinct forms, respectively. There is no doubt that the four different forms of figrər should each be analysed differently, but what about
the others? Should land be tagged as nominative/accusative, or granna as accusative/ dative/genitive (oblique case)?

When syncretic forms like granna and herra occur, only the context and our grammatical sensibilities can help us. Does the word agree with another word, perhaps? Does the verb follow a subjunction requiring a specific mood? Does the noun follow a verb (or a preposition) which governs a specific case? In most instances, a fairly plausible analysis is possible and should be used. In other cases, one has to accept that a word form is truly syncretic and that is is not advisable to make a specific analysis.

There are three major categories in which there are examples of syncretism: (1) mood, (2) gender and (3) case. It is not uncommon that a finite form of a verb can be analysed as either indicative or subjunctive, that a noun (and, consequently, an attributive adjective or determiner) may have more than one gender, and that a noun (and attributive words) may be analysed as having more than one case.

The morphological terms in ch. 1.1, can be used to encode these examples of syncretism:
mINSU mood: indicative or subjunctive
mINIM mood: indicative or imperative
mSUIM mood: subjunctive or imperative
gMF gender: masculine or feminine
gMN gender: masculine or neuter
gFN gender: feminine or neuter
gMFN gender: masculine, feminine or neuter
cAD case: accusative or dative
cGD case: genitive or dative
cAN case: accusative or nominative
cO case: oblique (i.e. accusative, dative or genitive)
The list of syncretic form could in theory have been much longer, but since it is based on the state of Old Norwegian in the classical period in the 13th century, it is relatively short. Even if the list is short, we believe that it cover almost any possible problem of syncretism which one does not want, or is not able, to solve.

In many cases, the syncretistic tags still restrict the number of possible analyses of a word form. With prepositions like $a ́$ and $\dot{i}$, the genitive form of weak noun like granni may be eliminated, even though it is not always certain whether the word is in the accusative or dative. The encoding would thus be cAD rather than cO .

Finally, there are certain cases where no specific term applies for the word in question. Then, one of the following may be used:
pU person: unspecified
nU number: unspecified
tU tense: unspecified
mU mood: unspecified
fU finiteness: unspecified
vU voice: unspecified
gU gender: unspecified
cU case: unspecified
rU degree: unspecified
sU definiteness: unspecified
The only category for which there is no unspecified option is inflection. A word is either inflected or not inflected, i.e. it is either tagged as inY (inflection: yes) or inN (inflection: $n o)$. In practice, this category is coupled to the word classes, so that all words in a word class are regarded as being either inflected or not inflected:

## Inflected Word Classes

xNC noun, common
xNP noun, proper
xAJ adjective
xPE pronoun, personal
$x$ xR pronoun, reflexive
xPQ pronoun, interrogative
$x \mathrm{PI}$ pronoun, indefinite
xDD determiner, demonstrative
$x \mathrm{xD}$ determiner, quantifier
xDP determiner, possessive
xVB verb
$x A V$ adverb, general
xAQ adverb, interrogative

## Non-inflected Word Classes

xAP preposition
xCC conjunction
xCS subjunction
xIM infinitive marker
xIT interjection

Note that one can use a term to describe a word even when its inflection is defective. For example, it is quite possible to say the proper noun Óláfr is singular (nS), even though the word has no plural inflection, or that dyrr 'door' is plural ( nP ), even though is has no singular forms. In both cases, the word should be tagged using the number feature.

The sausage maker had this advice for his son: Never eat sausages. And here is some advice from the annotator: Experience has shown that in almost every single case it is possible to give a specific analysis of Old Norwegian morphology. But there is one syncretism which must simply be suffered in silence: Adjectives and determiners in genitive and dative plural do not need a specified gender. It is true that in ollum monnит,
it is clear that ollum is a masculine dative plural, but there are so many other instances where adjectives and determiners are not attributes, and the annotator must spend an inordinately long time deciding on the gender, which, by the way, is not shown in the inflection. Leave it be.

## I. 6 Interpolation of Latin and Other Non-Scandinavian Languages

These guidelines deal with Old Norwegian and are written with Old Norwegian texts in mind, but they might also be of some use for the annotation of Old Icelandic and other Scandinavian or even Germanic languages. The range of word classes and syntactic functions is restricted to what occurs in Old Norwegian and the other Scandinavian languages. For the annotation of classical languages, e.g. Greek and Latin, we refer to the guidelines for the PROIEL project.

When Latin and other non-Scandinavian words occur in the Old Norwegian texts, we think that morphologically, these words should be tagged with the word class foreign word ( xFW ) and their native lemma, but otherwise with no morphological annotation. On the level of syntax, we distinguish between instances where the Latin interpolation is integrated into an Old Norwegian sentence, and where they constitute one or more independent sentences. In the case of integration, the foreign words should be tagged with the syntactic function they have within the sentence. An example of this is (75) in ch. 7.1.2, where the Latin participle egressus (from egredior) functions as a verb in the sentence, which otherwise is kept in Old Norwegian.

If it is difficult to decide what function non-Scandinavian words have, they may be tagged as VOC. This is because VOC is one of the few functions that are placed directly under a sentence's root, cf. ch. 7.1.3 below. When the foreign interpolation is independent, in one or more sentences, the syntactic annotation should be skipped.

The xml file which the annotation is based on usually has a language tag to mark non-Scandinavian interpolations. In the header (i.e. <teiHeader>) in such files, the languages which occur in the file should be indicated by the element <langUsage> in <profileDesc>, e.g. as <language ident="onw">Old Norwegian</language> and <language ident="lat">Latin</language>. Within the element <text> of the file, the main language is defined, e.g. <text xml:lang="onw">, and foreign interpolations where they occur.

## I.7 Orthography for Lemmas

The morphological as well as the syntactic annotation requires that each word is assigned to a lemma in normalised orthography. There is some variation in the orthography of Old Norse (Norwegian and Icelandic), so it is important to make a decision as to the rules for normalisation.

In the Gammalnorsk Ordboksverk (GNO), a normalised orthography for Old Norwegian was developed in the second half of the previous century, documented in a report from 1982, Regler for ekserpering og tekstgjengivelse, normalisering av oppslagsord, klassifisering og ordning av seddelmaterialet. This differs in a few specifics from the rules presently used for Old Norse (i.e. Old Icelandic and Old Norwegian) by Ordbog over det norrone prosasprog (ONP) in Copenhagen.

In the Menotec project, the goal is that each texts is supplemented with ONP lemmas in addition to the GNO lemmas. Fartein Th. Øverland has prepared a parallel list for lemmas in GNO, in Fritzner's dictionary, and ONP, and this list will be used to supply lemmas with ONP forms. This list contains 48,500 words (including some variant forms of the same lexeme).

For now, the Menotec project will use the GNO orthography for lemmas. This differs from the ONP orthography in four main ways:

1. Consonantal $i$ is spelled $i$, e.g. siá, kveðia (not sjá, kveðja)
2. No distinction is made between $o$ and $\rho$, e.g. diofull and koma (not djgfull vs. koma)
3. The diphthong $e y$ is spelled $\varnothing y$, e.g. høyra (not heyra)
4. The $b$ is not written before $l$, $n$ or $r$, e.g. lutr, nakki and ringr (not blutr, hnakki, hringr)

The effect of rules 1,3 and 4 are illustrated by a single word, úbljóəanseyra n . 'an ear unwilling to hear', which according to GNO-orthography becomes úlióðansøyra.

Finally, note that there is no vowel harmony in the GNO orthography, and that possible final vowels are $i, a, u$.

## 2 Word Classes

## 2.I Nouns

Nouns are divided into two classes, common nouns and proper nouns. Both types have an inherent gender. Proper nouns also have an inherent number.

### 2.1.I Common Nouns

Common nouns are marked for their word class, xNC (noun common). In addition to this, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), which is inherent, number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ), definiteness ( $\mathrm{sI}, \mathrm{sD}, \mathrm{sU}$ ) and, finally, for the fact that they are inflected (inY). The category definiteness is used to distinguish between definite nouns (sD), e.g. konan er spqk 'the woman is wise', and indefinite nouns (sI), e.g. kona bjó par '(a) woman lived there'. In the dictionaries, common nouns are usually not capitalised.
$\triangleright \quad$ This word class is open.
(4) En dróttningin hverfr í brott reið mjok.
'And the queen turns away very angry.'
Comment 1: We count demonyms among common nouns, e.g. danir m. pl. 'Danes', englar m. pl. 'Englishmen', sviar m. pl. 'Swedes'. We use the plural form as the lemma.

Comment 2: The words tigr m. 'a ten', hundrað n. 'a (great) hundred' (i.e. 100 or 120) and púsund f. 'a (great) thousand' (i.e. 1000 or 1200) are nouns. For other numerals, see ch. 2.12 below.

### 2.1.2 Proper Nouns

Proper nouns are tagged for their word class, xNP (noun proper). Furthermore, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), which is inherent, number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ), definiteness ( $\mathrm{sI}, \mathrm{sD}, \mathrm{sU}$ ) and, finally, for the fact that they are inflected (inY). For many proper nouns, some categories are unspecified, and these categories will be tagged ' $U$ ' (for unspecified). Proper nouns are usually capitalised in dictionaries.

D This word class is open.
(5) Jarnskeggi átti konu pá er Guðrún er nefnd. 'Iron-beard had a wife named Gudrun.'
(6) Nú var enn í Danmọrku greifi nǫkkurr illr ok q̧fundfullr.
'There was now in Denmark a certain count, evil and envious.'

### 2.2 Adjectives

Adjectives are tagged for their word class, xAJ. Furthermore, they should be tagged for degree ( $\mathrm{rP}, \mathrm{rC}, \mathrm{rS}, \mathrm{rU}$ ), gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}$, $\mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ), definiteness ( $s \mathrm{I}, \mathrm{sD}, \mathrm{sU}$ ) and, finally, for the fact that they are inflected (inY). The category definiteness serves to distinguish between an adjective's definite form (sD), e.g. inn gamli madr 'the old man', and its indefinite form (sI), e.g. gamall madr '(an) old man'. Adjectives may functions as attributes or predicatives: langr vegr ' (a) long way' vs. vegrinn er langr 'the way is long'. In either case, the adjective is inflected in agreement with the noun.

D This word class is open.
(7) Hann er ríkr maðr, qflugr ok ǽttgóðr.
'He is a powerful man, strong and of a good family.'
(8) Ert pú skyldr at sverja honum hinn sterkasta eið.
'You are obliged to swear a very powerful oath to him.'

Comment 1: Adjectives in neuter singular can also be used adverbially: hann gekk langt 'he walked far'. In forms like langt, there is a syncretism between neuter singular nominative and accusative. We analyse the form langt as an adjective in accusative and annotate is as xAJ gN nS cA . Adverbial use of adjectives will be evident from the syntactic analysis.

Comment 2: Adverbial adjectives also appear in other cases or genders, e.g. dative plural (9) or masculine accusative singular (10):
(9) Hann gekk fyrir of daginn ok steig heldr stórum [stigum].
'He walked during the day and took rather great [strides].'
(10) Pótt róa kynni krofturligan.
'Although [he] could row mightily.'

Comment 3: Traditionally, numerals have had their own word class, divided into cardinals and ordinals. Based on the fact that cardinals have the same syntactic function as
determiners, we count them as such, e.g. tveir 'two' in (11). See also the syntactic analysis of this sentence in ch. 10.3 below.
(11) Meðan pessir tveir viðir búa báðir saman, pá lifa ok bera lauf sitt.
'While these two trees are together, [then] they survive and bloom.'
The word einn 'one' will be classified as a determiner on par with tveir, prír, fiórir, etc. However, in some cases it functions as an adjective in the meaning 'alone', and we then classify it as an adjective:
(12) Hví ertu einn kominn í Jotunheima?
'Why have you come alone to Jotunheim?'
Ordinals in general are classified as adjectives, in line with the classification in ch. 1.2 above. However, due to their syntactic and semantic properties, the words fyrstr/fyrsti and annarr are analysed as determiners; cf. the examples in ch. 2.4.2 below. In other words, only ordinals from priði 'third' and upwards are counted as adjectives.

Comment 4: Where adjectives are compared irregularly, e.g. gódr - betri - beztr, we follow Ordbog over det norrøne prosasprog in treating gódr as one lemma and betri as another one (with beztr as its superlative). This applies for the following:

| Lemma 1 (positive) | Lemma 2 (comparative and superlative) |  |
| :--- | :--- | :--- |
| gamall | ellri | (elztr) |
| gódr | betri | (beztr) |
| illr | verri | (verstr) |
| lítill | minni | (minnstr) |
| margr | fleiri | (flestr) |
| mikill | meiri | (mestr) |

Comment 5: Some adjectives are non-inflecting, ending in either $-a$ or $-i$ in all forms. Even so, they should be tagged for degree, gender, number, case, definiteness and also inflection. The feature ' $U$ ' for unspecified should be used wherever necessary, apart from in the category inflection, since adjectives in general are inflected and thus should be tagged 'inY' for the category inflection (cf. p. 19 above). Ch. 17 below has an exhaustive list of non-inflecting adjectives in Ordbog over det norrøne prosasprog.

### 2.3 Pronouns

Pronouns are words that replace or are equivalent to noun phrases, i.e. they function pro nomen. They are characterised in Old Norwegian by a special inflection, unlike other word classes. In older grammars, the class of pronouns is larger than we define it here, since it also includes determiners.

### 2.3.I Personal Pronouns

Personal pronouns are tagged for their word class, xPE. Furthermore, they should be tagged for case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ) and for the fact that they are inflected (inY). We do not think that it is necessary to mark them for person ( $\mathrm{p} 1, \mathrm{p} 2, \mathrm{p} 3, \mathrm{pU}$ ), gender ( gM , $\mathrm{gF}, \mathrm{gN}, \mathrm{gU})$ and number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ). The pronoun $p u$ is not 2 . person of $e k$, and pér is not the plural of $p u$. A personal pronoun has only four forms, namely the case forms, e.g. ek, min, mér, mik.
$\triangleright \quad$ This word class is closed and includes ek, vit, vér, pú, pit, pér, hann and hon.
(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik.
'Lover, she said, I know for sure that you cannot carry me.'
(14) Vit kváðum nei við djǫflinum ok við ǫllum hans verkum.
'We said no to the devil and all his works.'
(15) Hann var mjok ástbundinn af henni, ok hon af honum.
'He was very much in love with her, and she with him.'

Comment 1: The determiners pat, peir, pár, pau (from sá) may function as personal pronouns in 3 . person singular and plural, but as argued in ch. 1.3 above, we will classify them as determiners in all cases; cf. ch. 2.4.1 below.

### 2.3.2 Reflexive Pronouns

Reflexive pronouns are tagged for their word class, xPR. Furthermore, they should be tagged for case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ) and for the fact that they are inflected (inY).

- This word class is closed and only includes sik (no nominative form).
(16) En margir létu illa yfir pví er hann gerði hana sér svá kára.
'But many expressed disapproval when he made her so dear to himself.'
Whether Old Norwegian has a separate reciprocal pronoun, or whether the phrase bvárr - annarr should simply be considered a pair of determiners is up for debate. We have gone for the second option, cf. ch. 2.4.2.


### 2.3.3 Interrogative Pronouns

Interrogative pronouns are tagged for their word class, xPQ. Furthermore, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}$, cU ) and for the fact that they are inflected (inY).

- This word class is closed and includes hvat, hveim and bvilikr.
(17) Hvat skal ek nú gera?
'What shall I do now?'

Comment 1: We take the word hví (actually a neuter singular dative of hvat) as an interrogative adverb (cf. ch. 2.6.2):
(18) Hví er frú mín svá árla upp staðin?
'Why has my wife gotten up so early?'

Comment 2: While the word bveim is actually a masculine singular dative of hoat, it may be considered to be a lexicalised interrogative pronoun. Consequently, hvat and hveim each has its respective lemma.

Comment 3: We include the words hvárr and bverr among determiners, even if they sometimes function like pronouns. Cf. ch. 2.4.2 comment 8.

Comment 4: The word bvilikr could have been tagged as a determiner in some cases:
(19) Ok sagði henni hvílíkan harm riddarinn hafði af ást hennar.
'And told her how much sorrow the knight suffered because of her love.'
We have nevertheless chosen to always analyse it as an interrogative pronoun.

### 2.3.4 Indefinite Pronouns

Indefinite pronouns are tagged for their word class, xPI. Furthermore, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ) and for the fact that they are inflected (inY).

- This class is closed and includes báðir, hvatki, hvatvetna/hvetvetna and manngi.
(20) Ek ann Yðr, frú, yfir hvatvitna.
'I love you, lady, more than anything.'

Comment 1: The word bádir occurs most often as a pronoun, i.e. it is not an attribute, nor is there an implicit parent word above it. An example of this would be:
(21) Um síðir luku pau béði lífi sínu.
'Eventually they both lost their lives.'
Less commonly, bádir functions as an attribute, as in:
(22) Pá lagði hann báða fǿtr í kné konungsins.
'Then, he put both feet in the king's lap.'

Here, it should be taken as a determiner. For these reasons, we think that báðir may be tagged as either a pronoun or determiner, depending on its function.

Comment 2: In our Old Norwegian corpus, there are examples of bvatvetna/bvetvetna, but so far we have not come across an example of manngi.

Comment 3: The word einn will be classified as a determiner (quantifier), whether it is in the singular, (23) or plural, (24):
(23) Pví nǽst hljóp fram kǫttr einn grár.
'Next, a grey cat sprang forth.'
(24) Pessa leið fara peir einir er kunnigstir eru um Fljótsdalsheiði.
'Only those who know their way around Fljotsdalr-heath, go this way.'
In the latter example above, we posit an implicit head, einir menn. For an example of einn classified as an adjective, see ch. 2.2 comment 3 above.

### 2.4 Determiners

Determiners are usually words that serve as attributes, and in Old Norwegian they are characterised by inflecting like adjectives. Older grammars classify them as pronouns, but they differ from pronouns both morphologically and syntactically. Determiners can also occur without a parent, e.g. (25), where the word menn is implicit:
(25) Einir trúðu at hamingjan myndi fagnað ok fremd veita.
'Some believed that happiness would give joy and honour.'

### 2.4.I Demonstratives

Demonstratives are tagged for their word class, xDD. Furthermore, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ) and for the fact that they are inflected (inY).

- This word class is closed and includes hinn/inn/enn, sá and sjá/bessi.
(26) Pá bera peir, sem hinn vildasti viðr, lauf ok blóm.
'Then they bear, as the best of trees, leaves and flowers.'
(27) Var petta dýr hverjum manni kárt er í hirð konungsins var.
'This animal was dear to every man at the king's court.'
Comment 1: The determiners pat, peir, pár, pau (from sá) may occur both as personal pronouns, (1), and as demonstratives, (2):
(1) Ek vil tala við pá.
'I wish to speak to them.'
(2) Um pá daga var par jafnan úfriðr ok bardagar.
'In those days, there constantly were hostilities and fighting.'
As argued in ch. 1.3 above, we have chosen to classify these words as demonstratives in all cases, to avoid having to divide them into two classes by their use. See also ch. 2.3.1 above.

Comment 2: The form binn may be used as a lemma for binn, inn and enn, so that inn may be reserved for the adverb inn 'in' and enn for the adverb enn 'still'. This has been done at the Old Norwegian Dictionary (Gammalnorsk Ordboksverk).

Comment 3: The words slikr and pvilikr will be classified as adjectives.

### 2.4.2 Quantifiers

Quantifiers are tagged for their word class, xDQ . Furthermore, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ) and for the fact that they are inflected (inY).

- This word class is closed and includes allr, annarr, annarrtveggi, annarrtveggja, báðir, einn, einnhverr, engi, fyrstr/fyrsti, hvárgi, hvárr, hvárrtveggi, hvárrtveggia, bvergi, bverr, nekkurr, samr and sumr.
It also includes the cardinals: einn, tveir, prír, fjórir, fimm, sex, sjau, átta, niu, tíu, etc.
(28) Ok rann hjarta hans allt ór honum.
'And his heart left him completely.'
Comment 1: As mentioned in ch. 2.2, it has been customary to give numerals their own word class, divided into cardinals and ordinals. Based on the fact that cardinals have the same syntactic function as other quantifiers, we have included them in that group. Ordinals are included with adjectives, also based on their syntactic properties. Actually, this only applies to priði 'third' and higher numbers, since we analyse fyrstr and annarr as determiners.

Comment 2: The word fyrstr is in most cases a typical determiner, e.g.:
(29) Ek réð pér pat hitt fyrsta ráð.
'I gave you that first piece of advice.'
In the Old Norwegian texts, it occurs almost without exception in definite form (inflected weakly), as in this example. In some instances, it occurs as a free predicative and in the indefinite form, e.g.:
(30) Óláfr konungr lagði undir sik fyrstr konunga Noreg allan.
'King Olaf conquered the whole of Norway first of all kings.'
In these cases, too, we will analyse fyrstr it as a determiner.
Comment 3: The word annarr has often been classified as both pronoun and determiner. In (31) it functions as a determiner and the meaning is 'other':
(31) Horpum, gígjum, simphanum, organum, timpanum, salterium ok korum ok allskonar qðrum strengleikum.
'Harps, fiddles, hurdy-gurdies, lyres, dulcimers, psalteries and rotes and all kinds of other stringed instruments.'

In (32) the first $q$ drum is a determiner, while the latter looks like a pronoun:
(32) Allskonar qðrum strengleikum er menn gera sér ok qððrum til skemtanar.
'All kinds of other lays which men perform for their own amusement as well as that of others.'

Here, it makes sense to posit an implicit parent word, $\boldsymbol{q}$ дrum [mqnnum], so that this oдrum, too, is a determiner.

In the preceding examples, annarr has the meaning 'other', not 'second'. However, in some instances it clearly has numeric content:
(33) Mx́lti hon qđðru sinni til hans.
'She spoke to him a second time.'
Note especially the use of annarr in the phrase 'one - the other':
(34) Pá sá hann mýss tvǽr, aðra hvíta en aðra svarta.
'Then he saw two mice, one white and the other black.'
For our purposes, the important feature of annarr is that it functions as a determiner, and since we prefer to maximise homonymy (cf. ch. 1.3 above), it makes sense to classify annarr as a determiner in all cases.

Comment 4: The word allr is in most dictionaries classified as an adjective, but we will analyse it as a quantifier, in line with the analysis of einn, nokkurr and sumr, e.g.:
(35) Síðan skildisk hann við konung ok allt hirðlið hans.
'Then, he left the king and all of the king's troops.'
Here and elsewhere, allr expresses scope and functions as an attribute like other determiners.

Comment 5: As mentioned before, the word bádir may either be tagged as a pronoun or a determiner (see example in ch. 2.3.4 comment 1).

Comment 6: The word einn is a typical determiner, e.g.:
(36) Í hǫfninni sá hann eitt skip.
'In the harbour he saw a ship.'
It will sometimes be understood as an article, e.g.:
(23) Pví nást hljóp fram kǫttr einn grár.
'Next, a grey cat sprang forth.'
Since we do not have a separate class for articles, we consider it a quantifier also in such cases. As noted in ch. 2.2 comment 3, einn is considered an adjective when it means 'alone'.

Comment 7: The word einnbverr has, like annarr, been taken as either a pronoun or determiner, but in the Old Norwegian texts, it seems like the latter usage is more common. A typical example would be:
(37) Einnhvern dag var pat er Óláfr var á land genginn með lið̀i sínu.
'It happened one day, that Olaf had gone ashore with his men.'
There is no doubt that einhvern is subordinate, i.e. a determiner, under dag. In (38), einhverr functions like a pronoun, but in line with the analysis of annarr, for example, we suppose there to be an implicit parent word (maðr) here:
(38) Pá leggi einnhverr họnd sína í munn mér at veði at petta sé falslaust gert.
'Let someone then lay his hand in my mouth as a surety that this be done without fraud.'

Therefore, einnhverr will always be tagged as a determiner.
Comment 8: The words engi, hvárr, hverr, nokkurr and sumr will also be classified as determiners, as for example in:
(27) Var petta dýr hverjum manni kárt er í hirð konungsins var.
'This animal was dear to every man at the king's court.'
There are also examples of these words occurring in the same places as pronouns, e.g.:
(39) Kaus hverr sér félaga.
'Each one chose a companion.'
Here, it makes sense to posit an implicit parent word, bverr [madr]. We have chosen to gather all instances of engi, hvárr, hverr, nekkurr and sumr together in the same word
class, i.e. as determiners. However, ekki, the neuter form of engi will sometimes be classified as an adverb, like eigi (cf. ch. 2.6.1 comment 1).

Comment 9: We understand the word tváru to be a compound of the preposition at and the determiner hvárr, in the dative singular neuter form hváru, governed by the preposition.
(40) Minnti hann at hváru á með orðum ok mǽlti svá.
'He reminded both with words and spoke thus.'
In the manuscript of the Old Norwegian Homily Book, it is spelled as one word, atvaro. We have split this form into at and varo, and tagged the two as the words at and bvárr, respectively.

Comment 10: The word hvergi may some cases be a determiner, e.g. hvergi góðr maðr 'every good man', but most often it is an adverb:
(41) Pá var hann hvergi sénn par í fylkinu.
'Then he was nowhere to be seen in the district.'
This is one of the words that have to be disambiguated.

Comment 11: The words margr and jafnmargr will be classified as adjectives, even though there are good reasons to see them as quantifiers. But it may be stressed that margr does in fact compare (albeit irregularly), margr - fleiri - flestr, like an adjective.

Comment 12: The word samr is sometimes used as a quantifer, but most frequently as an adjective. An example of the latter would be verða samir á 'reach agreement about'.

### 2.4.3 Possessives

Possessives are tagged for their word class, xDP. Furthermore, they should be tagged for gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ) and for the fact that they are inflected (inY).
$\triangleright \quad$ This word class is closed and includes minn, pinn, sinn, okkarr, $y k k a r r, y \not \partial v a r r$ and várr.
(42) Hann hugðisk pá at reyna afl sitt. 'He then wanted to test his strength.'

### 2.5 Verbs

Verbs have either a finite or an infinite form. In Old Norwegian, a finite verb is the only obligatory part of a sentence, viz. rignir 'it rains'. Infinite verbs either complement finite verbs or function in the same way as adjectives (as predicatives or attributes).

### 2.5.I Finite Verbs

Finite verbs are tagged for their word class, xVB . In addition to this, they should be tagged for finiteness (fF), tense (tPS, tPT, tU), mood (mIN, mSU, mIP, mU), person ( $\mathrm{p} 1, \mathrm{p} 2, \mathrm{p} 3, \mathrm{pU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), voice ( $\mathrm{vA}, \mathrm{vR}, \mathrm{vU}$ ) and, finally, for the fact that they are inflected (inY). It is also possible to tag them for inflectional class (iST, iWK, iRD, iPP, iU ), but this is not done in the proiel scheme and we recommend that it is only being done for disambiguation (cf. ch. 3.2 below).

D This word class is open.
(43) Pessir er sá dagr er guð gerði.
'This is the day that God made.'

### 2.5.2 Infinite Verbs

Infinite verbs are tagged for their word class, xVB . This group comprises infinitives and participles (present or preterite [ $=$ perfect $]$ ). Infinitives should be tagged for finiteness (fI), tense ( $\mathrm{tPS}, \mathrm{tPT}, \mathrm{tU}$ ), voice ( $\mathrm{vA}, \mathrm{vR}, \mathrm{vU}$ ) and for the fact that they are inflected (inY). Participles should be tagged for finiteness ( fP ), tense ( $\mathrm{tPS}, \mathrm{tPT}, \mathrm{tU}$ ), voice ( vA , $\mathrm{vR}, \mathrm{vU}$ ), gender ( $\mathrm{gM}, \mathrm{gF}, \mathrm{gN}, \mathrm{gU}$ ), number ( $\mathrm{nS}, \mathrm{nP}, \mathrm{nU}$ ), case ( $\mathrm{cN}, \mathrm{cG}, \mathrm{cD}, \mathrm{cA}, \mathrm{cU}$ ), and for the fact that they are inflected (inY).
$\triangleright \quad$ This word class, too, is open. In includes infinitives (e.g. bann mun koma 'he will come'), participles (e.g. bann er kominn 'he has come') and supines (e.g. hann hefir komit 'he has come').

Morphologically, supines are annotated as perfect participles in accusative, singular, neuter.

### 2.6 Adverbs

Adverbs may be divided into two groups with regard to syntax. The majority are internal to sentences and function as adverbials within a sentence, i.e. as qualifiers to verbs or as attributes to adjectives or other adverbs. A smaller group, the interrogative adverbs, stand out by making the sentence interrogative.

### 2.6.I Adverbs (general)

General adverbs are tagged for their word class, xAV. Furthermore, they are tagged for degree ( $\mathrm{rP}, \mathrm{rC}, \mathrm{rS}, \mathrm{rU}$ ) and for the fact that they may be inflected (inY). Some adverbs compare, e.g. oft 'often' (oftar, oftast), while others do not, e.g. ekki 'no(-thing)', eigi 'not', hér 'here', nú 'now', paðan 'thence', pegar 'at once'. As with non-inflecting adjectives, all adverbs are tagged as inflecting, even if some do not compare (cf. ch. 2.2 comment 5). Ch .17 .3 below has a list of the most common non-comparing adverbs.

- This word class is open (new adverbs may be produced with the suffix -liga).
(44) Hann svaf ok hraut sterkliga.
'He slept and snored loudly.'
In the case of irregular (suppletive) adverbs e.g. vel - betr - bezt, we follow Ordbog over det norrøne prosasprog in counting vel as one lemma and betr as another (with the superlative form bezt). This applies to the following:

| Lemma 1 (positive) | Lemma 2 (comparative and superlative) |  |
| :--- | :--- | :--- |
| gjarna | beldr | (helzt) |
| illa | verr | $($ verst $)$ |
| litt | minnr | (minnst) |
| mjok | meirr | $($ mest $)$ |
| vel | betr | (bezt) |

Comment 1: We take $e i, e i g i$ and $e k k i$ as (negative) adverbs, e.g.
(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik.
'Lover, she said, I know for sure that you cannot carry me.'
The word ei can also have the meaning 'always' (= ́́). The word ekki, which is a neuter form of engi, can also be a pronoun: sá hann ekki til konungs 'he could see nothing of the king'. Cf. ch. 2.4.2 comment 8 above.

### 2.6.2 Interrogative Adverbs

Interrogative adverbs are tagged for their word class xAQ. Unlike general adverbs, they are not inflected for degree, and since they are not inflected for any other category, they will be tagged as non-inflecting, inN.

- This word class is closed and include hvar, hvárt, hvert, hvaðan, hversu, hvé/hve, hví and hvernig.

Interrogative adverbs appear both in main clauses, (12), and in indirect questions (i.e. in subordinate caluses), (45):
(12) Hví ertu einn kominn í Jotunheima?
'Why have you come alone to Jotunheim?'
(45) Kynligt pykkir mér, kvað hann, hví pú leitar ei rannsaks um slíkt.
'It seems strange to me, he said, why you do not seek an investigation into such things.'

### 2.7 Prepositions

Prepositions are tagged for their word class, xAP (adpositions), and for the fact that they have no inflection, inN. First of all, we have the simple prepositions.

- This word class is closed and includes á, af, austan, frá, handa, bjá, í, innan, jafngegnt, milli, millum, með, mót, móti, norðan, nér, of, ór, sunnan, til, um, umbverfis, umbverfum, undir, útan, vegna, vestan, við and $y$ fir (we take meðr as a variant of með, and $v i \partial r$ as a variant of $v i \partial)$.
(46) Mjok nǽr fjallinu lét einn konungr gera mikla borg.
'Very close to the mountain, a king had a great city built.'
A number of these prepositions can also be adverbs: norðan, austan, sunnan, vestan, innan, útan and jafngegnt, as shown in ch. 3.1 below. Norrøn ordbok has jafngengnt only as an adverb, but (47) indicates that it may also be considered a preposition:
(47) Pá málti konungrinn at hann skyldi yrkja um pat er skrifat var á tjaldinu jafngengt honum.
'Then the king said that he should write a poem about what was on the tapestry in front of him.'

In addition to the simple prepositions, there are two types of complex prepositions:
(a) Both elements are prepositions, e.g. íhjá, or the first element is a preposition and the second a vestigial form of a noun, e.g. í móti from mót n. 'a meeting'. Based on the syntactic analysis, we will annotate these nouns as prepositions also. This means that some inflectional forms of nouns are lexicalised as prepositions. The original nouns are mót n. 'a meeting', bak n. 'back', hqnd f. 'hand' and sqk f. 'sake'.

| ábak | á móti | ímeðal |
| :--- | :--- | :--- |
| áhendr | ásamt | ímilli |
| ábond | afhendi | ímillum |
| á meðal | à baki | ímót |
| á milli | ígegn | ímóti |
| ámillum | ígegnum | fyrirsakir |
| á mót | íhjá | tilhanda |

(b) The first element is a preposition, the second an adverb. In this type, we consider the second element an adverb even if it is part of a complex preposition; cf. the syntactic analysis in (130) in ch. 8.6.2 below. This type includes a group of adverbs ending in -an and also fram:
fyrir austan fyririnnan um fram
fyrir norðan
fyrir útan
fyrir sunnan
fyrir vestan
The words ending in -an are usually adverbs, but they can also function as prepositions when standing alone, as in (48):
(48) Nú var Desiré tíu vetr útan lands, svá at hann fór ekki heim pess á millum.
'Now, Desiré was abroad for ten winters, so that he did not return in the meantime.'

Here, these words must be classified as prepositions; cf. the list of homonyms in ch. 3.1 below.

Comment 1: According to The Menota Handbook (v. 2.0) ch. 8.5.10, prepositions may be tagged as xVP when in absolute use or as a qualifier to the verb (i.e. when they function as verbal particles). This, however, is a syntactic analysis, and does not need to be a part of the morphological annotation. Therefore, we tag them as normal prepositions.

Comment 2: According to The Menota Handbook (v. 2.0) ch. 8.5.10, the expletive particles of and um (in Eddic poetry) may be tagged as xEX, but there is no real reason to mark this use specifically. Were one to do that, the annotator should simply tag all absolute prepositions (i.e. when they have no object) as xVP , but this would require a great deal of disambiguation. So, in the morphological annotation, the expletive particles are prepositions, but in the syntactic analysis, they will be tagged as AUX (cf. ch. 7.2.1 d below). Note that of and $u m$ are also regular prepositions.

Comment 3: In the phrases um sið and um siðir 'eventually', we mark um as a preposition, and si$\partial(i r)$ as inflectional forms of the noun si $\partial \mathrm{f}$. 'later time'. Together, they form a preposition phrase similar to í dag 'today', um morguninn 'that morning', while combinations like til handa may, like prepositions, govern cases, as in til banda Knúti konungi (DG 8 II, ch. 22), and are consequently analysed as complex prepositions.

### 2.8 Conjunctions

Conjunctions are tagged for their word class, xCC , and for the fact that they have no inflection, inN. Conjunctions join words or phrases on the same syntactic level.

- This word class is closed and includes the simple conjunctions eða, elligar, en, enda, heldr, né and ok (note that some of these can also be members of other word classes, ch. 3.1 below).
(44) Hann svaf ok hraut sterkliga.
'He slept and snored loudly.'
Furthermore, there is a number of conjunctions which occur in pairs: béði-ok, hvárkiné, annathvárt - eða, annattveggja - eða, hvárki - eða, hvárt - ok (the last two pairs are rare). Norrøn ordbok lists annat hvárt as one lemma, written as two words, i.e. annarr hvárr, probably because both elements inflect. But this is also true of words like einnhverr and bvárrtveggi, except they are written apart. We therefore propose that annathvárt be the lemma.
$\triangleright \quad$ In addition to the simple conjunctions, there are also some that may stand alone, or as members of pairs: annathvárt, annattveggia, béði, hvárki and hvárt.

Comment 1: The words béði and hvárt will be classified as conjunctions when paired with ok or eða. They must therefore be distinguished from the determiners bádir and hvárr and the adverb hvárt:
(49) Ok hverr sem einn várra manna hefir oftsamliga sét pat ok gengit nár pví, báð́ nátr ok daga.
'And each one of our men has often seen it [the animal] and approached it, both by night and day.'

The syntactic analysis of (49) is shown in ch. 9.3 below.
Comment 2: The word né can be either a conjunction or a subjunction. Here it is a conjunction:
(50) Aldri skalt pú fá svívirðing né hróp né hatr af henni.
'You shall never receive disgrace nor shouts nor hatred from her.'

### 2.9 Subjunctions

Subjunctions are tagged for their word class, xCS , and for the fact that they have no inflection, inN. Subjunctions introduce dependent clauses and function as their head words. The relative particle er (and sem) belongs here. Note that the infinitive marker at
has its own word class, since it has a different syntactic function than the subjunctions (cf. ch. 2.10 below).

Some of the subjunctions are complex, e.g. fyrir pví, fyrir pví at, sakir pess at, svá at, pá er, póat,pvíat. In the morphological annotation, the final word (usually er or at) is tagged as a subjunction, so that it may introduce a dependent clause. The other words are tagged with their respective word classes, so that pá in pá er will be tagged as an adverb, $p v i ́$ in fyrir pví as a determiner (from sá), and fyrir in fyrir pví as a preposition. In sakir pess at, we will analyse sakir as a lexicalised preposition (from the noun sqk f.), governing the genitive pess, and at as a subjunction, like in fyrir pví at. The syntactic annotation is covered in ch. 10.3 below.

- This word class is closed and includes the simple subjunctions at, ádr, ef, en, er, meðan, né, nema, ok, sem, sỉðan, svá, svát, pegar, pegars, pó, pótt, pví, pvít and unz (note that most of these can also belong to other word classes, cf. ch. 3.1 below).
(51) Hon sagði at Baldr hafði par riðit. 'She said that Balder had ridden there.'

Four of the above are actually complex subjunctions, written as a single word, namely svát $=$ svá at, pegars $=$ pegar er, pótt $=$ pó at and pvít $=$ pvíat. We treat them in the same way as the simple subjunctions.

- Then, there are a number of complex subjunctions (although, as mentioned above, we only analyse the last element as a subjunction): fyrir pví, fyrir pví at, hvárt sem, sakir pess at, svá at, pá er, pá sem, pegar at, pegar er, pegar sem, pó at and pví at.

Sometimes, the last element, at or er, is missing, in which case the preceding word must be analysed as a subjunction. In (52), this applies to svá, which may be interpreted as a reduced form of sváat. Since at is absent, svá becomes the subjunction.
(52) Svá hvárki viðr komi knífr né sqx.
'So that neither a knife or shears are used.'
This often happens with pegar, which is why it is listed as both an adverb and a subjunction in ch. 3.1 below, in the same way as svá.

Comment 1: According to The Menota handbook (v. 2.0) ch. 8.5.14, the relative particle may optionally be tagged as xRP, but there is no good reason to separate the relative particle from the other subjunctions. Latin (and a number of other languages) has a relative pronoun, quis, which inflects, but the Old Norwegian relative particle is noninflecting, and should therefore not be considered a pronoun.

Comment 2: In Southern Norwegian manuscripts, en sometimes occurs as a subjunction (relative particle), and in a few cases, er is used in the same way as the conjunction en (Knudsen 1952: 15).

Comment 3: In AM $6194^{\circ}$ (the Old Norwegian Homily Book), an often occurs as a comparative subjunction, alongside en (Knudsen 1952: 17).

### 2.10 The Infinitive Marker

The infinitive marker at 'to' is tagged for its word class, xIT, and for the fact that it has no inflection, inN. As mentioned above, the infinitive marker has a different syntactic function from the subjunctions: It is an auxiliary word with the infinitive, while a subjunction is the head of a dependent clause. For this reason, we regard it as belonging to a word class of its own.

## 2.II Interjections

Interjections are tagged for their word class, xIT, and for the fact that they have no inflection, inN.
$\triangleright$ This word class is closed and small. Examples: óhó! vei!
Among the interjections, we also include the affirmative and negative words $j a$ ' 'yes', nei 'no' and jaur 'yes', even though Norrøn ordbok considers them to be adverbs.

In some cases $j a ́$ and nei can function as non-inflecting nouns. For example:
(53) En sá kveðr nei við hann.
'But he says no to him.'
Norrøn ordbok seems to take já and nei as adverbs in such cases, but we have chosen to interpret them as nouns.

## 2. 12 Numerals

Many grammars have a special word class for numerals, divided into cardinals and ordinals. As mentioned in chs. 2.2 and 2.4 above, we include cardinals among determiners and ordinals among adjectives. In addition, there are a few numeral nouns, namely tigr m . 'a ten', hundraə n. 'a hundred' and púsund f . 'a thousand', cf. ch. 2.1.1 above.

Note that numbers higher than 20 are complex and the separate parts will belong to different word classes. One example is the cardinal fjórir tigir 'forty', in which fjórir 'four' is a determiner and tigir is a noun (from tigr m. 'a ten'). Numerals like these may also be
modified, as in (54) below. In this example, the adjective halfr (in dative singular, holfum) indicates the half of the fourth decade, i.e. three tens + half of the fourth, or $30+5=35$.
(54) En pá er peir váru albúnir ór họfninni, pá fóru peir norðan fyrir Prjótshverfi holfum fórða tig skipa.
'But when they were ready to leave the harbour, they went north around Thrjotshverfi on thirty-five ships.'

When Roman numerals occur in the text, we use Arabic numerals as lemmas. Thus, " 2 " is the lemma for ".ij" in the text, " 100 " for ".c." (unless there is reason to assume that it is a "great hundred" $=$ " 120 "). These numerals are annotated as belonging to an unassigned word class, xUA , and as being non-inflecting, inN.

We only use Old Norwegian lemmas when actual words are used in the texts. Thus, "tveir" is the lemma for "tvá" and "tveim" etc., "brír" for "brír" and "brimr" etc. Inflecting numerals receive a complete morphological annotation.

## 3 Homonymy

When forms of two or more words are identical, it is called homonymy. It may take the form of homography, i.e. forms with identical written forms (mála 'say, speak' vs. méla 'measure'), or homophony, i.e. when forms sound alike (like gått vs. godt in many modern Norwegian dialects). The forms listed below are strictly speaking examples of homography, but we use the blanket term nevertheless.

We want to avoid homonymy whenever possible, but since in many cases it is difficult to draw the line, we have used Norrøn ordbok (5th ed. 2008) as a reference.

## 3.I Homonyms from Different Word Classes

A number of words are homonyms, but can be disambiguated because they are of a different word class, or, in the case of nouns, have different genders. Here, the word class or gender is sufficient to tell them apart. In the table below, we use the following abbreviations for word classes: adj. = adjective, adv. = adverb, conj. = conjunction, prep. $=$ preposition, pron. $=$ pronoun and subj. $=$ subjunction .

| word | class 1 | class 2 | class 3 | class 4 | class 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| á | noun f. 'river' | prep. 'on' |  |  |  |
| áðr | adv. 'before' | subj. 'before' |  |  |  |
| ár | noun f. 'oar' | noun n. 'year' <br> or 'beginning' <br> cf. ár I and ár | adv. 'early' |  |  |
| II |  |  |  |  |  |


| báðir | demonstrative 'both' | indef. pron. <br> 'both' | conj. in $b a ́ d i-o k$ |  |
| :---: | :---: | :---: | :---: | :---: |
| bak | noun n . 'back' | prep. 'behind' | adv. <br> 'behind' |  |
| beit | noun f . <br> 'pasture' | noun n. 'ship' |  |  |
| beita | noun f . 'bait' | verb 'handle' |  |  |
| brenna | noun f. 'pyre' | verb 'burn' cf. brenna I and brenna II |  |  |
| dauðr | noun m. 'death' | adj. 'dead' |  |  |
| ei | adv. 'always' | adv. 'not' |  |  |
| einn | quantifier 'one' | adj. 'the only' |  |  |
| eins | adv. 'only' | gen. sing. masc./neut. of einn |  |  |
| ekki | adv. 'not' | pron. 'none, nothing' | quantifier <br> (neut. sing. <br> of engi) | noun m. <br> 'sobbing' |
| elligar | adv. 'else' | conj. 'or' |  |  |
| en | conj. 'but' | subj. 'than' |  |  |
| enda | verb 'end' | conj. 'since' |  |  |
| engi | quantifier 'no one' | noun n . <br> 'meadow' |  |  |
| fasta | noun f. 'fast' | verb 'fast' | adv. 'immovably' |  |
| festa | verb 'fasten' | noun f . <br> 'resolve' |  |  |
| fjara | noun f. 'beach' | verb 'ebb' |  |  |
| fóstra | verb 'foster' | noun f . 'foster mother' |  |  |
| frýja | verb 'taunt' | noun $f$. 'reproach' |  |  |
| fyrri | adj. 'first' | adv. 'before' | (see also fyrr adv.) |  |
| ganga | verb 'go, walk' | noun $f$. 'walking, course' |  |  |




| mǽrr | adj. 'famous' | noun $m$. <br> 'mayor' <br> (French <br> maire) |  |  |
| :---: | :---: | :---: | :---: | :---: |
| né | conj. 'nor' | subj. 'nor' | adv. 'not' |  |
| nei | interjection 'no' | noun 'no' |  |  |
| nema | subj. 'unless' | verb 'take' |  |  |
| norðan | adv. 'from the north' | prep. 'north of' |  |  |
| norrǿna | verb 'translate into Norse' | noun $f$. <br> 'Norse' |  |  |
| nǽr | adv. 'near' | prep. 'near' | subj. 'when' |  |
| óðr | noun m. 'mind' | adj. 'frantic' |  |  |
| of | prep. 'over' | adv. 'too' |  |  |
| ok | conj. 'and' | subj. 'that' | adv. 'also' |  |
| ól | noun f . 'thong' | noun $n$. 'ogress' |  |  |
| púsa | verb 'marry' | noun f. 'wife' |  |  |
| (h)reinn | adj. 'clean' | noun m. 'deer' |  |  |
| renna | verb cf. renna I 'run' and renna II 'make run' | noun $f$. 'course' |  |  |
| réttr | adj. 'correct' | noun $m$. <br> 'right' |  |  |
| rø̊ða | verb 'speak' | noun f . <br> 'speech' |  |  |
| rø̊ði | noun $m$. <br> 'oarsman' | noun n . 'oar' |  |  |
| sá | demonstrative 'that one' | verb 'sow' |  |  |
| samr | quantifier 'same' | adjective 'same' |  |  |
| sjá | demonstrative 'this one' | verb 'see' |  |  |
| síd | adv. 'late' | noun f. only in $u m$ si $\partial^{\prime}$ 'at last' |  |  |





### 3.2 Homonyms of the Same Word Class or Same Gender

In addition to the homonyms that can be disambiguated by word class, there are many words that may not, since they belong to the same class. Nouns can be disambiguated if they have different gender, e.g. ár f. 'oar' and ár n. 'year'. However, when they have the same gender, they need to be disambiguated in some other way. In Norrøn ordbok, homonyms of this type are disambiguated by a Roman numeral, e.g. "á f. I" 'river' and "á f. II" 'ewe'.

In the annotation application, words disambiguated by Roman numerals in Norrøn ordbok, are tagged with an extra type attribute displaying the number of the dictionary in Arabic numerals. The two homonyms "á f. I" and "á f. II" will thus be tagged like this:

```
<w lemma="á" type="1" me:msa="xNC nS gF cN sI inY">á</w>
<w lemma="á" type="2" me:msa="xNC nS gF cN sI inY">á</w>
```

For some verbs, the disambiguation is done by way of inflectional class. One verb will typically have a weak inflection, "bera (að)", another a strong inflection, "bera (bar)". These homonyms will be encoded with 'weak' and 'strong' as values of the type attribute:

```
<w lemma="bera" type="weak" me:msa="xVB tPS fI vA inY">bera</w>
<w lemma="bera" type="strong" me:msa="xVB tPS fI vA inY">bera</w>
```

In ch. 17.1 below, we give a list of homonyms of the same word class or the same gender, based on a perusal of Norrøn ordbok (5th. ed. 2008).

## 4 Menotec and PROIEL encoding

## 4.I Background

In ch. 2, we have discussed the morphological schema developed in the Menotec project. It is based on the more general guidelines of The Menota Hanbook ch. 8, and has been adjusted on several point so as to be compatible with the morphological schema used by the proiel project. While the Menotec scheme is based on name tokens in the guidelines of the Text Encoding Initiative (Tei), the proiel scheme is closer to the eagles annotation scheme, in which the features of the morphosyntactic categories are specified in a single string of characters.

In this chapter we will give a comparison of the two schemes. Note that the proiel scheme has more categories and features than listed here, since it has been desigend for the encoding of several other languages (Greek, Latin, Armenian, Church Slavonic and Gothic). In the following, only categories relevant for Old Norwegian (and Old Norse in general) will be listed.

### 4.2 The Lemma

In both schemes, the lemma is given as a separate attribute, in which the citation form of the lemma is the value of the attribute. For example, the subjunction at 'that' has this encoding (disregarding the morphosyntactic categories):
<w lemma="at">at</w>

The orthography of the lemma is discussed in ch. 1.7 above, while the encoding of fully homonymous lemmata is discussed in ch. 3.2 above. Two (or more) fully homonynous lemmata are words which can not be distinguished by word class or by inflectional class. Ch. 17.1 below contains a list of such homonyms in Old Norse.

### 4.3 The Word Class

The number of and definition of word classes are for all practical purposes identical in the two projects. Below is a table comparing the two, set up in the same order as the table in ch. 1.1 and the enumeration in ch. 2 .

| Menotec Word Classes |  |
| :--- | :--- |
| xNC | noun, common |
| xNP | noun, proper |
| xAJ | adjective |
| xPE | pronoun, personal |
| xPR | pronoun, reflexive |
| xPQ | pronoun, interrogative |
| xPI | pronoun, indefinite |
| xDD | determiner, demonstrative |
| xDQ | determiner, quantifier |
| xDP | determiner, possessive |
| xVB | verb |
| xAV | adverb, general |
| xAQ | adverb, interrogative |
| xAP | preposition |
| xCC | conjunction |
| xCS | subjunction |
| xIM | infinitive marker |
| xIT | interjection |
| xUA | unassigned word class |
| xFW | foreign word |

## PROIEL Word Classes

Nb noun, common
Ne noun, proper
A- adjective
Pp pronoun, personal
Pk pronoun, reflexive
Pi pronoun, interrogative
Px pronoun, indefinite
Pd determiner, demonstrative
Py determiner, quantifier
Ps determiner, possessive
V- verb
Df adverb, general
Du adverb, interrogative
R- preposition
C- conjunction
G- subjunction
N - infinitive marker
I- interjection
X- unassigned
F- foreign word

In the Menotec scheme, the word class is always the first name token in the msa (morphosyntactic annotation) attribute, as exemplified below for the subjunction at. The next token, inN, specifies that this particuar word class has no inflection (see ch. 1.1 for these abbreviations):

```
<w lemma="at" me:msa="xCS inN">at</w>
```

Since the attribute msa is specific for Menotec encoding (i.e. it is not a part of the standard tei repertoire), it is prefigured with me to indicate that it belongs to the Menotec name space.

It would be a simple matter to change the Menotec encoding so that the word class was an attribute of its own, e.g. called me:wc or the like:
<w lemma="at" me:wc="xCS" me:msa="inN">at</w>

This encoding is basically the one defined in the xml export of the proiel project, in which these attributes are called lemma, part-of-speech and morphology respectively.

### 4.4 The Morphosyntactic categories

In the proiel scheme, morphosyntactic (or grammatical) categories are given in a specified sequence of ten categories for each word class. If a category is not relevant for a word class, it is represented by a hyphen. In comparison, the name token scheme of Menotec is less strict, but in order to make the two schemes fully compatible, the sequence of the proiel scheme has been adopted by Menotec.

No. Scheme Category Features
(I) Menotec Person PROIEL Person $1 \begin{array}{lllll}\text { x }\end{array}$
$\begin{array}{llccc}\text { (2) } & \text { Menotec } & \text { Number } & \mathrm{nS} & \mathrm{nP} \\ \mathrm{n} U \\ & \text { PROIEL } & \text { Number } & \mathrm{s} & \mathrm{p}\end{array} \mathrm{x}$
(3) Menotec Tense tPS tPT tU
PROIEL Tense p u x
(4) Menotec Mood mIN mSU mIP mU

|  | Finiteness |  |  |  |  | fF | fi | fP | fU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PROIEL | Mood | i | s | m | x | (\#) | n | p | y |

(5) Menotec Voice vA vR vU
PROIEL Voice a m x
(6) Menotec Gender gM gF $\mathrm{gN} \quad \mathrm{gU}$ PROIEL Gender m f n x
(7) Menotec Case cN cG cD cA cU
PROIEL Case $n \quad g \quad d \quad a \quad x$
(8) Menotec $\begin{array}{llllll}\text { Degree } & \text { rP } & \text { rC } & \mathrm{rS} & \mathrm{rU}\end{array}$
(9) Menotec Definiteness sI sD sU
PROIEL Strength s w t
(10) Menotec Inflection inY inN PROIEL Inflection i n
(\#) In the Menotec encoding, a verb is marked for finiteness, fF , if it is finite, i.e. inflected for tense, mood, person, number and voice. In the proiel encoding, there is no encoding for finiteness as such other than by way of the category mood. If a verb is encoded as having a mood other than infinitive or participle, it is by definition finite.

As discussed in ch. 1.5 above, there are several syncretic forms in Old Norwegian as in probably any other inflecting language. Among the most common forms of syncretism are (1) between all genders in genitive and dative plural of adjectives and determiners, (2) between accusative and dative of nouns (especially in the weak declensions) and (3) between indicative and subjunctive verb forms. As recommended in ch. 4.5.2 below, the first type of syncretism should be dealt with by using the unspecified feature, $\mathbf{g U}$ in the Menotec scheme and $\mathbf{x}$ in the proiel scheme. Almost all other types of syncretisms in Old Norwegian can be encoded with the following set of additional features (which are defined in the table on p .14 above):
$\begin{array}{clccc}\text { (4) } & \text { Menotec } & \text { Mood } & \text { mINSU } & \text { mINIM } \\ \text { PROIEL } & \text { Mood } & \mathrm{e} & \mathrm{f} & \mathrm{h} \text { h }\end{array}$
(6)

| Menotec | Gender | gMF | gMN | gFN | gMFN |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PROIEL | Gender | p | o | r | q |

(7)

| Menotec | Case | cAD | cGD | cAN | $c \mathrm{c}$ |
| :--- | :--- | :---: | :---: | :---: | :---: |
| PROIEL | Case | e | c | b | o |

### 4.5 Examples of morphosyntactic encoding

This chapter explains in practical details how words in various word classes are encoded in the Menotec scheme and the proiel scheme. The numbers $1-10$ refer to the categories and features listed in the previous subchapter.

### 4.5.I Nouns

Nouns are divided into common nouns ( xNC ) and proper nouns ( xNP ). All are encoded with the categories number, gender, case, strength (definiteness) and inflection, e.g. the form mann of maðr 'man':


Comment: Nouns in indefinite form, e.g. madr '(a) man', is encoded as sI (definiteness: indefinite) in Menotec and as s (strength: strong) in proiel, while nouns in definite form, e.g. maðrinn 'the man', is encoded as sD (definiteness: definite) in Menotec and as $\mathbf{w}$ (strength: weak) in proiel.

|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :---: | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $M$ | Óláfi | Óláfr | xNP |  | nS |  |  |  | gM | cD |  | sI | inY |
| P | Óláfi | Óláfr | Ne | - | s | - | - | - | m | d | - | s | i |

Comment: For some proper names, certain categories will be unassigned. For example, place names like Norðmandí may not have a specific gender, and this category will then be encoded as $\mathbf{g U}$ in the Menotec scheme and $\mathbf{x}$ in the proiel scheme. Furthermore, it is debatable whether it makes sense to encode proper names for number, but we recommend doing so in order to make the encoding of nouns, common and proper, as unified as possible. Also for this category, it is possible to encode it as $\mathbf{g U}$ in the Menotec scheme and $\mathbf{x}$ in the proiel scheme.

### 4.5.2 Adjectives

Adjectives (xAJ) are encoded with the categories number, gender, case, degree, strength (definiteness) and inflection, e.g. the form spok of spakr 'wise':

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :---: | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $M$ | spok | spakr | xAJ |  | nS |  |  |  | gF | cN | rP | sI | inY |
| P | spoqk | spakr | A- | - | s | - | - | - | f | n | p | s | i |

Comment: The word spgk is an indefinite (strong) form af the adjective, since it occurs without any determiner, e.g. spok kona '(a) wise woman'. This category is encoded as sI (definiteness: indefinite) in Menotec and as strength: strong) in proiel. The definite (weak) form of the adjective, e.g. in súbin spaka kona 'the wise woman', is encoded as sD (definiteness: definite) in Menotec and as $\mathbf{w}$ (strength: weak) in Proiel.

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $M$ | spakra | spakr | xAJ |  | nP |  |  |  | gU | cG | rP | sI | inY |
| P | spakra | spakr | A- | - | p | - | - | - | x | g | p | s | i |

Comment: In genitive and dative plural of adjectives (and also of determiners) it is not advisable to try and specify gender, since this distinction is never expressed in these cases in plural. As mentioned above, we therefore recommend encoding gender as unspecified, gU in the Menotec scheme and x in the proiel scheme.

### 4.5.3 Pronouns

Pronouns are subdivided into personal ( xPE ), reflexive ( xPR ), interrogative ( xPQ ) and indefinite ( xPI ). The number of categories varies between them, as shown below.

|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | oss | vér | xPE |  |  |  |  |  |  | cA |  |  | inY |
| P | oss | vér | Pp | - | - | - | - | - | - | a | - | - | i |
|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| M | sér | sik | xPR |  |  |  |  |  |  | cD |  |  | inY |
| P | sér | sik | Pk | - | - | - | - | - | - | d | - | - | i |



| word | lemma | class | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  | 9 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M bx́di | bádir | xPI |  | $n \mathrm{P}$ |  |  |  | gN | cN |  |  | Y |
| P bádi | báðir | Px |  | p |  |  |  | n | n |  |  |  |

### 4.5.4 Determiners

Determiners are subdivided into demonstratives (xDD), quantifiers ( xDQ ), and possessives (xDP). They are encoded for number, gender, case and inflection.

|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | peirri | sá | xDD |  | nS |  |  |  | gF | cD |  |  | inY |
| P | peirri | sá | Pd | - | s | - | - | - | f | d | - | - | i |
|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| M | qðru | annarr | xDQ |  | nS |  |  |  | gN | cD |  |  | inY |
| P | Qðru | annarr | Py | - | s | - | - | - | n | d | - | - | i |
|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| M | yðarn | yðvarr | xDP |  | nS |  |  |  | gM | cA |  |  | inY |
| P | yðarn | yðvarr | Ps | - | s | - | - | - | m | a | - | - | i |

### 4.5.5 Verbs

Verbs have different encoding depending on whether they are finite or infinite. In the Menotec scheme, this distinction is made by a separate category, finiteness, while in the proiel scheme, the categories finiteness and mood have been merged (as explained above). In practice, the encoding in the two schemes are compatible, as exemplified below.

Firstly, finite verbs are encoded for person, number, tense, mood/finiteness, voice and inflection. In the example below, the fourth position in the Menotec scheme contains two name tokens, fF for definiteness: finite and $\mathbf{m I N}$ for mood: indicative. This information is represented by the single $\mathbf{i}$ for indicative in the proiel scheme; an indicative form is by definition finite.

|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | gekk | ganga | xVB | p3 | nS | PT | fF | vA |  |  |  |  | inY |
|  |  |  |  |  |  |  | mIN |  |  |  |  |  |  |
| P | gekk | ganga | V- | 3 | s | u | i | a | - | - | - | - | i |

Secondly, infinitives are encoded for tense, mood/finiteness, voice and inflection. In the Menotec scheme, the position for mood/finiteness contains the name token fI for definiteness: infinitive, while in the proiel scheme this information is conveyed by the single character $\mathbf{n}$ for infinitive. This is the encoding of the infinitive bita 'bite':

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $M$ | bíta | bíta | xVB |  |  | tPS | fI | vA |  |  |  |  |
| inY |  |  |  |  |  |  |  |  |  |  |  |  |
| $P$ | bíta | bíta | V- | - | - | p | n | a | - | - | - | - |
| i |  |  |  |  |  |  |  |  |  |  |  |  |

Comment: There are in fact three verbs which have a preterite infinitive, skulu, munu and vilja (with the preterite infinitives skyldu, mundu and vildu), so it is necessary to encode the infinitives for tense.

Thirdly, participles are encoded for number, tense, mood/finiteness, voice, gender, case, definiteness and inflection. In the Menotec scheme, the position for mood/finiteness contains the name token $\mathbf{f P}$ for form: participle, while in the proiel scheme this information is conveyed by the single character $\mathbf{p}$ for participle.

|  | word lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | bítandi bíta | xVB |  | nS | tPS | fP | vA | gM | cN |  |  | inY |
| P | bítandi bíta | $\mathrm{V}-$ | - | s | p | p | a | m | n | - | - | i |

Comment: In the Old Norwegian sources, there are not many participles which are reflexive, i.e. the type kallandisk and kallazk, but since Old Norse grammars have this form, it seems advisable to include the category in the list.

The encoding for a perfect (past) participle is similar, only that the tense is different:

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | bítinn | bíta | xVB |  | nS | tPT | fP | vA | gM | cN |  |  | inY |
| P | bítinn | bíta | $\mathrm{V}-$ | - | s | i | p | a | m | n | - | - | i |

### 4.5.6 Adverbs

Adverbs are subdivided into general adverbs (xAV), which are encoded for degree and inflection, and interrogative adverbs ( xAQ ), which can not be inflected for degree and for this reason will be encoded as having no inflection, inN. Examples:

|  | word | lemma | class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | oftast | oft | xAV |  |  |  |  |  |  |  | rS |  | inY |
| P | oftast | oft | Df | - | - | - | - | - | - | - | $s$ | - | i |
|  | word | lemma | class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| M | eigi | eigi | xAV |  |  |  |  |  |  |  | rU |  | inY |
| P | eigi | eigi | Df | - | - | - | - | - | - | - | x | - | i |
|  | word | lemma | class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| M | hví | hví | xAQ |  |  |  |  |  |  |  |  |  | inN |
| P | hví | hví | Du | - | - | - | - | - | - | - | - | - | n |

Comment: Of the general adverbs (xAV), some can be inflected for degree, e.g. oft 'often' (note that we use - $f t$ - for - $p t$ - in the normalised orthography), while others can not, e.g. eigi 'not'. However, since the category inflection can only have one value in each class, it has to be inY for all general adverbs, and non-inflecting adverbs like eigi have to be encoded as having an unspecified degree, in Menotec $\mathbf{r} \mathbf{U}$ and in proiel x.

### 4.5.7 Prepositions

Prepositions (xAP) are never inflected, and are thus only encoded for the category of inflection, stating that they are non-inflecting, e.g. frá 'from':

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $M$ | frá | frá | xAP |  |  |  |  |  |  |  |  |  | inN |
| $P$ | frá | frá | R- | - | - | - | - | - | - | - | - | - | $n$ |

### 4.5.8 Conjunctions

Conjunctions (xCC) are not inflected, e.g. eða 'or':

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $M$ | eða | eða | xCC |  |  |  |  |  |  |  |  |  | inN |
| $P$ | eða | eða | C- | - | - | - | - | - | - | - | - | - | $n$ |

### 4.5.9 Subjunctions

Subjunctions ( xCS ) are not inflected, e.g. sem 'who, which, that':

|  | word | lemma class | l | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $M$ | er | er | xCS |  |  |  |  |  |  |  |  |  | inN |
| $P$ | er | er | G- | - | - | - | - | - | - | - | - | - | $n$ |

Comment: The relative particles er and sem are not inflected in Old Norwegian and are for that reason not classified as relative pronouns, as in e.g. Latin. They join the group of other subjunctions like at 'that' and ef 'if'.

### 4.5.IO Infinitive Marker

The infinitive marker at 'to' (xIM) is not inflected:

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $M$ | at | at | xIM |  |  |  |  |  |  |  |  |  |
| inN |  |  |  |  |  |  |  |  |  |  |  |  |
| P | at | at | $\mathrm{N}-$ | - | - | - | - | - | - | - | - | - |
| n |  |  |  |  |  |  |  |  |  |  |  |  |

### 4.5.I I Interjections

Interjections (xIT) are not inflected, e.g. vei 'woe':

|  | word | lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $M$ | vei | vei | xIT |  |  |  |  |  |  |  |  |  | inN |
| $P$ | vei | vei | I- | - | - | - | - | - | - | - | - | - | $n$ |

### 4.5.I2 Unassigned words

Some words can not be assigned to a specific word class. There may be several reasons for this, for example that a word is so corrupted that it is impossible to give a meaning to it, or that it is recognised as a word, but its meaning and word class are not known (this applies to some words in Old Norse poetry).

|  | word | lemma class | l | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $M$ | he | he | xUA |  |  |  |  |  |  |  |  |  |  |
| P | he | he | $\mathrm{X}-$ | - | - | - | - | - | - | - | - | - | - |

This is an example of how the corrupted word he can be encoded. See a discussion of this example in ch. 13.4 below.

### 4.5.13 Foreign words

Some words belong to another language. As discussed in ch. 1.6 above, these words will be tagged with the wordclass xFW and their native lemma, but with no additional morphological annotation. In the Old Norwegian material, Latin is the most frequent nonNordic language. It is usually straight-forward to specify the lemma based on a Latin dictionary.

|  | word lemma class | I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $M$ | patrem pater | xFW |  |  |  |  |  |  |  |  |  |  |
| P | patrem pater | $\mathrm{F}-$ | - | - | - | - | - | - | - | - | - | - |

This is an example of how the Latin word patrem (accusative singular of pater m. 'father') can be annotated. Note that while we do not recommend to specify additional morphological categories than the word class, a foreign word which constitutes a part of an Old Norwegian sentence, should be annotated syntactically with its function in the sentence (ch. 1.6 above).

## Part Two

Syntactic Annotation

## 5 Background for the Syntactic Annotation

These guidelines are based on a modified form of dependency analysis. This type of analysis has a long history, but in recent times, the foundation for modern dependency analysis was laid by Lucien Tesnière, in his Éléments de syntaxe structurale (1959). Dependency analysis has been used in Slavic studies more than other fields, and is discussed in Igor A. Mel'čuk's Dependency syntax: Theory and practice (1988), among others. Working from this basis, as well as relying on Guidelines for the Syntactic Annotation of Latin Treebanks (Bamman et al. 2007), the proiel project at the University of Oslo has developed its dependency method, published in PROIEL Guidelines for Annotation (Haug 2010). This is the model we apply to Old Norwegian in these guidelines.

Although dependency grammar has not been used much outside the field of Slavic studies, it has received more attention in recent years. This may be because dependency analysis offers a good compromise between a complete syntactic description and practicality. Since dependency analysis operates on the level of words in a sentence, it can be put to good use in work on large corpora. It has also proved useful in dealing with languages with relatively free word order. Old Norwegian is one such language.

A dependency tree may at first glance seem abstract, since it does not show the word order as it is the text. The trees on the next page show three ways of displaying a dependency analysis of the following sentence:
(55) Pá viti hann at sǫnnu at svá hefir konungr mált.
'Then he shall surely know that the king has spoken thus.'
The nucleus (or head, as we will refer to it) is the verb viti, present subjunctive of vita 'know'. It has as its dependents the subject hann and the two adverbials pá and at (which in turn has the dependent sqnnu), as well as the dependent clause at svá befir konungr mált. There, the subjunction at is the head, with the main verb mált as a dependent. The verb mált, has as its dependents the subject konungr, the auxiliary verb hefir and the adverbial svá. The word order on each level is arbitrary; pá might just as well have been the first dependent under viti.

Free word order presents no problems for the dependency analysis, since it does not rely on the actual word order, i.e. the presentation is what is called "unsorted" in the application. But since words are indexed in the analysis, one can set up the dependency tree so as to follow the word order, "sorted by linearisation" (aka jellyfish diagram). The last arrangement in (55) is an example of this. In the application, both types can be used

(55) Three types of presentation. Top: unsorted from the annotation application. Middle: our unsorted arrangement with normalised text. Bottom: sorted from the application.
to display analysed sentences, but the dependency tree, topmost in (55), is the most commonly used. When dealing with complicated sentences, the branches will unavoidably get tangled up when displaying the correct word order. This is a known problem in all phrase structure analysis, and may be an argument for a method of analysis and display that does not rely on word order.

All examples in these guidelines are presented without regard for word order, as shown in the middle diagram in (55). We have not used the application to produce examples, but rather sketched them ourselves, so that there may be some differences between our examples and what may be found in the database itself. These differences should only be superficial, e.g. an AUX may be placed to the left of a SUB or vice versa. We have chosen to normalise the spelling in the examples and provide an English translation. All the examples are collected in ch. 16 below.

There are several variants of dependency analysis (see more on this topic in Nivre 2005: 1-3). The type we use in these guidelines deviates from classical dependency analysis in some respects. The following are the most important identifying features of the method we use:

1. A sentence is analysed as consisting of a head with dependents, where the main verb (PRED) is usually dependent on the sentence's root. In the analysis, this is shown with branches from the head to its dependents, the head always being placed above its dependents. In many models, the branches are shown as arrows pointing from head to dependent, as in the uppermost part of (55).
2. Between the head and a dependent, there is a syntactic relation, corresponding to syntactic functions like SUB (subject), OBJ (object), ADV (adverbial), ATR (attribute) etc. In the analysis, this is show with tags between the head and the dependent. The relations will be discussed in ch. 7 below and summarised in the table in ch. 15.
3. A head may have more than one dependent. For example, the main verb may have a SUB (subject), an OBJ (object), an ADV (adverbial) and an AUX (auxiliary).
4. In coordination, the conjunction is taken as the head, with each coordinated word or phrase dependent on it.
5. A dependent has only one parent in the sentence. The analysis does not include phrasal nodes like NP (noun phrase), PP (preposition phrase) and such. There are only two cases in which there may be empty nodes in the analysis: when a conjunction is missing (asyndetic coordination) or when a main verb is missing (ellipsis).
6. In addition to the primary dependencies, some words may have secondary dependencies. This applies to the relationship between a subject (SUB) and a predicative (XOBJ). This is shown with a dashed line (a slash) pointing from the secondary dependent to its head (typically the subject).

The first four points are common to most types of dependency analysis, while points 5 and 6 are special. Classical dependency analysis does not have empty nodes or secondary dependencies. With regard to these points, our analysis is more similar to methods like Lexical Functional Grammar (LFG), which makes it easier to convert from one to the other.

Since the dependency analysis does not reproduce word order, the annotator may proceed rather freely when analysing sentences. When the head verb has been identified, one can just as easily continue to the object as to the subject.

Some of the Old Norwegian (and many of the Old Icelandic) texts include a mixture of prose and poetry, first and foremost the Kings' sagas, but also some of the Sagas of the Icelanders. The poems are inserted into the prose, often in the form of skaldic dróttkvátt stanzas. In the Menotec corpus, poetry occurs in the legendary Óláfs saga ins helga in DG 8 II, which includes over 60 stanzas of poetry. These stanzas can be rather complex, often having inserted and discontinuous phrases. In our experience, dependency analysis is particularly well suited for this type of construction.

## 6 Word and Sentence Boundaries

## 6.I Sentence Division

## 6.I.I Prose

In many Old Norwegian manuscripts, and perhaps especially in diplomas, dividing the text into suitable sentences can be difficult. Sentences are commonly coordinated with the conjunctions ok or en, and the annotator must then sometimes choose between analysing each sentence separately or annotating a relatively long string of sentences. In the former case, the sentences may become too short, and in the latter, they may become so long that the annotator loses oversight. The following is a fairly typical example. Dropped subjects are shown in square brackets and the highest level of sentence division is indicated by two vertical lines (with the verbs in bold), while the lower level divisions are shown with one vertical line:
(56) Hann var oft lengi í konungs hirð || ok [hann] unni mjok konungs dóttur || ok oftsamliga rǿddi [hann] við hana | at hon skyldi játta honum ástarpokka sinn | bví at hann var vaskr maðr ok hinn kurteisasti || ok konungr lofaði hann mjok || ok var [hann] honum hinn kárasti.
'He was often a long time at the king's court || and [he] loved the king's daughter very much || and [he] often said to her | that she should give him her love | because he was a valiant man and most courteous, || and the king praised him highly || and [he, i.e. the young man] was most dear to him.'

As a rule of thumb, we suggest that coordinated sentences be split up if each has both a subject and a finite verb. Thus, we can split (56) into two strings of sentences:
(56a) Hann var oft lengi í konungs hirð || ok [hann] unni mjok konungs dóttur || ok oftsamliga rǿddi [hann] við hana | at hon skyldi játta honum ástarpokka sinn | bví at hann var vaskr madr ok hinn kurteisasti.
(56b) ok konungr lofaði hann mjǫk || ok var [hann] honum hinn kárasti.
The first sentence string will then be 33 words, which is a relatively high number, but manageable. (56a) is analysed in ch. 9.2 below.

When the coordinated sentences are short and closely connected, it is tempting to analyse them as a single sentence. An example of this are the two sentences in (57):
(57) Hann skal vera huggan hennar || ok skal hon kalla hann Jonet.
'He will be her comfort $\|$ and she shall call him Jonet.'
We nevertheless recommend that each sentence be analysed separately, even if they turn out to be relatively short. It has proven difficult to draw the line between adjacent sentences and more independent ones. Therefore, we have chosen to follow the fairly cut and dried rule that coordinated sentences should be analysed separately if each has its own subject and finite verb, as in (57) above. See also the discussion in ch. 7.3.4 below.

In exceptional cases, sentences are so closely connected, both semantically and stylistically, that it is fitting that they be analysed as one sentence. (58), the first sentence of "Geitarlauf", is such an example:
(58) Bretar kalla Gotulæf, $\|$ en vér kollum Geitarlauf.
'The British call [it] Gotulæf, but we call [it] Geitarlauf.'
We think that it would be unnatural to separate these sentences. But we nevertheless stress the main rule, namely that when a sentence contains both a subject and a finite verb, it should be regarded as a complete sentence. To be sure, a subject is not required in all sentences, since an important group of verbs do not take a subject. Thus, sentence (59) is a complete sentence, in which the verb mislika takes the oblique subject honum, but no subject in the nominative. Oblique subjects are discussed in ch. 7.3.3 below.
(59) Ok mislíkaði honum mjok.
'And he was very displeased.'
It is a feature of Old Norwegian that the subject can be dropped, not only when the verb (like pykkja, sýnast, langa etc.) does not require a nominative subject, or when it has been elided in coordination, but because it is not being emphasised in the sentence (as in merkja skal dróttinsvikann '[one] shall mark the traitor').

Many sentences have more than one conjunction. In the dependency analysis, these can not be on the same level. One of them has to be analysed as the primary conjunction, i.e. then one which marks the most important boundary in a series of sentences. This is discussed in more detail in ch. 9.2 below.

We can not give an upper limit for the length of a sentence. If the subject matter is diverse enough, it may be sensible to use discretion and split the sentence:
(60) Pá hǫfum vér skóa á fótum ef vér bjǫrgum oss í verkum með dómum liðinna feðra við freistni fjánda ok vándra manna svá sem skór hlífa fótum við byrni ok við ormum. || Pví at oss eru til bess sýnd dǿmi heilagra feðra ór heimi liðinna at vér megim batna af peim í eftirlíkingu góðra verka pá er vér sjám hverja dýrð réttlátir menn hǫfðu fyrir erfiði sitt.
'Then we have shoes on our feet if we save ourselves by following the examples of our departed fathers to guard against the temptations of demons and evil men just
as shoes guard our feet against thorns and words. || Because we are shown the examples of holy departed fathers so that we may improve ourselves by imitating good words when we see the glory that righteous men receive for their toil.'

The double lines mark the split. True enough, the second sentence opens with the subjunction pví at and should under normal circumstances depend on a parent clause. But since the subject matter of the two sentences is only loosely connected, not much is gained by analysing them as one. The first sentence is about how shoes guard our feet, while the second is about how God has given us examples to follow.

From time to time we see very long sentences which simply can not be split. The following 113 word long collection of vices, with a preposition phrase for each one, is from the Old Norwegian Homily Book:
(61) Sjá við manndrápi ok við hórdómi, við stuldum, við skrǫkvitnum, við meineiðum, við ráni, við rǫngum dómi, við svikum, við ofmetnaði, við ofdrykkju, við ofprýði, við ofsínku, við fégirnd, við mútufé, við gulls leigu eða silfrs, við kvennsemi, við víkingu, við qfund, við hatri, við lygi, við lausung, við bakmǽlgi, við háðsemi, við rógi, við morði, við údáðum, við misjafnaði, við fordǽðuskap, við goldrum, við gerningum, við mikillǽti, við róggirni, við bọlvan, við gauð, við hólni, við fjándskap, við úgrandveri, við frýgirni, við tortrygð, við ofgeytlan, við ofdeildum, við ofkappi, við ofprá, við tunguskǿð̇i, við ofbráði, við ofsennu, við ofinndǽli, við kválni, við ofkǽti, við ofhlátri, við ábersemi, við úhlýðni, við flǽrðum qllum.
'Beware of man-slaughter, of adultery, of theft, of false witnesses, of perjury, of robbery, of wrong judgement, of fraud, of arrogance, of excessive drinking, of pride, of selfishness, of avarice, of bribery, of rent of gold or silver, of lasciviousness, of piracy, of envy, of hatred, of lying, of loose life, of backtalking, of mockery, of slander, of murder, of misdeeds, of inequality, of sorcery, of magic, of witchcraft, of arrogance, of slanderousness, of curses, of cowardice, of boasting, of animosity, of dishonesty, of taunting, of suspicion, of wastefulness, of quarrelling, of stubbornness, of lust, of defamation, of wrath, of bickering, of luxury, of cruelty, of delight, of immoderate laughter, of recrimination, of disobedience, of every deceit.'

To be sure, the syntactic structure is very simple: sjá is PRED, under which the conjunction ok ties together the 53 preposition phrases introduced by við. For obvious reasons we will not provide an illustration.

### 6.1. 2 Poetry

Sentence division in prose texts need not be particularly difficult if our cut and dried rules are followed, whereas divisions in poetry are a bit of a challenge. In the Old Norwegian texts, this means skaldic verses (no Eddic material survives in Old Norwegian
sources), most of which are found in the legendary Óláfs saga ins helga (DG 8 II). It contains 63 stanzas, mostly in the intricate dróttkvátt meter.

$\begin{array}{ll}\text { (62) } \begin{array}{ll}\text { Rétt er at sókn en sétta } \\ \text { (snarr pengill vann Englum }\end{array} & \begin{array}{ll}\text { 'It is true that the sixth attack } \\ \text { (a swift king fought the English) }\end{array} \\ \text { at) par er Óláfr sótti } & \text { [was] when Olaf made } \\ \text { (Yggs) Lundúna bryggjum. } & \text { against London's bridges.' }\end{array}$

Traditionally, the syntactic unit in skaldic verse is a half stanza. Since most halves contain more than one clause (often intertwined), but clauses never cross the middle of a stanza, we choose to take each half stanza as a sentence when annotating syntactically. An empty conjunction must often be added to connect sentences. Example (62) above is the first half of st. 6 of Sigvat Thordsson's Vikingarvisur, which survives in DG 8 II and a
number of other manuscripts. This first half contains two sentences, one inserted into the other (this is known as stál). In (62), the inserted clause is displayed in parentheses, as is often the case in printed editions. Furthermore, the inserted clauses is split into snarr pengil vann Englum at and Yggs. Stál is particularly problematic in the syntactic annotation, because it is unwise to split the half stanza into two (or more) sentences and analyse them separately. The topmost line of figure 6:1 shows the word order in the half stanza and the line below shows a more "normal" word order.


Figure 6:1. Poetic and prose word order in Víkingarvísur, st. 6, cf. example (62).

When dealing with stál, it is not always apparent which sentence is the primary one, but we consider the inserted stál to be secondary. The standard editions may be of help, as they usually print the stál in parentheses. In our first round of work on the corpus, we chose to append the stál to the main sentence using an empty conjunction. But now we recommend analysing the stál as PARPRED, as shown in the tree diagram on the previous page.

In exceptional cases, the sentences in the first half stanza are not intertwined, as in (63), the second half of st. 6 of Vikingarvisur (see teh diagram on the next page). We also analyse these sentences as one, to make the annotation of poetry consistent.

In this point, we ignore our own advice in ch. 6.1.1, where we say that each coordinated sentence should be analysed separately. The skaldic verses are, in our opinion, different enough a type of text to warrant analysing each half stanza as a syntactic unit. The rhyme scheme also shows that each half is a self-contained unit, as it pairs up the lines in the half stanza.

We emphasise that what we have said about analysing skaldic verse is only tentative. It is a genre of poetry which departs sharply from the Old Norwegian prose. Nevertheless, the dependency analysis is well fitted to annotate such complex structures.

(63) Sverð bitu vǫlsk, en vǫrðu víkingar par díki, átti sumt í sléttu Súðvirki lið búðir.
'French swords cut but Vikings defended a ditch; some of them were camped in the level fort Sudvirki.'

Note that this stanza has a number of variant readings in the manuscripts. We have followed the text in DG 8 II and normalised the spelling.

## 6.I. 3 Whole and Partial Replies

Replies are often introduced by expressions like "hann sagði", "hann svaraði", "hann mélti", as in (64) below. If the reply is a whole clause, we analyse it separately, as illustrated on the next page. In some cases, like in (65) below, the reply may seem integral to the sentence, and is sometimes called a partial (or half) reply. However, we also recommend splitting the sentences here; in (65) after the verb méla. What is special about this example is that the reply ef guð vill at gerisk gagn 'if God wants it to be of use' is not a complete sentence; we must posit some underlying phrase like '[It may happen] if God wants it to be of use'. The second clause in (65) must then open with an empty verbal node.


(64) Pá svaraði Rani. || Eigi félltu, herra.
'Then Rani replied: || You did not fall, my lord.'
(65) Konungrinn hló at ok mǽlti, || ef guð vill at gerisk gagn.
'The king laughed at this and said, || if God wants this to be of use.'

In a normalised text, we would add quotation marks:
Konungrinn hló at ok mǽlti, "ef guð vill at gerisk gagn."
In a translation, we could even make the dependent clause independent:
The king laughed and said: "May God grant that this be of use."

### 6.2 Word Boundaries

### 6.2.I Words Written Together or Separately

In the xml texts from Menota, each word is contained in a word element, <w>...</w>. This ordering is sometimes different from what we find in the manuscripts. Sometimes, two or more words are written as one, e.g. a preposition + object are combined, like "ilande" for " $i$ landi". In the xmL encoding, this is done in the following way:
<seg type="nb"><w lemma="i">i</w><w lemma="land">lande</w></seg>
Each word is wrapped in a <w>-element with the lemma form as an attribute. At the same time, they are included together in a <seg>-element with the type attribute $n b$ 'no break', which tells us that they occur without a space between. This ensures that the word can be displayed correctly in a diplomatic rendering, i.e. as "ilande".

It also happens that complex words are split in the text, i.e. "veiði maðr" for "veiðimaðr"
<w lemma="veiðimaðr">veiði maðr</w></seg>
Since complex and separate words are handled in this way, the annotation should present no problem. In the case of "ilande", the two words will be annotated separately, while "veiði maðr" will appear as one word in the annotation.

During the annotation, one may also wish to combine or split up words. So far, this has not come up often in the texts imported from Gammalnorsk Ordboksverk, such as Strengleikar in DG 4-7, and the legendary Óláfs saga ins helga in DG 8 II. But in the texts transcribed from scratch, this may happen more often. We see examples of this in the legal texts in Holm perg $344^{\circ}$.

We use the following dictionaries as guides for splitting up and combining words: Norrøn ordbok by Simensen et al., Fritzner's Ordbog over det gamle norske Sprog and Ordbog over det norrøne prosasprog (ONP). In case of disagreement, we follow Norrøn ordbok.

### 6.2.2 Enclitics

There are three main types of enclitics in Old Norwegian:

1. Noun + definite article, maðr $+i n n \rightarrow$ maðrinn 'the man'
2. Verb + reflexive pronoun, kalla $+s k \rightarrow$ kallask 'to be called'
3. Verb + personal pronoun, munt pú $\rightarrow$ muntu 'will you'

We consider the two first types to be inflectional forms of the noun or verb. Thus, there is no need to split the words as specified in ch. 6.2.1 above.

The third type has to be split, however, since the syntactic annotation requires that the verb and the subject are separate words. In addition to personal pronouns, this type also includes negative particles, i.e. erat $=$ er at 'is not'. In rare cases, both subtypes are combined, i.e. vilkat $=$ vilek at 'I do not want'.

In the encoded texts, such words are typically gathered in one $<w\rangle$-element, but for the purposes of the syntactic annotation, we must split them up into two <w>-elements (which in turn are gathered using the <seg>-element with the attribute $n b$ (no break)). This may be done within the annotation application, or when preparing the texts for import. In either case, the encoding will have the following structure:
<seg type="nb"><w>vil</w><w>k</w></seg>
In this example, vil will be tagged as PRED and (e)k as SUB.
In some cases, the words can be split unproblematically, as in the case of erat $=$ er at. But often, an assimilation has occurred between the stem and the pronoun, e.g. munt pú > munttu > muntu. In such cases, we render the verb as complete as possible (unless an consonantal assimilation is involved), with the pronoun getting whatever is left:

```
mundak = munda k (i.e. munda ek)
megak = mega k (i.e. mega ek)
baf\partialak = baf\partiala k (i.e. baf\partiala ek)
emk =em k (i.e. em ek)
bykk=byk k (i.e. bygg ek)
```

```
muntu \(=m u n\) tu (i.e. munt pú)
```

muntu $=m u n$ tu (i.e. munt pú)
fórtu $=$ fór $t u$ (i.e. fórt pú)
fórtu $=$ fór $t u$ (i.e. fórt pú)
láttu $=$ lát tu (i.e. lát pú)
láttu $=$ lát tu (i.e. lát pú)
hjóttu $=$ bjót tu (i.e. bjótt pú)
hjóttu $=$ bjót tu (i.e. bjótt pú)
kenndu $=$ kenn $d u$ (i.e. kenn pú)
kenndu $=$ kenn $d u$ (i.e. kenn pú)
farəu = far $\partial u$ (i.e. far pú)
farəu = far $\partial u$ (i.e. far pú)
$\operatorname{ger} \partial u=g e r \partial u$ (i.e. ger pú)

```
\(\operatorname{ger} \partial u=g e r \partial u\) (i.e. ger pú)
```

We do the same in the case of the negative particles -a, -at and $-t$ :

```
era \(=\) er a 'is not' skalat \(=\) skal at 'shall not'
erat \(=\) er at 'is not' \(\quad\) bárut \(=\) báru \(t\) 'did not bear'
```

In some cases, the enclisis includes both pronoun and negation, as in vilkat $=$ vilkat, i.e. vil ek at 'I do not want', or even bjargigak = bjarg ig a k, i.e. bjarga ek a ek 'I do not save’ (Hávamál st. 152). Each of these words will then get its own <w>-element and its own syntactic analysis, while they are all gathered together within one <seg>-element.

An enclitic will sometimes occur in combination with a full pronoun, e.g. vilk ek 'I [I] want'. We then take the enclitic pronoun as the primary word and the full pronoun as an apposition with it. In the example of bjargigak, the first pronoun, ig, becomes the primary pronoun, and is tagged as SUB, while the latter, $k$, is an apposition to $i g$.

The reason why we have chosen to split these types of enclitic words is that verb + subject on one hand and verb + negation on the other have such different syntactic functions that they must be split for us to be able to analyse them properly. Definite nouns, e.g. maðr $+i n n$, and reflexive verbs, e.g. kalla $+s k=$ kallask, may also be considered a type of enclisis, but the syntactic analysis does not demand that they be split up.

When annotating an enclitic construction, one can split the verb and the enclitic pronoun in the annotation application (see ch. 6.2.1. above). This entails that in the morphological and syntactic analysis, one annotates two words, a verb and a pronoun, but the text itself will still show only one word. Thus, in (64), féltu is an enclitic form of the verb falla (2. pers. sing. pret.) and the pronoun pú.

(64) (Pá svaraði Rani:) Eigi félltu, herra.
'(Then Rani replied:) You did not fall, my lord.'

When normalising the enclitic pronoun, we use the standard lemma forms, in this case $p u$ instead of $t u$.

### 6.3 Chapter Headings

Many manuscripts have titles for individual sections of the text. These often appear as rubrics that are placed in between sections, as shown below. This is an excerpt from The Older Gulathing Law, where the title is written in red: Báðir máltu petta um kirkjur 'Both stated this about the churches'.


Figure 6:2. Copenhagen, The Royal Library, DonVar $1374^{\circ}$, fol. 7r, 1. 5-14.
The line between a title and an introductory sentence is not sharply drawn, and may appear in different ways in the texts that are to be annotated.

Sometimes, the title (or introductory sentence) can stand alone, as for example in the introduction to the collection of miracle stories about Saint Olaf in the Old Norwegian Homily Book. It is therefore annotated like other complete sentences:


hér frá
OBL
jartegnum
ATR

(66) Hér segir frá jartegnum hins helga Óláfs konungs.
'Here, the miracles of the holy king Olaf are related.'

In most cases the title is just a single phrase, often a noun phrase or a preposition phrase. We then assume an empty verbal node, on which to hang the phrase. We handle titles that are only a number in the same way. This type occurs often in the collection of miracles in the Old Norwegian Homily Book (see next page).


In (67), we assume that the empty verbal node has the function of a verb with a meaning like 'tell, say' (i.e. a verbum dicendi), and that the phrase um bitt sama mál thus should be analysed as an OBL. In (68) we have less to work on, so we assume that the number .v. is the subject, [Chapter] 5 [is here].

## 7 Functions

This chapter goes through all the functions used in our version of the dependency analysis, and which the annotators will find in the annotation application's menu. We will discuss all of them, even the ones which we for various reasons do not wish to use in the annotation of Old Norwegian. Most of the functions are familiar from traditional syntax and are used largely in accordance with it. Some, however, are different and must be studied carefully. More than others, this applies to auxiliary words (AUX), complements (COMP), external objects (XOBJ) and external adverbials (XADV).

In every full sentence, the predicate (PRED) is the central element on which other words depend. This perspective is known from valency grammar, for instance, and fits well with Old Norwegian (and many other languages), where the predicate is obligatory, but not the subject or other noun phrases. PRED is usually directly dependent on the root, which also applies to the parenthetic predicate (PARPRED) and vocative (VOC).

The function AUX stands apart, being for the most part defined negatively. It is an auxiliary word which belongs to its parent, be it a word or a whole sentence. Included in this category are auxiliary verbs, particles and negation adverbs, as well as introductory conjunctions.

The remaining functions fall into two groups: arguments and adjuncts.
Arguments are words that are joined with the predicate in fixed phrases or are dependent on it. In our analysis, subjects (SUB), objects (OBJ), obliques (OBL), complements (COMP), external objects (XOBJ) and nominal arguments (NARG) are considered arguments. Arguments may also depend on adjectives and prepositions. Thus, a preposition's object is usually an oblique (OBL).

Adjuncts are freer than arguments and can often be deleted without the sentence changing its basic meaning. We consider adverbials (ADV), attributes (ATR), appositions (APOS), external adverbials (XADV) and partitives (PART) to be adjuncts.

The difference between arguments and adjuncts may perhaps most clearly be seen in the case of adverbial phrases. When they take part in fixed constructions with the verb, e.g. when expressing a source or a target, we analyse them as obliques (OBL), but when they are used more freely, e.g. when expressing time, place or manner, we count them as adverbials (ADV). A similar distinction is made between direct accusative objects (OBJ) and indirect dative or genitive objects (OBL).

In addition to these, we have at our disposal a number of so-called superfunctions, to be used when the annotator is unable to decide which function should apply. For
example, we try to distinguish restrictive relative clauses from non-restrictive ones (ATR and APOS, respectively). When in doubt, the annotator may use the superfunction REL, which covers both functions. However, we try to avoid using the superfunctions as much as possible. The five superfunctions are ARG, PER, NONSUB, ADNOM and REL.

Finally, there are two secondary functions XSUB, and PID, that are automatically assigned by the annotation application.

## 7.I Root Functions

Root functions are most commonly found directly under the root in the analysis. They may be said to assign roles to other phrases in the sentence, most importantly, to the arguments.

## 7.I.I PRED

The predicate (PRED) is the primary function in each sentence. Most often, it is the head verb:

(69) En ekki átti hann fleira barna. 'But he had no other children.'

In the analysis of (69), we see that the introductory conjunction en is tagged as AUX (in accordance with ch. 7.2.1. f below), and so is the negative adverb ekki (ch. 7.2.1 e). As for the object (OBJ), the accusative fleira is the head word, not the attributive genitive barna. Note that the subject (SUB) and the object (OBJ) are on the same level in the annotation, as dependents on the predicate átti.

In the trees, conjunctions are placed within a rhombus to underline their special syntactic features (see more about this convention on p .123 below).

Auxiliary verbs are tagged as AUX, whether they are of the type bafa, geta, fá + past participle or the type munu, skulu, mega, vilja + infinitive. Thus, mun is AUX and lifa is PRED, in (70):

(70) Pá mun faðir minn jafnan lifa með harmi ok hugsótt.
'Then, my father will always live in grief and sorrow.'
A consequence of this analysis is that some sentences will have more than one AUX, as in (71):

(71) Aldrigi munt pú slíkan stein sét hafa.
'You will never have seen such a stone.'

The same applies in (72), where we have two modal auxiliaries, skyldi and mega. Both should be tagged as AUX:

(72) Hon lét af sér falla skikkju sína, at hon skyldi mega gløggliga sýnask.
'She took off her cloak, so that she could be seen clearly.'

Note that no other node may depend on an AUX. In some cases, one might want to make an ADV modify the auxiliary verb (root modal), but it must depend on the nonfinite PRED. Accordingly, gløggliga could not depend on skyldi or mega in (72) above.

Dependent clauses introduced by the subjunction at will often be nominal clauses, in which case they are tagged as COMP, but in (72) the at-clause expresses purpose and is therefore and ADV. The analysis of sentences with the verb láta is discussed in detail in ch. 7.3.4 below, in examples (46) and (102).

In sentences with coordinated head verbs, the conjunction will be tagged as the highest level PRED, e.g. ok in (73):
(73) Rann drykkrinn ór ok dreifðisk víða um fjallit.
'The drink spilled out and spread all over the mountain.'

The coordinated verbs are also PRED, one level below the conjunction. The analysis is discussed in greater detail in ch. 9.2 below, pp. 123-124.

In subordinate clauses, the PRED is directly dependent on the subjunction, as the subjunction introduces and provides the dependent clause with a head. Thus, in (55), mált is a PRED in the dependent clause at svá hefir konungr mált:

(55) Pá viti hann at sq̣nu at svá hefir konungr mált.
'Then he shall surely know that the king has spoken thus.'
In sentences without a verb, one must provide an empty verb. This is discussed in ch. 13 below, as well in the context of comparative constructions in ch. 10.6. It should be stressed that we try to avoid introducing empty verbs. This should only be done in the case of copulas or a verb that can clearly be understood from the context, as in (74):

(74) Ein man Ásta hvíla sér í nátt, sagði hann, ok svá skulu vér [hvíla] [oss].
'Asta will sleep alone tonight, he said, and so shall we [sleep].'

In (74), the second clause has an implicit PRED hvila, and we therefore must slash from the empty verb to bvila in the preceding clause. When one slashes from a null-verb to an explicit verb, the relation is automatically tagged as PID by the application (cf. ch. 7.6.2 below). The function PARPRED is discussed in the next chapter.

Comment: When writing these guidelines, we originally considered a different solution for modal auxiliaries, i.e. of the type skulu, mega, vilja + infinitive (possibly also типи + infinitive). Since some adverbs are more closely connected to the auxiliary verb (root modality) than the head verb, one might prefer an analysis where the auxiliary verb is a PRED, and the infinitive an XOBJ (not PRED), in which case one must slash from the XOBJ to the SUB. We have chosen the simpler of the two analyses, with all auxiliaries marked as AUX.

## 7.I. 2 PARPRED

A parenthetical predicate (PARPRED) is a predicate in interpolated clauses of the type sagði hann 'said he'. They are common in Old Norwegian texts that have dialogue, e.g.:

(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik.
'Lover, she said, I know for sure that you cannot carry me.'

Less common are independent interpolated clauses, as in (75) from the Old Norwegian Homily Book, analysed on the next page. Typically, we mark them with dashes (or parentheses) in the normalised text. It appears that this first occurred in learned style (note that the sentence opens with a Latin word).

(75) Egressus af hǽstum himni í kvið meyjarinnar - pess var á milli prír ok prírtigir vetr - af krossinum í grofina.
'Having stepped down from the highest heaven into the virgin's womb - between these [events] there were thirty-three winters - from the cross to the grave.'

## 7.I. 3 VOC

Vocatives (VOC) are addresses and interjections. Because they are syntactically unrelated to the predicate, they are placed directly under the root. For example:
(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik.
'Lover, she said, I know for sure that you cannot carry me.'
(76) Ohó, hversu góðr Israels Guð er!
'Oh, how good is the God of Israel!'

We also analyse the interjections já 'yes' and nei 'no' as vocatives, as in (77) and (78). The former example has two vocatives, which we must analyse as two separate dependents under the root. It is not necessary to join them with an empty coordination (on this topic, see ch. 9.4 below).

(77) Já, já, sagði hann.
'Yes, yes, he said.'

(78) Nei, sagði hinn, ei er pat.
'No, said the other one, it is not so.'

In these examples we do not use quotation marks, which one would do in a normalised text edition: "Já, já," sagði hann. "Nei," sagði hinn, "ei er pat." Here, we have followed modern Norwegian rules in placing the quotation marks, comma and period.

### 7.2 Auxiliary Functions

AUX is the only auxiliary function.

### 7.2.I AUX

Auxiliary words form a unit with their head, i.e. they provide functional information about the head or the entire sentence, but do not have a proper syntactic function. Consequently, an AUX can not be a head for anything else (cf. the notes on example (72) in ch. 7.1 above). Sometimes, the AUX does not modify the head at all, as in the case of infinitive markers, conjunctions or parts of a subjunction. In other cases, the AUX modifies a specific word, such as an auxiliary verb or a negation. AUX words are of various types:
a. Auxiliary verbs with past participles (supines). A typical example is hafa:
(79) Sem hon hafði yfir sét bréfit.
'When she had perused the letter.'
There are two other verbs which are constructed in a similar way, geta and fá:
(80) Ef hann getr borit dóttur hans upp í fjallit.
'If he can carry his daughter up the mountain.'
(81) Hversu má nǫkkurr maðr eftir skírnina fá haldit sik frá syndum ok úhreinundum? 'How may anyone, after baptism, keep away from sin and uncleanliness?'
b. Modal Auxiliaries with infinitives, e.g. mega, skulu and vilja:
(82) Ok svá er hann mér mjǫk kárr at aldri vil ek honum angr gera.
'And he is so dear to me that I wish to never do him harm.'
The verb типи is not as clearly modal as the verbs mega, skulu and vilja, but we also analyse it as AUX (cf. (70) in ch. 7.1.1 above):
(70) Pá mun faðir minn jafnan lifa með harmi ok hugsótt.
'Then, my father will always live in grief and sorrow.'
c. The infinitive marker, e.g.:
(83) Pá leituðu margir við at bera hana, er allsekki gátu at sýst.
'Then many, who could not do anything, sought to carry her.'
Here, the infinitive marker at is dependent on the XOBJ bera, which in turn is dependent on the PRED leituðu.
d. The expletive particles of and $u m$. These only occur in poetic language and have no clear semantic content. The Eddic poem Prymskviða opens with these lines:
(84) Reiðr var pá Vingpórr \| er hann vaknaði | ok síns hamars | um saknaði.
'Vingpórr was angry | as he awoke | and his hammer | found missing.'
The particle $u m$ stands with the verb sakna, perhaps to denote the perfect tense, but is usually not translated into modern languages. Other types of verbal particles are analysed as OBL, cf. ch. 7.3.3.
e. Negation of the head verb, e.g.:
(69) En ekki átti hann fleira barna.
'But he had no more children.'

In other phrases, the negation is taken as an ADV, e.g.:
(85) Ormrinn er slǿgari en ekki annat kvikvendi.
'The serpent is more cunning than any other creature.'
Here, ekki is dependent on annat in the XOBJ annat kvikvendi. The word is included among ambiguous words in the table in ch. 3.1 above.
f. Introductory conjunction, e.g. en or enda (cf. ch. 7.2.1 f above):
(69) En ekki átti hann fleira barna.
'But he had no more children.'
g. Introductory adverbs, e.g. nú:
(86) Nú vill maðr annan sǿkja um eitthvert mál.
'Now, a man wishes to bring some charge against another man.'
This occurs almost exclusively in the legal texts and implies a condition, i.e. "if a man wishes...", but we interpret the sentence as it stands, and nú is taken as an introductory adverb.

## h. The interrogative particle bvárt, e.g.:

(87) Enn er mér úkunnigt hvárt pessi frú líkar eða eigi at ek sjá unnasti hennar.
'I still do not know whether this lady likes or dislikes me being her lover.'

### 7.3 Arguments

Arguments are words or phrases connected with the head verb in a sentence. This is not to say that they are obligatory; in Old Norwegian, a sentence need not be more than one word, e.g. Rignir '[it] rains'. Rather, arguments are necessary to use a verb to its fullest extent. In the case of a verb like bit, there is someone doing the hitting, the subject, and one being hit, the object, both of which are arguments of the verb. Words expressing the circumstances of the event (time, place, manner, cause etc.) are not as necessary, and so we consider them adjuncts (on the term, see p. 77 above).

### 7.3.I SUB

The subject (SUB) typically expresses the agent or the one being talked about. The subject is a dependent of the predicate (PRED) and is in most cases in the nominative case. It may be a noun:
(88) Konungr lofaði hann mjok.
'The king praised him highly.'
Or it may be a pronoun:
(89) Hon var í hjá honum bǽð̇i nátr ok daga.
'She was with him both night and day.'

It may also be an adjective used as a noun (nominal usage):
(3) Ríkir báðu hennar.
'Powerful [men] wooed her.'

The accusative subject in accusative-with-infinitive constructions is also analysed as SUB, since it constitutes a subject in an underlying finite sentence, e.g. (90), discussed in ch. 10.4.1 below:
(90) Ok hefir hann heyrt fugla syngja svá fagri rọddu at hann lysti til at hlýða.
'And he has heard birds sing with such a beautiful voice, that he wished to listen.'

Here, one can say that the underlying sentence is fuglar syngja svá fagri rqddu at hann lysti til at blýda.

The so-called oblique subjects are analysed as OBL, whether they are accusatives, e.g. mik dreymir 'I dream', or datives, mér bykkir 'I think'. There is only a small, closed group of verbs that can take oblique subjects. See ch. 7.3.3 below.

### 7.3.2 OBJ

The object (OBJ) is an argument which typically denotes the person or thing at which the action is directed. The object is a dependent of the predicate (PRED), and is usually in the accusative case. It may be a noun:
(91) Af pessum tveim ungmennum gerðu bretar strengleik er peir kalla Tveggja elskanda.
'About these two youths, the Britons composed a lay which they call The Lay of the Two Lovers.'

In other cases, it is a pronoun (88) or a determiner (69):
(88) Konungr lofaði hann mjǫk.
'The king praised him highly.'
(69) En ekki átti hann fleira barna
'But he had no more children.'

In (69), barna is a genitive attribute with fleira. See the tree in ch. 7.1.1 above.
In most Old Norse grammars, the object can be in the accusative, dative, or genitive. In these guidelines, however, object-like words and phrases in the dative or genitive are taken as OBL. Thus, both indirect objects (always in the dative) and oblique subjects (accusative or dative), will be analysed as OBL, cf. the discussion in ch. 7.3.3 below.

Note also that nominal clauses (commonly introduced by the subjunction at) are not analysed as OBJ (or SUB), but as COMP. Cf. ch. 7.3.5 below.

### 7.3.3 OBL

Oblique words (OBL, hence referred to as obliques) may occur on many levels within sentences. In most cases, they depend on the predicate, e.g. the genitive bennar in (3) or the dative lifi in (21):
(3) Ríkir báðu hennar.
'Powerful [men] wooed her.'
(21) Um síðir luku pau bǽði lífi sínu.
'Eventually they both lost their lives.'

These words are traditionally taken as objects, but in the dependency analysis we treat them as OBL.

Indirect objects, which are always in the dative case, are typical cases of OBL:

(92) Hon gaf henni leyfi.
'She gave her permission.'

As mentioned above, so-called oblique subjects are also analysed as OBL, e.g. the dative mér in mér pykkir 'I think', and the accusative mik in mik langar 'I wish'. Cf. the analysis of mérpykkir in (45) in ch. 10.1 below.

The verb dreyma is among those that take an oblique subject, mik dreymir 'I dream', rather than a normal subject, ${ }^{*}$ ek dreymir. This construction is exemplified by the accusative Guðbrand in (93):

(93) Pá dreymdi Guðbrand [acc.] at maðr nękkurr kom til hans, ljóss.
'Then Guðbrandr dreamt that a fair man approached him.'
With verbs of motion (ganga, blaupa, fara), we take the expressions of source or destination as OBL, since this type of verbs requires such an argument. For the same reason, ADV is not applicable here.

(73) Rann drykkrinn ór ok dreifðisk víða um fjallit.
'The drink spilled out and spread all over the mountain.'

In (73), the preposition ór is without an object here, but we may infer the object keraldinu 'the vessel' from the context. The analysis of the conjunction ok 'and' as PRED is explained in ch. 9.2 below.

Verbs of position (vera, sitja, standa, liggja) also take OBL, since such verbs require arguments to denote place. In (94), the verb búa (preterite bjó or bjuggi) can hardly stand on its own; one must specify where he lived:
(94) Faðir hennar bjuggi á Laukhamri.
'Her father lived at Laukhamar.'

Se also ch. 14.2 about the relationship between OBL and ADV.

Verbal particles. Particular to Old Norwegian and other Germanic languages is the widespread use of verbal particles, i.e. adverbs or prepositions that complete or alter the meaning of a verb, as in (79):

(79) Sem hon hafði yfir sét bréfit.
'When she had looked the letter over.'

Here, the preposition $y$ fir is connected to the verb sjá and is analysed as OBL. The noun bréfit is an object under the verb sét, but not an oblique under yfir. The noun is analysed in the same way in *hon baföi sét bréfit as in bon bafð̈i yfir sét bréfit, and is therefore not dependent on $y$ fir.

Another example is (83), where both við and at are OBL under the verb and have no dependents of their own:
(83) Pá leituðu margir við at bera hana, er allsekki gátu at sýst.
'Many men, who could not at all do it at all, then tried to carry her.'

The object of a preposition is also OBL, e.g. in (94) and (95):
(94) Faðir hennar bjuggi á Laukhamri.
'Her father lived at Laukhamar.'

(95) At sqnnu var petta í Neustria.
'In truth, this was in Neustria.'

Some adjectives take an argument in the dative or genitive case. The argument in such cases is an OBL, e.g.:
(82) Ok svá er hann mér mjǫk kárr at aldri vil ek honum angr gera.
'And he is so very dear to me, that I never want to trouble him.'

Comparable constructions are mikill fyrir sér 'great of size' and ungr at aldri 'young of age'. Here, the preposition fyrir is an oblique with the adjective mikill, and at with ungr (and one level down, sér is an oblique under fyrir, and aldri under $a t$ ).

Datives with body parts, like hqfuð mér 'my head', are discussed in ch. 7.4.3 below.

### 7.3.4 XOBJ

The external object (XOBJ) has no immediate counterpart in traditional syntax. It includes predicatives, infinitives and participles. External objects are in a dependency relationship with two words in a sentence, one primary (its parent verb) and one secondary. The secondary relationship is indicated with a slash arrow. See ch. 9.1 below for details on slash arrows.

Predicatives are in general XOBJ, whether they refer to the subject or to the object in the sentence. The trees in (57) below show both types: In the first sentence, there is an XOBJ to the object hann [acc.], while in the second, the XOBJ is to the subject bann [nom.]. Notice the slash from XOBJ to OBJ, i.e. from the object complement to the object, in the first sentence, and from XOBJ to SUB, i.e. from the subject complement to the subject, in the second one. The application automatically adds the tag XSUB when slashing to a subject.

(57) Hann skal vera huggan hennar || ok skal hon kalla hann Jonet.
'He will be her comfort || and she shall call him Jonet.'

Another example of a predicative as XOBJ is (97), where the conjunction ok represents the whole phrase bugsjúkr ok barmsfullr. See the tree in ch. 9.3.
(97) Af pví var hann hugsjúkr ok harmsfullr.
'Therefore, he was distressed and sorrowful.'

Infinitives may be XOBJ, too, as in (98):
(98) Fyrr en pú tókt at unna mér, pá vart pú lofséll af hreysti pinni.
'Before you fell in love with me, you were praised for your prowess.'

Infinitives as XOBJ are sometimes dependent on verbs denoting the beginning, duration or end of an action (phase verbs). The verb taka may be used in this way, like in the example above, but it looks as if Old Norwegian has few examples of this usage. In the Menotec corpus, we found no good examples of byrja 'begin' or lúka 'finish' + infinitive.

Other verbs can also take infinitives as XOBJ, if there is an external subject, e.g. fýsa 'want to' in (99):
(99) Ok fýsti hann ekki aftr at fara.
'And he did not wish to go back.'

Infinitives denoting purpose, however, are adverbial and are tagged as XADV; cf. (118) and (119) in ch. 7.4.2 below.

Verb participles are often to be analysed as XOBJ, e.g.:
(100) Hér er kominn Óláfr konungr digri.
'Here Olaf the stout has come.'
In this sentence, one must slash from the external object kominn to the subject Ólafr. The construction in (100) is formally identical to subject + subject complement, as in:
(97) Af pví var hann hugsjúkr ok harmsfullr.
'Therefore, he was distressed and sorrowful.'

Preposition phrases may also be XOBJ, as in (101) below. Here, af vatninu 'of the lake' is XOBJ to the subject issinn 'the ice'; the expression is similar to predicative constructions like 'the ice was gone' or 'the ice was away'. Note that allr is analysed as an XADV as in examples (149) and (155), meaning 'completely' rather than 'all'.

(101) En um várit er íssinn var allr af vatninu, pá senda svíar orð Óláfi svenska konungi sínum.
'And in the spring when the ice had all gone from the lake, the Swedes sent word to their king Olaf the Swedish (Skötkonung).'

Láta. The verb láta merits a special discussion. It often takes an external object, but the external object's subject is not the same as the subject of láta:


(46) Mjǫk nǽr fjallinu lét einn konungr gera mikla borg.
'Very close to the mountain, a king had a great city built.'
(102) Hann lǽtr penna mann bera konungsskrúð allt.
'He makes this man wear the king's whole apparel.'

In (46) it is not the king who builds the city, but another, unnamed person. We therefore slash directly from the XOBJ gera to the head verb lét, as shown in the left tree above. If we had slashed to the subject konungr, we would have implied that the king had built the city, which he did not. The king only initiated the process.

Sometimes the external subject appears as an object to láta, as in (102) above. Here, it is penna mann who shall wear the king's apparel, and thus functions as subject for the infinitive bera. So we slash from the XOBJ bera to the OBJ mann, as shown in the righthand tree above.

In the reflexive inflection of the verb, the head verb's subject and the external object's subject are identical, as in (103):

(103) En hann lézk ekki vita hvat er pǽr vildu.
'But he acted as if he did not know what they wanted.'

In (103), it is the same person who acts, lézk 'let himself', and who knows, i.e. who is the subject for the external object vita. The analysis of the sentence bvat er pár vildu follows ch. 10.1 below.

### 7.3.5 COMP

The complement (COMP) is a function we use for arguments that are sentences or sentence-like. Instead of assigning these constructions functions like SUB or OBJ, we use COMP. This usage includes:

## a. Nominal clauses (that-clauses):

(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik.
'Lover, she said, I know for sure that you cannot carry me.'
The subjunction at functions as the COMP. See the analysis in ch. 7.1.2 above.

## b. Indirect Questions (wh-clauses):

(104) Hon kom par [...] ok spyrr, hverr maðr hann er.
'She arrived there [...] and asks who the man is.'
In these clauses, we take the finite verb as the head, and tag it as COMP.

## c. Accusative with Infinitive:

(90) Ok hefir hann heyrt fugla syngja svá fagri rǫddu at hann lysti til at hlýða.
'And he has heard birds sing with such a beautiful voice, that he wished to listen.'
Here, the infinitive syngja is the main verb in the sentence-like construction fugla syngja svá fagri roddu at hann lysti til at blyda and is linked to the superordinate sentence as a COMP. See the tree in ch. 10.4.1 below.

## d. Infinitives:

Infinitives that function as a subject or a predicative are also COMP:


(105) Nú er um pann atburð pví nǽst at rǿða.
'Now, one must talk about that event next.'

The infinitive marker is an AUX under the infinitive (cf. ch. 7.2.1 c). Note that in the adverbial phrase pví nést 'next [to that]', we take pví as an OBL under the ADV nást.

Infinitives (and infinitive constructions) may also be governed by adjectives like skyldr 'bound, obliged'. We understand them as arguments, and therefore COMP:

(8) Ert pú skyldr at sverja honum hinn sterkasta eið.
'You are obliged to swear a very powerful oath to him.'

As mentioned above, we use COMP for arguments in the form of sentences, and infinitive clauses behave much like sentences, i.e. they can take their own object. Thus, in the infinitive clause at sverja honum binn sterkasta eið, we both have the oblique honum and the object eið.

## e. Comparative constructions:

In comparative constructions, we take the subjunction en 'than' as an COMP dependent on the comparative, e.g.:
(96) Hon hefir par lengr verit en fimmtigi vetra.
'She has been there for more than fifty winters.'
See the discussion in ch. 10.6 below.

### 7.3.6 NARG

The nominal argument (NARG) is an argument of a noun, especially objective genitives. In Old Norwegian they have the form stjórn landsins 'the government of the land'. This type of genitive is so different from the attributive type sonr Guðbrands 'Gudbrand's son', that we think it sensible to use the function NARG. An example would be:
(106) Ok gaf pá hvárttveggja peira qðru samband sitt með umskifti fingrgulla sinna.
'And then, they gave each other assurance by the trading of their gold rings.'
Here, fingrgulla is a nominal argument with umskifti, and sinna an attribute of fingrgulla. The objective genitive fingrgulla corresponds to the object in an underlying sentence $X$ skiftir um fingrgull.

Note that a subjective genitive is analysed with the function ATR (ch. 14.6 below).

(107) Pessum hafði herra hans fengit gaumgǽfð ok gǽzlu alls ríkisins síns með réttyndum ok refsingum.
'To this man, his lord had entrusted the care and keeping of the entire kingdom, to dispense justice and punishments.'

In (107), rikisins is a genitive (with the attributes alls and sins) under gózlu, and should be analysed as an objective genitive. We must also link the coordinated words gaumgáfд and gázlu in some way. This is done by joining them with the conjunction ok, and then we slash from one of the coordinated elements to the genitive rikisins, as shown in the tree above.

Furthermore, a NARG may be a preposition governed by a noun derived from a verb ("deverbal nouns"), e.g. rannsak n. 'investigation', which is derived from the verb rannsaka 'investigate'. In the phrase rannsaks um slikt, we consider um slikt to be a NARG under rannsaks (cf. the tree in ch. 10.1 below):
(45) Kynligt pykkir mér, kvað hann, hví pú leitar ei rannsaks um slíkt.
'It seems strange to me, he said, why you do not seek an investigation into such things.'

### 7.3.7 AG

The agent (AG) is the logical subject in passive (and reflexive) constructions, usually a preposition phrase introduced by af, e.g.:
(108) Hér dǿmask oft góðir af illum.
'Here, good people are often judged by bad people.'
The preposition phrase af illum expresses the agent; of is the head on which illum depends (OBL). The agent is not commonly expressed in Old Norwegian in this way, but from a syntactic point of view, it is nevertheless interesting, since these cases may be interpreted as true passives. It is probably only the preposition of which is used to denote the agent. We believe that in the cases where we have indicated the agent, it is influenced by Latin, directly or indirectly.

A special case is the use of the present participle as a gerund, where the dative dependent on the participle should be tagged as an AG:

(109) Ekki er kristnum manni meir flýjanda en ofmetnaðr.
'Nothing should be avoided by a Christian man more than pride.'

This construction, too, is influenced by Latin. The example above is taken from a part of the Old Norwegian Homily Book translated from Alcuin's De virtutibus et vitiis.

### 7.4 Adjuncts

Adjuncts are words or phrases which express the circumstances surrounding the verb's action, and they can usually be removed without compromising the sentence's structure. The prototypical adjunct is the adverbial.

### 7.4.I ADV

The adverbial (ADV) is a function which typically expresses time, place, manner, instrument or circumstance. The function ADV is most commonly dependent on a verb when it denotes:

## a. Time:

(110) Forðum í Norðmandí gerðisk einn atburðr er síðan var víða freginn um tvau ungmenni er mjok elskuðusk.
'In former days in Normandy there was an occurrence which became widely known, about two youths who loved each other very much.'

See the tree in ch. 10.2 below.

## b. Place:

(110) Forðum í Norðmandí gerðisk einn atburðr er síðan var víða freginn um tvau ungmenni er mjogk elskuðusk.

In a preposition phrase, the preposition is the head and carries the syntactic function. In (110), $i$ is the head, and strictly the only word that should be displayed in bold. In this example, as well as in all following examples, we render the entire preposition phrase in bold.
c. Manner:
(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik.
'Lover, she said, I know for sure that you cannot carry me.'
d. Instrument (Instrumental Dative):
(111) Ok málti [hann] pá at engi myndi pann fald aftr falda, nema með knífi skári eða með sqxum klippi.
'And [he] said that no one would fold that hem again, unless [this person] cut it with a knife or clipped it with scissors.'
(9) Hann gekk fyrir of daginn ok steig heldr stórum [stigum].
'He walked during the day and took rather great [strides].'

## e. Circumstance:

(95) At sqnnu var petta í Neustria.
'Truly this was in Neustria.'
This type also includes adverbs denoting degree:
(88) Konungr lofaði hann mjok.
'The king praised him highly.'
Adverbials may be simple adverbs, like forðum in (110) and mjok in (88). They may also be the heads of preposition phrases, like í Norðmandí in (110), at vísu in (13), meд knífi and með soxum in (111), or nouns in oblique cases (112):
(112) Hann reiơ níu nátr døkkva dala ok djúpa.
'He rode nine nights through dark and deep valleys.'
In (112) the noun nótr (acc.) is the head of the adverbial niu nátr and the noun dala (acc.) is the head of the adverbial døkkva dala okdjúpa.

Adverbials can also be subordinate clauses, as in (113):
(113) En ef pér líkar, ek vil við hana rǿða.
'But if you like, I will speak to her.'
Here, the subjunction ef is the head in the clause efpér likar.

In addition to modifying verbs, adverbials may also modify other word classes, e.g. the preposition nár 'close to' in (46), the adjective haltr 'lame' in (114) and the adjective vágskorinn 'indented with bays' in (115):
(46) Mjôk nár fjallinu lét einn konungr gera mikla borg.
'Very close to the mountain, a king had a great city built.'
(114) Var sá hafr haltr eftra fóti.
'That ram was lame on its back foot.'
(115) Kringla heimsins, sú er mannfolkit byggir, er mjok vágskorin.
'The circle of the world, which is inhabited by people, is quite indented with bays.'

A special type is that of comparatives preceded by the adverb at, e.g. at meirr 'the more', at verri 'the worse' and at sidr 'the less'.

(116) Ok sǿk í hauginn eigi at síðr.
'And head for the mound none the less.'
We always mark the negative adverb eigi as AUX. For this reason, we place siðr as ADV under the predicate sǿk (imperative of sǿkja), and at as a dependent of siơr.

The unassuming little at is probably the most ambiguous word in Old Norwegian (it can be a subjunction, preposition, adverb, infinitive marker and noun, cf. ch. 1.3 and the table in ch. 3.1 above). As mentioned in ch. 6.2.2, it may even be a negation particle, but only as an enclitic.

### 7.4.2 XADV

External adverbials (XADV) include participles, infinitives and adjectives with an external subject. There are a few types of XADV:

## a. Present participles:

In (117), the phrase vinir ok frándr 'friends and relations' is the external subject of eggjandi 'encouraging':
(117) Vinir ok fréndr kvámu til hans með róðum ok ráðagerðum sínum, eggjandi hann at fá sér eignar púsu.
'Friends and relations came to him with advice and plans, encouraging him to take a wife.'

Construction like the one in (117) are most common in the works translated from Old French or Latin, often called the learned style.

## b. Infinitives of purpose:

Sentences (118) and (119) contain examples of infinitives expressing purpose:

(118) Ok at halda honum félagskap pá lét blóð með honum rǽðismaðr hans.
'And to keep him company, his steward underwent bloodletting with him.'

(119) Pegar sem hann var heiman fǿrr, pá sendi hann [acc.] faðir hans heiman til konungs hirðar at pjóna konungi.
'As soon as he was able to leave home, his father sent him to the king's court to serve the king.'

Infinitives depending on verbs meaning the beginning, duration or end of an action (phase verbs) are analysed as XOBJ, e.g. (98) in ch. 7.3.4.

## c. Adjectives:

Also adjectives can be XADV, like einn in (12). Note that this word is usually analysed as a determiner, but here it clearly functions as an adjective, and should be classified as one:
(12) Hví ertu einn kominn í Jotunheima?
'Why have you come alone to Jotunheim?'

The enclitic -tu (for the pronoun pú) in ertu is the external subject of einn. The word sjalfr in (120) is analysed in the same way:

(120) Ok tók sér herbergi í lofti einu par sem hann svaf sjalfr í.
'And [he] took a room in a loft where he himself slept.'

### 7.4.3 ATR

Attributes (ATR) modify other words. For instance, adjective + noun:
(112) Hann reið níu nátr døkkva dala ok djúpa.
'He rode nine nights through dark and deep valleys.'
Determiner + noun:
(27) Var petta dýr hverjum manni kǽrt er í hirð konungsins var.
'This animal was dear to every man at the king's court.'
Possessive + noun:
(28) Ok rann hjarta hans allt ór honum.
'And his heart left him completely.'
Furthermore, we analyse restrictive relative clauses as ATR, e.g. er pá bjó par 'who at the time lived there':

(121) Sá konungr er pá bjó par, átti eina dóttur, fríða ok kurteisa mey.
'The king who at the time lived there had a daughter, a fair and courteous maiden.'

In (121), we also have an example of an ATR as a noun + determiner, sá konungr, and as a noun + adjective, friða ok kurteisa mey. In the last instance, there is coordination, and so the conjunction, too, must be tagged with ATR (more on coordination in ch. 9.3 below). The relationship between restrictive and non-restrictive relative clauses is discussed in more detail in ch. 10.2 below.

Generally, ATR is a function which restricts a noun's reference; it does not only indicate subordination. In (112), døkkva dala refers to a smaller set than dala would alone.

In cases of a dative with body parts (dativus sympatheticus), e.g. h̨fuð mér 'head for me, i.e. my head', one might think that the dative should be an OBL. We believe that this use is so close to the possessives (cf. ch. 2.4.3), e.g. hqfuð mitt 'my head', that both mér and mitt should be tagged as ATR.

### 7.4.4 APOS

Appositions (APOS) are subordinate words or phrases which do not restrict the meaning of their parent, e.g.:
(121) Sá konungr er pá bjó par, átti eina dóttur, fríða ok kurteisa mey.
'The king who at the time lived there had a daughter, a fair and courteous maiden.'
In (121), fríza ok kurteisa mey (with ok as its head) is a dependent on eina dóttur, but does not restrict the object's reference; dóttur refers to the same set as mey.

Non-restrictive relative clauses are also analysed as APOS. Cf. the discussion in ch. 10.2.2 below. A non-restrictive relative clause can be seen in (91) below:
(91) Af pessum tveim ungmennum gerðu bretar strengleik er peir kalla Tveggja elskanda.
'About these two youths, the British composed a lay which the call The Lay of the Two Lovers.'

Patronyms (like Haraldsson and Eiriksdóttir) are analysed as an APOS under the name they modify. Thus, in Óláfr Haraldsson, Haraldsson is an APOS under Óláfr. If the patronym is written as two words, Óláfr Haralds son, the word son is an APOS under Óláfr and Haralds is an ATR under son. Titles, like konungr, herra and frú are also analysed as APOS under the name they appear with. In (122), konungr is an APOS under Marbés. Furthermore, frénda (with the attribute sinum) is an APOS under Tristram:
(122) Marhǽs konungr var reiðr Tristram fránda sínum.
'King Marhes was angry with his kinsman Tristram.'
Sometimes we see very complicated constructions, as shown in the tree of example (123) below. Series like these are often found at the beginnings of Icelandic sagas. This is really a genealogy in the guise of a series of genitive constructions.

(123) Pat var á dogum Haralds konungs hins hárfagra, Halfdanar sonar hins svarta, Guðrøðar sonar veiððikonungs, Halfdanar sonar hins milda ok hins matarilla, Eysteins sonar frets, Óláfs sonar trételgju Svía konungs, at sá maðr kom skipi sínu til Íslands í Breiðdal, er Hallfreðr hét.
'It was in the days of King Harald the fair-haired, son of Halfdan the black, son of Gudrod the hunting king, son of Halfdan the mild and meal-grudging, son of Eysteinn fart, son of Olaf the wood-carver, king of Swedes, that a man named Hallfred sailed his ship to Iceland and landed in Breiddal.'

Those who study names often classify patronyms among other types of epithets denoting profession (bóndi), personal features (inn digri), residence (í Geitdal, ór Laxárdal), incidental nicknames (selsbani, i.e. the killer of Pórir selr), amd regular nicknames like smjormagi 'butter-belly' (cf. Særheim 2013: 525-527). It is difficult to differentiate between all these types of epithets, but syntactically they all fall into the same category. We analyse all of them as APOS. The main word is always the given names, like Óláfr, Haraldr, Guðný, Ástriððr etc.

### 7.4.5 PART

The partitive (PART) function expresses the group to which a noun belongs. We do not think that it is useful to separate PART from ATR in genitive constructions in Old Norwegian; it is, in our opinion, a semantic not a syntactic term, and will only make the annotators' work more difficult.

### 7.5 Superfunctions

Superfunctions cover two or more functions and are used in cases where it is difficult to make a choice between them. The choice may be between two arguments, as is the case with ARG, or between an argument and an adjunct, as with PER, NONSUB and ADNOM, or between two adjuncts, REL. As mentioned above, we would like to restrict the use of superfunctions as much as possible.

### 7.5.I ARG

A superfunction which can be used instead of selecting either OBL or OBJ.

### 7.5.2 PER

A superfunction which can be used when it is difficult to distinguish between an argument and an adjunct, e.g. OBL or ADV, cf. ch. 14.2.

### 7.5.3 NONSUB

A superfunction used instead of selecting either OBJ, OBL or ADV. This is infrequent, but it may be useful to analyse some anomalies as NONSUB. In ch. 13.4, we show that it can be used to tag one of the twin words in dittographies.

### 7.5.4 ADNOM

A superfunction which can be used instead of selecting either ATR, APOS, PART or NARG.

### 7.5.5 REL

A superfunction which can be used to tag a relative clause when the annotator is not sure whether it is restrictive (ATR) or non-restrictive (APOS).

### 7.6 Secondary Functions

The secondary functions express a relationship between nodes which have other, primary relationships, like between a subject and a predicative (XOBJ). Both are dependents under the sentence's PRED, but are also connected with one another, as indicated by the fact that the predicative agrees with the subject. This is expressed by a secondary relationship, as explained in ch. 9.1 below.

### 7.6.I XSUB

An external subject, XSUB, is allotted to the function XOBJ, if it can be identified. This is done by slashing, and the application automatically adds the function XSUB, as in (124). Cf. the tree in ch. 13.2.
(124) Er barnit verðr fø̆tt, skalt pú senda systur minni, er gift er í Norðmandí rík ok auðig, kurteis ok hyggin frú.
'When the child is born, you should send [it] to my sister, who is married in Normandy, a powerful and wealthy, courteous and wise lady.'

Here, barnit is an XSUB of fǿtt, cf. the discussion on XOBJ above. When an external subject can not be identified, XOBJ is instead connected to its parent verb, as in the relative clause ergifterí Norðmandí. Here, gift is an XSUB of the verb er.

### 7.6.2 PID

A verb is automatically assigned a PID (Predicate Identity) when it is in a secondary relationship with an empty verbal node. An example would be (15) on the next page, where hon af honum must be analysed by adding an empty verb, hon [var] af honum. Here, one must slash from the empty verbal node to the predicate var in the preceding sentence.

(15) Hann var mjok ástbundinn af henni, ok hon af honum.
'He was very much in love with her, and she with him.'
In this tree, the second sentence is shown to the left and not - as one might expect - to the right, but in dependency analysis, one does not depict word order. A tree represents the relations between words, not their sequence.

Another example of slashing from an empty verb to an explicit verb is (74) in ch. 7.1.1 above. See ch. 9 below for a broader discussion of slashing.

## 8 Phrases

Even though phrases are not a part of the dependency analysis, it is often useful to refer to them when discussing syntax. For our part, this is especially true of noun phrases and preposition phrases.

## 8.I Noun Phrases

Noun phrases consist of a noun, primarily, and may additionally include adjective phrases, determiners, preposition phrases (as ATR), relative clauses (as ATR or APOS) and other noun phrases. Nouns may be modified by sá only, e.g. sá maðr, but *hinn maðr and *sá binn madr are ungrammatical. Adjectives may take sá, sá binn or binn, e.g. sá gamli maðr, sá hinn gamli maðr and binn gamli maðr. But since sá hinn maðr can not occur without an adjective, we consider binn to be dependent on the adjective:

(125) The noun phrases sá binn gamli maðr 'the old man' and bafit pat it djúpa 'the deep ocean'

In the syntactic analysis, we do not differentiate between definite and indefinite nouns, so bafpat it djúpa and bafit pat it djúpa are analysed in the same way.

Even in very complex noun phrases, there is little subordination in the dependency analysis, other than that binn is subordinated to the adjective, where they occur together. In the artificial example allar pessar inar prjár ofsaliga skemmtiligu bǿkr 'all these (the) three immensely entertaining books', all the words are ATR on the same level under bøøkr, except for inar, which is an AUX under skemmtiligu, and ofsaliga, which is an ADV under skemmtiligu.

Adjective phrases and determiner phrases sometimes have the same function as noun phrases. One can think of them as noun phrases without the noun. In the examples below we have included hypothetical nouns in square brackets.

Adjectives move up to the place where the noun would have been, while any determiners with the adjectives become dependents. An example of this is (126), cf. the tree in ch. 10.6.
(126) Sú hin fátǿkasta [kona] í hennar pjónustu er fríðari en Pér, frú dróttning! 'The poorest [woman] in her service is fairer than you, my queen!'

Adjectives that stand alone can also be heads in a phrase. So it is in (3), where rikir is the head, with the function SUB.
(3) Ríkir [menn] báðu hennar.
'Powerful [men] wooed her.'

Determiners can also be heads in phrases. An example of this is (43), where pessir is a SUB and sá dagr is an XOBJ.
(43) Pessir [dagr] er sá dagr er guð gerði.
'This [day] is the day that God made.'

### 8.2 Verb Phrases

Verb phrases are generally simple in Old Norwegian. They may contain only a finite main verb, usually marked as PRED, or an auxiliary verb + main verb, where the auxiliary verb is dependent (AU) on the main verb (PRED). In exceptional cases, the phrases are more complex, like (71), from Barlaams ok Josaphats saga (translated from Latin into Old Norwegian):
(71) Aldrigi munt pú slíkan stein sét hafa.
'You will never have seen such a stone.'

Here, sét is the PRED, while both munt and hafa are AUX under sét (cf. the tree in ch. 7.1.1 above). In some cases, the main verb is not a PRED. In indirect questions, for example, the verb will be a COMP (cf. ch. 10.1 below).

Another example of a complex verb phrase is contained in the relative sentence (127) in the Old Norwegian Homily Book:

(127) [...] er oss mátti lofat vera at hafa.
'[...] which might have been promised to us to have.'

### 8.3 Adjective Phrases

Adjective phrases have an adjective as the head word, as in hann var vaskr madr 'he was a valiant man' (56). The adjective is typically a dependent under a noun and has the function ATR. Sometimes, as in this case, the phrase consists of only one word.

The adjective can also have its own dependents, e.g. adverbs, mjok vágskorin 'quite indented with bays' in (115) in ch. 7.4.1 above (p. 102). The adverb then is tagged as an ADV. The same applies in examples like gódr tiltaks 'good to resort to', where the noun tiltak (in the genitive) serves as an ADV under the adjective.

Superlative adjectives can take genitive dependents, which are tagged as ATR, e.g. allra manna fóthvatastr 'the most swift-footed of all men'. This could also have been analysed as a partitive (PART), but since we do not want to distinguish between ATR and PART in genitive constructions in Old Norwegian, the function must be ATR (cf. ch. 7.4.5 above).

In phrases like mikill fyrir sér 'great of oneself, powerful', the adjective mikill is the head. We then take fyrir as an OBL under mikill, and sér as an OBL under fyrir. Cf. ch. 7.3.3 above (p. 91).

### 8.4 Adverbial Phrases

Adverbial phrases have an adverb for a head. Adverbs are typically dependents under other words and have the function ADV. The adverbs themselves may also have dependents. These will be ADV, too, e.g. mjok oft 'very often'.

### 8.5 Pronominal Phrases

Pronominal phrases have a pronoun as their head and are usually dependents under the predicate. Pronouns may also have their own dependents, e.g. relative clauses, peir er eigi vildu undir kristniganga 'those who did not want to convert to Christianity'.

### 8.6 Preposition Phrases

Preposition phrases have a preposition as their head. They can occur without an object (in so-called absolute use), but most often they have a noun phrase as an object. That phrase is an OBL under the preposition.
(95) At sonnu var petta í Neustria.
'Truly this was in Neustria.'

In (95), at and $i ́$ are heads of their respective preposition phrases, at sqnnu and í Neustria.
A preposition phrase may be modified by an adverb, e.g. siðla in siðla um kveldit 'late that evening'. This adverb is taken as a dependent under the phrase's head, i.e. the preposition um gets two dependents, the ADV siðla and the OBL kveldit.

Many Old Norwegian prepositions are complex. We distinguish between two types, which will be treated somewhat differently. The morphological analysis is given in ch. 2.7 above, the syntactic here.

### 8.6.I Preposition + Preposition (including vestigial nouns)

In the complex prepositions á millum, í móti, í hjá, fyrir sakir etc., we regard the second element as having the function that the phrase has within the sentence, usually ADV or OBL, while the first node is an AUX. In (128), this applies to í móti:

(128) Sem jarlinn leit hann, pá hljóp hann upp ok gekk í móti honum.
'As the earl saw him, he jumped up and walked towards him.'
The second word in complex prepositions of this type will always be taken as another preposition. This is uncontroversial in á millum and í hjá, where both are undoubtedly prepositions, which can occur together, á millum and íhjá, or one member can occur on its own, millum and bjá.

In this group, we also include complex prepositions of which one word is originally a noun, like í móti, á bak, til banda, etc. Here we observe that inflectional forms of the original nouns, mót n., bak n. and hqnd f., are on their way to becoming lexicalised as prepositions. Some of them, like mót $(i)$ can also occur alone, while others can not. We nevertheless believe that it is defensible to classify them as prepositions, and in ch. 2.7 above we suggest than this be done. As a consequence, a small group of words must be disambiguated, namely bak, hqnd, mot and sqk. See the table in ch.3.1.

In example (128), both $i$ and móti are classified as prepositions in the morphological analysis. In the syntactic analysis, $i$ is an AUX under móti, which takes bonum as an OBL.

### 8.6.2 Preposition + Adverb

Another type of complex prepositions is preposition + adverb, e.g. fyrir norðan, fyrir útan and um fram, as illustrated in (129).

(129) Óláfr konungr stefnir fyrir innan Bókn ok leggr í sundit fyrir norðan tungu í eyjar pár er svá heita.
'King Olaf sails inside Bokn and heads into the channel north of the tongue toward the islands that bear this name.'

In complex prepositions of this type, the first element serves as the head and the second element is an ADV under it. The object is then an OBL under the preposition, as in other preposition phrases. Adverbs ending in -an (norðan, sunnan, austan, vestan, innan, útan) and fram function as adverbials under the preposition.

The analysis of complex prepositions is summarised in (130) below.

(130) Overview of the analysis of complex prepositions. The first main type (8.6.1) is shown above the dashed line, the second type (8.6.2) below.

The adverbs in -an can also stand alone as prepositions and must be morphologically annotated accordingly. As discussed in ch. 2.7 above, there is thus a small group of words that has to be disambiguated.

Note that prepositions of this type govern a different case depending on whether they stand alone or not. Thus, fyrir norðan governs the accusative, while norðan governs the genitive.

## 9 Slashing and Coordination

### 9.1 Slashing

Slashing is used in three different circumstances: (a) to show that a word has an external subject, (b) to show that an empty verb has the same head as an explicit verb ("predicate identity") and (c) to show that words are coordinated. In classical dependency grammar, slashing is not used but this functionality was added in the proiel project and we borrow it from there.
(a) Slashing to external subjects apply to the functions XOBJ and XADV, as shown in ch. 7.3.4 and 7.4.2 above. In the first sentence of (57) below, the slash arrow points from the XOBJ buggan to the SUB bann [nominative], in traditional terminology from the subject complement huggan to the subject bann. The idea is that the verb vera is the sentence's head, and buggan and bann are each dependents under the verb. But there is also a secondary dependence between buggan and bann: the subject bann is the external subject (XSUB) of the complement Jonet. This is the relationship that the slash serves to show. The arrow points towards the head of the secondary dependency.

(57) Hann skal vera huggan hennar ok skal hon kalla hann Jonet.
'He will be her comfort and she shall call him Jonet.'
In the next sentence of (57), the slash arrow points from the XOBJ Jonet to the OBJ bann [accusative], in traditional terminology from the object complement Jonet to the
object hann. In addition, there is a secondary dependence between Jonet and hann: the object bann is the external subject (XSUB) of the complement Jonet.

Often, there is no subject in the sentence one can slash to. In such cases, one must slash to the PRED, which is the sentence's head word and is typically the subject's head, directly or indirectly. Examples are (110) in ch. 10.2 below, and (131) here:

(131) Síðan bjósk konungrinn upp pangat ok mǿtti bóndum q̨ðrum megin ár peirrar er Nitja heitir.
'Then the king headed up there and met the farmers on one side of the river which is named Nitja.'

In this example, Nitja is actually the complement (XOBJ) of ár (genitive of á 'river'), but since it is not allowed to slash outside the sentence, we must settle for slashing to its head, the verb heitir.
(b) In the case of empty verbs, we slash to an overt verb if there is a coordinated one. An example is (15):

(15) Hann var mjok ástbundinn af henni \| ok hon af honum.
'He was very much in love with her, $\|$ and she with him.'
In this example, we posit an empty verbal node in the second sentence, ok bon [var] af honum, and we slash from the empty verb in this sentence to the overt verb var in the first sentence (shown to the right in the tree). See also the comments in ch. 7.6.2 above.
(c) In coordinations, slashing is used to show the relationship between the coordinated elements. The principle is that the conjunction is raised above the coordinated elements and is tagged with their function. This is done in the same way for coordinated sentences and coordinated phrases. Since the conjunction is an important node in the sentence tree, it is highlighted by appearing inside a rhombus (cf. the trees in this chapter).

### 9.2 Sentence oordination

When sentences are coordinated, the conjunction receives the PRED function and the main verbs in the coordinated sentences are subordinated to the conjunction, as in (73). In this sentence, we slash from the second verb dreiffisk to the subject drykkrinn which it shares with the first verb rann.

(73) Rann drykkrinn ór ok dreifðisk víða um fjallit.
'The drink spilled out and spread all over the mountain.'

(132) Hann tígnaði hana ok unni yfir alla lifandi.
'He revered her and loved above all other living people.'

In (132), the verb share dependents: both tignaði and unni have bann as their subject, hana as object, and yfir alla lifandi as adverbial. This is analysed by assigning the subject and object to the verb tignaði as primary dependents, while the other verb, unna, has the same words as secondary dependents. We show this by slashing from unna to the dependents in question. Note that unna normally takes an oblique in dative, but in this case, the only option was to slash to the other predicate's accusative object bana. When it comes to the preposition phrase $y$ fir alla lifandi, it is the other way around - the nearest verb is unna, under which the phrase becomes a primary dependent, with a slash from tigna.

To make the analysis consistent, we follow the simple rule that the nearest of the two (or more) coordinated words is the main word, i.e. the one which receives the primary dependents. Here, hann and hana are closest to tignaði, and yfir alla lifandi is closest to unni.

An alternative might have been to make the shared words or phrases, commonly ADV and AUX, dependents under the coordination itself. But since dependency analysis is focused on words rather than phrases, and because the main verb is so important, we will avoid this option. In (133), hefir happens to be an AUX to both byrgt and lést, but we will analyse the sentence by hanging hefir on the first PRED byrgt, not the conjunction ok. Then we slash from lést to befir.
(133) Fyrir pví hefir hann hér byrgt mik ok lést í pessum steingarði.
'Therefore he has covered me and imprisoned in this stone garden.'
Shared phrases should always be marked with slash arrows. Coordinated phrases may share many different kinds of phrases which may be easy to miss. Infinitives can, for example, share an infinitive marker, so the annotator must be vigilant! Examples of slashing to shared phrases can be found in (134), where the three PRED frá 'heard of', bjó 'prepared' and kom 'came', share the subject Milun. See the tree in ch. 9.4 below.
(134) Milun frá orðsending hennar, bjó ríkuliga ferð sína ok kom upp í Norðmandí. 'Milun heard of her message, prepared his journey amply, and came up to Normandy.'

When a series of sentences is connected joined with more than one conjunction, the first one is placed directly under the sentence root, and every PRED in the sentence hangs from it, while the other conjunctions all become AUX under the first one. In (56a) (in ch. 6.1.1 above), we see that the first ok serves as the main connective word in the sentence. Based on this analysis, the result will be as shown on the next page. The tree shows that the first conjunction $o k$ becomes PRED for the whole series, and the verbs are its dependents.

(56a) Hann var oft lengi í konungs hirð || ok [hann] unni mjok konungs dóttur || ok oftsamliga rǿddi [hann] við hana | at hon skyldi játta honum ástarpokka sinn | bví at hann var vaskr maðr ok hinn kurteisasti.
'He was often a long time at the king's court and [he] loved the king's daughter very much and [he] often said to her that she should give him her love because he was a valiant man and most courteous.'

Finally, we note that in some sentences, there may be one explicit verb and another implicit, empty verb. An example of this kind of construction is (74), analysed in ch. 7.1.1 above (p. 81). Here, hvila is explicit in Ein man Ásta hvíla sér í nátt, but implicit in ok svá skulu vér [hvíla oss]. We must slash from the empty verbal node to the explicit verb to indicate the predicate identity (PID).

(74) Ein man Ásta hvíla sér í nátt, sagði hann, ok svá skulu vér [hvíla] [oss].
'Asta will sleep alone tonight, said he, and so shall we [sleep].'

### 9.3 Phrase coordination

In the paragraphs above, we saw that when a conjunction coordinates two or more verbs, it is assigned the same function as the verbs and becomes their head. The same method is used for all other kinds of coordination, i.e. below the PRED level. In (97), the predicatives (XOBJ) bugsjúkr and harmsfullr are coordinated by the conjunction ok, and ok inherits their function:

(97) Af pví var hann hugsjúkr ok harmsfullr.
'Therefore, he was distressed and sorrowful.'

(49) Ok hverr sem einn várra manna hefir oftsamliga sét pat ok gengit nǽr pví, báði nátr ok daga.
'And each one of our men has often seen it and approached it, both at night and by day.'

The relation between the subject and the predicative in (97) is expressed by slashing from the conjunction ok 'and' to the subject instead of slashing from each one of the coordinated words. The application automatically assigns the tag XSUB to the relationship between the XOBJ ok and the SUB bann. As previously mentioned, slashing indicates a secondary dependency; the primary dependency is between the PRED var and the XOBJ ok (which represents hugsjúkr and barmsfullr), while the secondary dependency is between the latter and the SUB bann.

In the case of béði-ok 'both - and', (annat) hvárt - eða 'either - or' and hvárki - né 'neither - nor', both elements are to be classified as conjunctions, but we analyse the latter as the primary conjunction and the former as AUX under it, as in (49) on the previous page. See also the discussion of these conjunctions in ch. 2.8 above. This is similar to English, where one can say he wants meat and fish or he wants both meat and fish but not *he wants both meat fish.

The analysis of the comparative construction beerr sem einn is briefly discussed in ch. 10.6 below. As shown in the tree on the previous page, we use an empty verbal node.

(135) Hvárki sakir pín, kvað hann, né ástarpokka píns vil ek vera svíkari né svívirðing herra míns.
'Not for your sake, said he, nor for your love's do I wish to be a traitor or a disgrace to my lord.'

In (135), analysed on the previous page, we observe that né stands alone as a conjunction in svikari né svivirðing, but together with bvárki in bvárki sakir pin né ástarpokka pins. In the first coordination, we slash in order to show that the XOBJ have the subject $e k$ as a secondary parent, and since the two words are coordinated, the slash goes from the conjunction né to the subject $e k$. This is comparable to example (97) above.

Then what about the attribute herra mins? It makes sense to hang it on the nearest word, svivirðing, and then slash from the coordinated svikari to herra in herra mins, since herra mins is an attribute of both words. But as it happens, the application assumes that a slash from an XOBJ or an XADV is to the external subject (either subject or object complements) and the relationship is then automatically marked as XSUB. Here, the relationship is ATR, which makes it impossible to slash from the coordinated svikari to the ATR herra mins.

We are therefore forced to break our rule from ch. 9.2 above, and hang herra mins as an ATR on the conjunction né. Since the conjunction inherits its function from svikari and svivirðing, namely XOBJ, an ATR will have the same relationship with both coordinated words. This is a way of expressing what could have been expressed with slash notation.

Coordination often occurs in discontinuous constructions, as in (136). In this sentence, the adverbial með honum only modifies allt lið hans, and we must assume that there is coordination of two verbs, only one of which is explicit.
(136) Ok varð Sóti handtekinn ok allt lið hans með honum.
'And Sóti was apprehended and all his men with him.'
See a more detailed analysis in ch. 13.3 below.

### 9.4 Asyndetic coordination

Coordination can also occur without a conjunction, as in (137) on the next page. Here, the phrase í úró ok í úfriði are linked with a conjunction, but the coordination of stundum í friði and oftsamliga í úró ok í úfriði is done without one. These are two verbal appositions to the main verb réd. In the syntactic analysis, one must add an "asyndetic conjunction" to tie the two together. In the sentence tree, this will appear as a ' C ' inside a rhombus. Then, one must posit two empty verbal nodes in order to group the adverbs appropriately, since neither apposite verb is explicit. These are represented by a ' V ' inside a circle.

(137) Um pá daga réð pví ríki Odels konungr, stundum í friði, oftsamliga í úró ok í úfriði.
'In those days, king Odels ruled, sometimes peacefully, often with unrest and conflict.'

In modern written language, it is common to coordinate three or more words or phrases with commas and then a conjunction between the last two elements, as in "Curly, Moe and Larry". In Old Norwegian, as far as we know, each word or phrase is usually connected with a conjunction, i.e. "Curly and Moe and Larry". This is the case in (56) discussed in ch. 6.1.1 above. But we have also found examples of the former type, namely (134), shown on the next page. In this tree, there is no need to add an empty conjunction node between the first two clauses. Instead, the three verbs frá, bjó and kom all hang from the single conjunction $o k$.

(134) Milun frá orðsending hennar, bjó ríkuliga ferð sína ok kom upp í Norðmandí.
'Milun heard of her message, prepared his journey amply, and came up to Normandy.'

In exceptional cases, a conjunction connects two different elements, often COMP and OBJ, as in (138). We allow this because COMP is often an OBJ in the shape of a sentence; in (138) ok coordinates the OBJ vilja pinn 'your will' and a COMP, hvat pú kárir 'what you wish for'. We follow proiel's convention of assigning the function OBJ to the conjunction in such cases.

(138) Seg mér vilja pinn ok hvat pú kárir.
'Tell me what you want and what you wish for.'

## IO Subordinate Clauses and Clause-like Constructions

## IO.I Nominal Clauses

The main type of nominal clause is the at-clause, like (55), analysed in ch. 7.1.1 above:
(55) Pá viti hann at sǫnnu at svá hefir konungr mǽlt.
'Then he shall surely know that the king has spoken thus.'

A nominal clause is typically an object or a subject in the main sentence, but since clauses are not tagged with functions like SUB and OBJ, we use COMP instead; cf. (55) in ch. 7.1.1 above. The subjunction is always the head in a dependent clause, under which we get the clause's verb.

Indirect questions with bvat are also a type of nominal clauses, but these often have no introductory subjunction. Therefore, their verb has the function COMP.

(139) Hann spurði hvat títt var með konungi.
'He asked what was new with the king.'

(103) En hann lézk ekki vita hvat er pǽr vildu.
'But he acted as if he did not know what [that] they wanted.'

(45) Kynligt pykkir mér, kvað hann, hví pú leitar ei rannsaks um slíkt.
'It seems strange to me, he said, why you do not seek an investigation into such things.'

If the indirect question has a subjunction, it has the function COMP and the verb is subordinated to it, as in (103) on the preceding page.

Indirect questions with the interrogative adverb bví also belong here, like the one in (45), also on the preceding page. These clauses are not introduced by a subjunction either, so that in (45) the main verb leitar is assigned the function COMP, while hví is taken as ADV within the interrogative clause.

Note that um slikt is analysed as a NARG, meaning that it functions as an argument of the noun rannsaks. Cf. ch. 7.3.6 above.

Finally, there are many indirect questions with the interrogative adverb hversu 'how', as in (140). Here also, the main verb is a COMP, while hversu is an ADV in the interrogative clause.

(140) Síðan fór hann aftr til Gúruns ok sagði honum hversu mǽrin unni honum.
'Then he returned to Gurun and told him how much the maiden loved him.'

### 10.2 Relative Clauses

We distinguish between restrictive and non-restrictive relative clauses, both because the distinction is incorporated into the syntax and because it is relevant to the study of a text's information structure. Restrictive clauses are tagged as ATR while non-restrictive clauses are tagged as APOS, as illustrated in (110) on the next page.

If the distinction between the two is not clear, the relative clause may be annotated as REL, but we recommend using this function with restraint (cf. ch. 7.5.5 above).

(110) Forðum í Norðmandí gerðisk einn atburðr er síðan var víða freginn um tvau ungmenni er mjok elskuðusk.
'In former days in Normandy there was an occurrence which became widely known, about two youths who loved each other very much.'

A relative clause always has an antecedent in the main clause, and the subjunction (or relative particle) er or sem is either an ATR or APOS under it. The antecedent can be a determiner, i.e. sá (in any form), or an adverb, i.e. par. (141) is an example of the former, where pat (acc. sing. neut. of sá) is the antecedent:
(141) Pví at engi gat fullgort pat er við lá.
'Because no one could fulfil that which it entailed.'

Another example of a determiner is (83), where margir (nom. plur. masc. of margr) is the antecedent:
(83) Pá leituðu margir við at bera hana, er allsekki gátu at sýst.
'Then many, who could not do anything, sought to carry her.'

In (142) the antecedent is the adverb par:

(142) Ok fór hann í fóstrland sitt Suðvales, par sem hann var fø̈ddr.
'And he went to his native country Sudvales, where he was born.'

### 10.2.I Restrictive Relative Clauses

Relative clauses are introduced by the subjunction (relative particle) er or sem. The antecedent can be a noun, i.e. ungmenni in (110) above. Here, we understand the second relative clause, er mjok elskuðusk, as necessary for the word ungmenni. The clause is thus restrictive and the subjunction is tagged as ATR.

The antecedent of relative clauses is often accompanied by a determiner, sá or pessi. This word may stand alone, as in (141), or be part of the antecedent, as in (121):
(141) Pví at engi gat fullgǫrt pat er við lá.
'Because no one could fulfil that which it entailed.'
(121) Sá konungr er pá bjó par, átti eina dóttur, fríða ok kurteisa mey.
'The king who at the time lived there had a daughter, a fair and courteous maiden.'

In (121), sá is part of the antecedent sá konungr. It refers to a specific king, who lived there, so the relative clause is restrictive, i.e. necessary. The clause is therefore tagged as ATR (cf. the tree in ch. 7.4.3 above).

The antecedent also occurs in apposition to a word in the main clause, like sú (nom. sing. fem. of sá 'that') in (115). In the restrictive relative clause er mannfolkit byggir, the subjunction er 'which' is an attribute of sú 'that', which is an apposition of kringla f . 'circle' (cf. the analysis of sá konungr in example (121) in ch. 7.4.3 above).

(115) Kringla heimsins, sú er mannfolkit byggir, er mjok vágskorin.
'The circle of the world, which is inhabited by people, is quite indented with bays.'

### 10.2.2 Non-Restrictive Relative Clauses

Non-restrictive relative clauses are also introduced by the subjunction er or sem, but usually without sá or pat. They are similar to appositions and are therefore marked as APOS. In (143) below, we understand the relative clause er pá var í bqndum meə peim as non-restrictive. The fact that the old man was chained is not indispensible information; it is rather a type of additional information. If the antecedent had been definite, on the
other hand, sáhinngamli maðr, we would interpret the relative sentence as restrictive and analyse it as an ATR.
(143) Pá mx́lti gamall maðr einn er pá var í bondum með peim.
'Then spoke an old man who was chained with them.'

In (144) below, we have another example of a non-restrictive relative clause. Here, pá er fruín hafði allt sagt honum is an APOS under pá in the main clause (i.e. the pá right before fagnadi), and the subjunction er is an APOS (and thus analysed as non-restrictive) under the first pá.

(144) Pá er frúin hafði allt sagt honum, pá fagnaði hann at faðir hans var áttgóðr ok ríkr at eignum.
'When the lady had told him everything, he rejoiced in the fact that his father was of noble stock and rich in possessions.'

### 10.3 Adverbial Clauses

Adverbial clauses are introduced by a subjunction, which can be either simple, i.e. ef, meðan, siðan, or complex, i.e. fyrir pví at or sakirpess at. In (113), the subordinate clause is introduced by ef 'if'. Note that the word order is unchanged in the main clause (ek vil, not vil ek as might be expected, according to the word order in Modern Norwegian).

(113) En ef pér líkar, ek vil við hana rǿð́a.
'If you like, I will speak with her.'

Adverbial clauses are often the first phrase in the main clause, but can also occur elsewhere. In any case, we analyse the clause as ADV. In (113), the subjunction ef will therefore be ADV under the verb in the main clause. It is also common for the adverbial clause to occur late in the sentence, as in (145).
(145) [Hann] fyrirbauð honum ríki sitt, sakir pess at hann unni dróttningunni. ' $[\mathrm{He}]$ kept him from his kingdom, because he loved the queen.'

In many cases, the adverbial clause has an antecedent in the word pá in the main clause, as in (11) on the next page. In accordance with the analysis in ch. 12.2 below, the subordinate clause is taken as an APOS under the adverb pá. Note that we slash from the second verb bera to the adverb pá under the verb lifa, since the two verbs share this adverb.

(11) Meðan pessir tveir viðir búa báðir saman, pá lifa ok bera lauf sitt.
'While these two trees are together, [then] they survive and bloom.'

In (54) on the next page, we have a similar example, where the second pá is an ADV in the main clause, and the first is in apposition to it. It is the head of a restrictive relative clause, of the same type as in (144) above (ch. 10.2.2).

(54) En pá er peir váru albúnir ór họfninni, pá fóru peir norðan fyrir Prjótshverfi hǫlfum fjórða tig skipa.
'But [then] when they were ready to leave the harbour, [then] they sailed north by Thrjotshverfi with 35 ships.'

A large group of complex subjunctions ends with at, i.e. pó at, slik at, pví at, fyrir pví at, sakir pess at. Since these subjunctions introduce an adverbial clause, the uppermost node will be an ADV, i.e. fyrir in fyrirpvíat and pví in pvíat. In two-word subjunctions like pví at, pví will be an ADV in the main clause, at an APOS underneath it, and the subordinate clause a PRED under at, cf. (187) in ch. 11.3.2 below.

In three-word subjunctions like fyrir pvíat, pví is taken as the dependent of fyrir and is tagged as OBL. The last word, at, is always tagged as an APOS and governs the PRED in the subordinate clause, as in (146) on the next page. In (146), we analyse fyrir pví at as a complex subjunction, even though it is split (discontinuous). In the dependency analysis, this actually looks rather simple, because we can ignore the word order.

(146) Ok fyrir pví íhugaða ek at gera nǫkkura góða s甲qu, ok ór vǫlsku í bókmál snúa at pat mátti flesta hugga er flestir megu skilja.
'And for that reason I considered putting together a good story, and translate it from French to Norse, that I might bring joy to more people if more could understand it.'

Comment: Bókmál usually means 'Latin', but in this example, which has been taken from the Norwegian part of the prologue to Strengleikar, the meaning must be 'Norse'.

Alongside the subjunction fyrir pví at, we also have fyrir pví, as in (147) below, or even just $p v i ́$. Then, $p v i ́$ must be annotated morphologically as a subjunction, since it introduces the subordinate clause. In the syntactic annotation, pví will be an ADV, while fyrir must be taken as AUX. If pví occurs alone, there is of course no AUX.

(147) Ok pótti peim pat landvǫrn mikil, fyrir pví hǫfðu par margir úslétt farit.
'And they considered it a great defence of the land, because many had suffered there.'

(48) Nú var Desiré tíu vetr útan lands, svá at hann fór ekki heim pess á millum. 'Now, Desiré was abroad for ten winters, so that he did not return in the meantime.'

In (48) above, we see that the complex subjunction svá at can be analysed in the same way as fyrir pví at, so that svá is assigned the function ADV, and at becomes an APOS under svá.

Sometimes an adverb is inserted into the complex subjunction, as in (148):

(148) Hann unni pessari frú mjǫk lengi, svá tryggliga at eigi var hugr hans á annarri.
'He loved this lady for a very long time, so devoutly that his mind strayed to no other.'

Here, the adverb tryggiliga has been analysed as the head of the adverb svá, since svá modifies tryggiliga, and at stands in apposition to svá, just as in other complex subjunctions. Cf. also the analysis of (90) in ch. 10.4.1 below.

Another, smaller group of complex subjunction ends in sem, i.e. pegarsem and nú sem, which are typically appositions to a pá in the main clause. Here also, the uppermost word will be an ADV, i.e pá in the main clause, while pegar and nú are APOS under pá. An example of this is in (119), analysed in ch. 7.4.2 above:
(119) Pegar sem hann var heiman fórr, pá sendi hann [acc.] faðir hans heiman til konungs hirðar at pjóna konungi.
'As soon as he was able to leave home, his father sent him to the king's court to serve the king.'

Here, the subordinate clause pegar sem hann var heiman fórr is dislocated and stands in apposition to the adverb pá in the main clause, so that pegar is an APOS under pá, and sem is an APOS under pegar. Had there been no pá in the main clause, the subordinate clause would have shifted up and pegar would have been the ADV, with sem still as its APOS. Relative clauses are usually either restrictive (ATR) or non-restrictive (APOS), but in this particular construction, we always analyse them as APOS. In this way, we get a single analysis covering all complex subjunctions.

It is worth noting that the complex subjunctions also occur as single words in the sources, pó at > pótt, and sometimes pví at > pvít and svá at > svát. When this happens, the words pótt, pvít and svát are analysed as subjunctions with the function ADV.

Another and somewhat simpler construction is the one with bvártsem, as in (149):

(149) En hinir [eru] allir úgildir hvárt sem peir fá sár eða bana, bǽð̌i konungi ok karli. 'But the others [are] all useless, whether they are hurt or killed, to both king and to man.'

Finally, we give in (150) below a summary of the complex subjunctions and the functions of individual words. As mentioned before, we usually assume the uppermost word to be an ADV, but when the subordinate clause is moved, the function becomes APOS (see also ch. 11.3.2 on this point).

(150) The syntactic analysis of complex subjunctions.

## I0.4 Infinitive Constructions

Infinitives often occur in clausal constructions, and may therefore have their own dependents, OBJ, OBL and ADV. In (146), sqgu is an OBJ of the infinitive gera (see the analysis in ch. 10.3 above):
(146) Ok fyrir pví íhugaða ek at gera nǫkkura góða ṣgu [...].
'And for that reason I considered putting together a good story [...].'
With the verb láta, we get constructions in which the subject of the main clause can not be construed as the subject of the infinitive. In (46), konungr is the subject in the main clause, while the subject of gera is someone else, 'the king had [someone] build a city'. This is analysed in ch. 7.3.4 above, p. 95.
(46) Mjôk nǽr fjallinu lét einn konungr gera mikla borg.
'Very close to the mountain, a king had a great city built.'
The verb biðja can govern an implicit clause, as in (151) below. Here, we understand pá búa ferð sina as the implicit clause, and we therefore analyse pá 'them' as an OBJ under
$b a ð$, the infinitive búa as an XOBJ, and ferð sina as an OBJ under búa. In accordance with the rules in ch. 9.1, we slash from the XOBJ to the OBJ.

(151) Síðan bað konungrinn pá búa ferð sína.
'Then, the king told them to prepare their travel.'

### 10.4.I Accusative with Infinitive

The accusative with infinitive is typically governed by verbs of perception, like heyra and sjá. The accusative often occurs right before the infinitive, but there is some variation in the word order, as illustrated in (152):

(152) Pá skalt pú mik sjá standa hjá pér.
'Then you shall see me standing by you.'

We understand there to be an underlying clause $e k$ [nom.] stend [present], which has then changed into mik [acc.] standa [infinitive]. The infinitive is connected to the main clause via the relation COMP, while the accusative is tagged as a SUB, reflecting its function in the underlying clause.

(90) Ok hefir hann heyrt fugla syngja svá fagri rọddu at hann [acc.] lysti til at hlýða.
'And he has heard birds sing with such a beautiful voice, that he wished to listen.'

Example (90) on the preceding page has essentially the same structure as (152), in the sense that beyrt fugla syngja is parallel to sja mik standa. However, (90) has a rather complex adverbial phrase. In this, the words svá fagri ręddu at corresponds to svá tryggiliga at in (148), cf. ch. 10.3 above, p. 145. Also note that in (90), lysta has an oblique subject, hann [acc.], and it has a prepositional phrase as an oblique, cf. (177) in ch. 11.2.2 below.

Sometimes, the accusative collapses into the main verb, which then becomes reflexive. In (153), vita is the infinitive, and -sk in kvezk is the accusative (it is an enclitic form of an original sik 'oneself'). Here, we could not use the function COMP without being able to separate the enclitic -sk from the verb. Instead, we analyse these constructions with the infinitive as an XOBJ. In this case, we slash from the infinitive vita to another verb form, kvezk, since the underlying subject is expressed by the ending sik > $-s k$ (i.e. $k v e \partial r+s k$ 'says himself' $>k v e \not \partial r s k>k v e \not \partial s k=k v e z k$ ).

(153) Konungrinn kvezk vita bragð peira.
'The king says that he knows of their trick.'

### 10.4.2 Nominative with Infinitive

Nominative with infinitive occurs with verbs that govern an oblique subject, e.g. pykkja and sýnask. The construction comprises a nominative subject along with the infinitive vera with its dependents, if any, e.g. XOBJ or OBL, as in (154):

(154) Mér pótti vit vera í hellinum.
'I thought that we two were in the cave.'

In (155), we also have a nominative with an infinitive, and here the subject póttisk and the subject of the understood vera are the same. That is, the person thinking and the person hovering are one and the same. Therefore, we hang bann as a SUB under póttisk and slash from vera to hann. This analysis is similar to that of sentences with the verb látask where the two subjects are also the same, as (103) in ch. 7.3.4 above, p. 96.

(155) Ok allr póttisk hann á lofti vera.
'And he thought he was entirely in the air.'

Sometimes, the verb vera is elided, as in (156). Then we add an empty verbal node:

(156) Pá var honum Konraðr dauðr sagðr [vera].
'Then he was told that Konrad [was] dead.'
In all three instances above, we assume there to be an underlying clause. In (154) it is vit [erum] íhellinum, in (155) bann [er] álofti, and in (156) Konraðr [er] dauдr.

### 10.5 Dative and Accusative Absolute

In learned style, both in Old Norwegian and Old Icelandic, and in the Old Icelandic Eddic poems, we have examples of so-called dative (or accusative) absolute, which functions as an adverbial clause. There are analogous constructions in both Latin (ablative absolute) and Greek (genitive absolute). Here are two examples from the Eddic Hárbarðsljóð (Hrbl.), taken from Jón Helgason’s 1971 edition:
(157) Taka við víl ok erfiði at uppverandi sólu (st. 58)
'to take with hardship and toil while the sun is in the sky'
(158) fanntaðu mann inn harðara at Hrugni dauðan
'then you found no man fiercer since Hrugnir died'

(157) Dative absolute (Hrbl. st. 58)

(158) Accusative absolute (Hrbl. st. 14)

In both of these cases, it makes sense to take at as a preposition in the phrases at Hrugni dauðan and at uppverandi sólu. We analyse the prepositional phrases as ADV, with sólu and Hrugni as OBL, and upperandi and dauðan as XADV.

This construction is discussed by Nygaard (1905: 128, §120) and others as an absolute dative and by Hanssen and others (1975: $129, \$ 15.45$ ) as a double dative. The accusative use, as in (157), is not discussed in these grammars.

## I0.6 Comparative Constructions

In comparative constructions, the subjunction en 'than' is frequently used, as in (126), but sem and, more rarely (in Old Norwegian at least), ok also occur. We have chosen to analyse these constructions as containing an underlying clause with no verb. In example (126), it is sú er frïdari en Pér [eruð] 'she is more beautiful than you [are]'. Since we analyse the final en Pér as representing an underlying clause, the subjunction must be taken as a COMP. In the annotation application, we use the option "add empty verbal node" to add the empty verb.

(126) Sú hin fátókasta í hennar pjónustu er fríðari en Pér, frú dróttning!
'The poorest one in her service is more beautiful than you, my queen!'

Another example would be (159):
(159) En hǫfðingi sá reið hesti peim, er mǫrgum hlutum er gq̧fgari en gervastir allir aðrir.
'But the chieftain rode a horse, which in many ways is more noble than the foremost of men.'

In (126) and (159), a comparative word immediately precedes the subjunction en, which is the case in most comparative constructions. This also applies to fyrr en 'until' in (160).

(160) Paðan fór Óláfr konungr í Soleyjar ok létti eigi fyrr en í Svípjóðu.
'From there, king Olaf went to Solør [in the southern part of the present-day county of Hedmark] and did not stop until he came to Sweden.'

In the above examples, we have introduced an empty verbal node in the comparative construction, and it is rather straight-forward to suggest an underlying verb for this position. In some examples, however, like (96) on the next page, there is no obvious candidate for an underlying verb. Since we take this construction to be analogous with the previous ones, we will also analyse it with an empty verbal node:

(96) Hon hefir par lengr verit en fimmtigi vetra.
'She has been there for more than fifty winters.'

We take (96) to be a type of comparison referring to a measurement of the dimension (e.g. time, space, weight) that the adverb or adjective signifies.

Comparison is less commonly introduced by sem 'as', as in (26) on the next page. The analysis is the same as in the three preceding examples, where en has the function COMP. But in (26), the comparison is not necessary, making sem an ADV.

(26) Pá bera peir, sem hinn vildasti viðr, lauf ok blóm.
'Then they bear, as the best of trees, leaves and flowers.'

Another example is found in (49), where we must posit an implicit verb, i.e. that bverr sem einn represents the underlying clause sem [er] einn. Then analysis of this clause is shown in ch. 9.3 above.
(49) Ok hverr sem einn várra manna hefir oftsamliga sét pat ok gengit nár pví, bǽð́i nátr ok daga.
'And each and everyone of our men has often seen it and approached it, both at night and by day.'

We often see comparative constructions with svá sem, where we take svá as ADV and sem as an APOS under svá, as in (161). In this example, we also have sem occurring as a regular relative particle, namely in atburði pá sem gerðusk á binu syðra Bretlandi i fyrnskunni.

(161) En svá sem ritningar hafa sýnt mér vil ek segja yðr atburði pá sem gerðusk á hinu syðra Bretlandi í fyrnskunni.
'But as written texts have shown me, I want to tell you about the events that occurred in the south of Britain in the olden days.'

In (161), it is reasonable to take svá as an ADV directly under the verb segja. But in (162), svá is an APOS under pá, which introduces the second comparative clause "as ... then":

(162) Svá sem honum helt pessi harmr, pá kom hann pví nǽst til hafnar par sem hann fyrst skipit sá hjá fylki sínu.
'As this sorrow gripped him, then he next went to the harbour where he first saw the ship in his district.'

We analyse the construction svá + adverb + at with svá as an ADV under the adverb, and at as an APOS under svá, as exemplified in (148):

(148) Hann unni pessari frú mjok lengi, svá tryggliga at eigi var hugr hans á annarri. 'He loved this lady for a very long time, so devoutly that his mind strayed to no other.'

The construction svá + adjective $+a t$, as in svá fagri rqddu at 'a voice so fair that' in (90), is comparable. It has been analysed in ch. 10.4.1 above.

There are also examples of ok being used as a subjunction, with the word samr among others, as in (163), analysed on the next page. Here, ok should be morphologically tagged as a subjunction rather than a conjunction. In this comparative construction we posit an empty verbal node.

(163) Hann hefir sǫmu lýzku sína ok áðr.
'He has the same manners as before.'

Finally, comparison can also be done without a subjunction. An example of this is (164) where solu is an OBL under the XOBJ bjartari:

(164) Hann var sólu bjartari.
'He was brighter than the sun.'

### 10.7 Sentences with pat and an Extraposed Subordinate Clause

In Old Norwegian, at-clauses may be extraposed at the end of their main clause. They are sometimes accompanied by a pat before the finite verb, or after the verb, as in (165), where pat and the dependent clause are rendered in bold type:
(165) Pat er par til merkis at Ásta, dóttir hans, er sjúk við barni.
'That indicates that Ásta, his daughter, is with child.'
The word pat is in both cases in a typical subject position. Sentences like (165) are akin to constructions in Modern Norwegian with det 'that' as a formal subject, i.e. a subject with no contents, followed by a clause functioning as a so-called potential subject. However, since Old Norwegian does not require a subject, it is reasonable to analyse pat as a pronoun that anticipates (and refers to the same thing as) the subordinate clause. In that sense, pat and the subordinate clause are in apposition, and we take pat as a SUB and the clause as an APOS under pat.

An alternative would be to analyse pat as a determiner with the subordinate clause, since pat and the clause form a discontinuous phrase, but we have nevertheless stuck to the APOS analysis, as shown in (166):

(166) Ok var pat eigi kynligt at Bisclaret vildi sín á honum hefna.
'And it was not strange that Bisclaret wanted to get his revenge on him.'

There are also sentences in which pat is not the SUB, but an OBJ or an OBL. The analysis will be the same as above: pat (or pví or pess) is an OBJ/OBL with a subordinate clause as an APOS, as in (167):
(167) En pess vil ek biðja yðr at pér blótið mik eigi.
'But I want to ask you this, not to curse me.'
Sentences can of course have pat as a subject or an object without it having a subordinate clause in apposition, as in (146), shown in ch. 10.3 above, and in (78), shown in ch. 7.1.3, where it is a SUB, and in (49), shown in ch. 9.3, where it is an OBJ.

## II Verbs and Verbal Particles

In ch. 7.1.1 PRED we discuss the analysis of main verbs, and in ch. 7.2.1 AUX we cover auxiliary verbs. In this chapter we will look at verb phrases in more detail. Firstly, we will try to draw a clear distinction between main verbs and auxiliary verbs. Secondly, we will look at infinitives, which have a great many functions, and are not always easy to analyse unequivocally. Thirdly, we will talk about the verbal particles, of which some are closely connected to the verb while others are not.

## II.I Auxiliary Verbs

The basic difference between main verbs and auxiliary verbs is that main verbs have a lexical meaning, while the auxiliaries have only grammatical meaning (cf. Faarlund, Lie and Vannebo 1997: 516-518). Grammatical meaning entails that the verb functions in a similar way to inflectional endings, i.e. they express grammatical relationships in sentences, like time, voice and modality. In (168), kunna is an auxiliary of this type, but in (169), it is a main verb (see the trees on the next page).

As mentioned in chs. 7.1.1 and 7.2.1, we analyse the main verb as PRED and the auxiliary verb as AUX. A number of verbs may occur as either of the two. These include at least the five verbs which govern an infinitive, kunna, mega, vilja, pora and pykkja, and up to six which govern a supine, primarily hafa, geta and fá, but probably also eiga, ráda and vinna (cf. Faarlund 2004: 130).

The verb kunna 'know, be able to' can occur as an auxiliary verb, as in (168) below. This sentence actually has two auxiliary verbs, man (from типи) and kunna. In accordance with ch. 7.1.1 above, we analyse both as AUX, cf. example (71). But kunna can also be a main verb, when it means 'to have knowledge of', as in (169) below. Here, we have analysed the noun phrase allra grasa ok róta 'of all herbs and roots' as a nominal argument, NARG, dependent on skyn 'knowledge', since it is an objective genitive, skynja oll gręs ok rótr > allra grasa ok róta skyn. Cf. ch. 7.3.6 above.

Similarly, hafa, can either be a main verb, PRED, with objects, and an auxiliary verb, AUX, under a supine verb. In (163), hafa has the object sqттu lyzku 'same manners', and is undoubtedly a main verb (cf. the tree in ch. 10.6 above):
(163) Hann hefir sq̣mu lýzku sína ok ádr.
'He has the same manners as before.'

(168) Hann man aldrigi kunna deyja. 'He will never be able to die.'
(169) Hon kann allra grasa ok róta skyn. 'She has knowledge of all herbs and roots.'

In most cases, however, hafa occurs with a main verb in the supine form, and is taken as an auxiliary verb. An example of this is (55), analysed in ch. 7.1.1 above. Here, the supine form mált is the PRED:
(55) Pá viti hann at sq̣nu at svá hefir konungr mált.
'Then he shall surely know that the king has spoken thus.'

## II.I.I Auxiliary Verb + Infinitive

In previous chapters, we saw that mega, kunna, vilja and pora can occur both as main verbs and as auxiliary verbs. In addition to these, there are two verbs that are only auxiliaries, типи and skulu.

Some of these verbs can govern an infinitive with or without an infinitive marker, at least kunna, pora and pykkja. On the other hand, we have not found examples of munu, mega, skulu or vilja governing an infinitive with an infinitive marker. As a rule, when the verbs occur with an infinitive without an infinitive marker, we analyse them as auxiliary + main verb, i.e. AUX + PRED. When they occur with an infinitive with an infinitive marker, we analyse them as main verb + external object, i.e. PRED + XOBJ.

In (170), the infinitive kyssa 'kiss' has no infinitive marker, so we take it to be a main verb, PRED, while kann 'can' is an auxiliary verb, AUX. But in (171), we analyse kynni
'knew how to' as a main verb, PRED, and grǿða 'heal' as an XOBJ, with the infinitive marker at as an AUX under it.

(170) Pessi riddari kann vel kyssa. 'This knight can kiss well.'

(171) Hann vissi at sár kynni at grǿða. 'He knew that the wound might heal.'

We have thus far not seen an example of the rare verb *knega 'be able to, be allowed to' in our corpus, but Norrøn ordbok lists it being used as an auxiliary verb. The infinitive form of this verb is marked with an asterisk, since it does not appear in the sources.

In ch. 11.2.1 below, we discuss verbs of duration, beginning and ending, e.g. byrja at, taka at, nema at. These are not considered auxiliaries, but rather as XOBJ.

## II.I. 2 Auxiliary Verb + Supine

The three verbs hafa, geta and fá can, as mentioned above, occur both as auxiliaries and as main verbs. To these we can add eiga, ráða and vinna. As auxiliaries, they occur with the supine form of the main verb, and we analyse them as auxiliary + main verb, i.e. AUX + PRED. Sentence (55) above is one example we often have referred to of hafa + supine; sentence (141) on the next page is another, this time with geta as AUX.

(141) Pví at engi gat fullgort pat er við lá. 'Because no one could fulfil that which it entailed.'
(172) Gat hann ok orrostu pessarar.
'He also mentioned this battle.'

The verbs mentioned here also occur as main verbs, such as in (172).
In older language, we sometimes see another construction, namely bafa + object + object predicative, where the predicative agrees with the object. So it is in (173) on the next page, where the participle séna (acc. sing. fem. of sjá 'see') agrees with stjornu (acc. sing.). See also Haugen (2001: 278-279).

In this analysis, séna is XOBJ dependent on the PRED bafð̛i. In the younger construction, hann bafð̈i fyrr sét 'he had seen before', sét would be analysed as PRED and haffi as AUX, as exemplified in (55) in ch. 7.1.1 above.

(173) Keisarinn sá stjǫrnu eina ljósari en hann hafði fyrr séna.
'The emperor saw a star, brighter than he had seen before.'

## | I. 2 Infinitives

In ch. 7, we gave a series of examples of infinitives with different functions, especially in ch. 7.3.4 XOBJ and in ch. 7.3.5 COMP. What follows is a comprehensive discussion of infinitives and their various functions.

## II.2.I XOBJ

Infinitives are XOBJ with a number of phrasal verbs. These verbs may express the beginning, duration and end of an action. As mentioned in ch. 7.3.4, p. 93, this does not seem to have occurred often in Old Norwegian, but taka at 'begin to' is an example:
(98) Fyrr en pú tókt at unna mér, pá vart pú lofsǽll af hreysti pinni.
'Before fell in love with me, you were praised for your valour.'

Verbs expressing will and intention (purpose) are also analysed with XOBJ, e.g. étla 'intent, plan':

(174) En eigi ǽtlumk ek at taka trúna.
'And I do not intend to convert.'
In (174), the subject is expressed both with $e k$ and the enclitic - $m k$. It is enough to tag $e k$ as the SUB. If $e k$ had not been present (which would still have been grammatical), the subject would have been represented with the enclitic $-m k$. In that case, the analysis would be as shown in (64) in ch. 6.2.2 above.

(153) Konungrinn kvezk vita bragð peira.
'The king says that he knows of their trick.'

The infinitive in accusative with infinitive constructions is analysed as COMP, apart from the instances where the governing verb is reflexive. An example is (153) above, where the accusative is joined with the verb as the enclitic $-s k$. Then, we analyse the infinitive as an XOBJ, as explained in ch. 10.4.1 above, p. 150. As for the form kvezk, we refer to the morphological analysis of the word in connection with sentence (153) in the same chapter.

The so-called infinitive of purpose is analysed as an XADV, cf. ch. 11.2.3 below.

## II.2.2 COMP

When the infinitive is the head in an accusative with infinitive construction, it is assigned the function COMP. To be tagged as COMP, it must have (or must be able to take) its own subject. This subjects receives its semantic role from the infinitive, not the verb governing the infinitive. An example of this is (152), discussed in ch. 10.4.1 above:

(152) Pá skalt pú mik sjá standa hjá pér.
'Then you shall see me standing by you.'
In (152), the accusative mik gets its semantic function from the infinitive standa, and is analysed as SUB. Verbs of perception, like sjá and heyra, also belong here.

The verb biðja governs a similar construction, but there we have chosen to analyse the infinitive as an XOBJ. In those cases, the semantic function is assigned by the superordinate PRED, as in (151), discussed in ch. 10.4 above.

(151) Síðan bað konungrinn pá búa ferð sína.
'Then, the king told them to prepare their travel.'
Infinitives can occur as subjects or objects of verbs, in which case we use the function COMP rather than SUB or OBJ. An example of this is (175), where the infinitive véla functions as the subject for the PRED sýnisk.

(175) En vant sýnisk honum um pessa ást at véla.
'But it seems difficult for him to pursue this love.'

An infinitive can be an argument of an adjective (176) or an object of a preposition (177). Also in such cases it should be tagged as COMP.

(176) Nú er erfingi skyldr at gera honum boð.
'Now an heir is obliged to summon him.'

(177) Pá réðu peir vaskliga til at sǿkja hann [i.e. kastalann].
'And they began attacking it [i.e. the castle] bravely.'

## II.2.3 XADV

The infinitive of purpose is analysed as an XADV, as in (118):
(118) Ok at halda honum félagskap pá lét blóð með honum rǽðismaðr hans.
'And to keep him company, his steward underwent bloodletting with him.'

See a syntax tree and a more detailed discussion in ch. 7.4.2 above.

## II.2.4 ATR

An infinitive can also be a dependent under a pronoun or a noun. In (178), the infinitive ráða modifies the noun skip.

(178) Ok hafð̊i hann tíu skip fyrir at ráða.
'And he had ten ships at his disposal.'

## II.2.5 APOS

Sometimes, the infinitive functions as an APOS to other words, like pat and bitt. In (179), the infinitive setjask is an APOS to pess, expressing what he (Thormod Kolbrunarskald) was not able to do.

(179) Til bess em ek eigi fórr at setjask í rúm hơfuððskálda.
'I am not so good as to be placed among great poets.'

## II.2.6 NARG

Lastly, we analyse infinitives as NARG when they are dependents of deverbal nouns.

(180) Gef ek pér leyfi at unna peirri [konu].
'I permit you to love this [woman].'

## II. 3 Verbal Particles

In Old Norwegian (as well as in other Germanic languages), the verb is often complemented by a preposition or an adverb, e.g. liggja við'be at stake' and lúka upp 'open, make known', which often changes the verb's meaning in such a way that is not always obvious or predictable. These words are traditionally known as verbal particles (cf. Norsk referansegrammatikk, pp. 446-449, there called verbalpartikkel). We analyse these particles as OBL under the verb, because they are necessary to express the idiomatic meaning. They can occur (a) with or (b) without an object. In either case the particle is an OBL, not an ADV or an AUX.

## II.3.I Verbal Particles without Objects

In sentence (181), the verb yrkja 'work, compose' (preterite plural ortu) occurs with the verbal particle (morphologically a preposition) á 'on', which changes the verb's meaning to 'set about, attempt'. For this reason, the particle is analysed as an OBL. The particle takes no object, and it is not obvious what such an object would be, except maybe Óláfr (which should then have been in the accusative).

(181) Ok ortu bóndr á pegar ok bǫrðusk við Óláf konung.
'And the farmers at once set upon [him] and fought king Olaf.'

In sentence (182), there is no object either, nor is it obvious what this would have been, if not the general 'situation'. Here, the particle precedes the verb, which is not uncommon in Old Norwegian.

(182) Pá mun hon til leggja ráð ok rǿkt.
'Then she will provide advice and attention.'

The phrase rád ok rókt is not the particle's object, because til governs a genitive, but these words are in the accusative (as direct objects of the verb leggja).

In (183), lik fuglsins is the verb's object, while the adverb upp is an OBL. There is a difference between taka 'take' and taka upp 'pick up' (and, for that matter, taka til 'start, begin'). In that sense, (183) is similar to (182) above, the difference being that the verbal particle is an adverb not a preposition.
(183) Pá tók frúin upp lík fuglsins.
'Then the lady picked up the dead bird.'

Sentence (184) is another example of a verbal particle without an object, where we have two particles, $u m$ with the verb orða and at with the verb telja:

(184) Sem hann heyrði at menn um orðuðu ok at toldu [...].
'As he heard that men talked about it and found fault [...].'
In (185), there is no object either, and we analyse $u p p$ as an OBL under the verb:
(185) Um morgininn árla stóð hann upp ok steig á hest sinn.
'Early that morning, he got up and mounted his horse.'

Here we see that the verb standa 'stand' does not denote movement (one can easily stand still). The verbal particle $u p p$ changes the meaning to a movement, 'stand up, rise'.

In (186), however, the verb reisask 'raise oneself' (the reflexive of reisa 'raise') denotes movement, so that if an $u p p$ is added, it functions more like an ADV:
(186) Ok reistisk hann pá upp ór rekkjunni.
'And he rose up from the bed.'

## I I.3.2 Verbal Particles with Objects

In sentence (187), shown below, the verbal particle af modifies the verb sjá and gives it a new meaning, and is therefore an OBL, not an ADV. The pronoun benni is the object of $a f$, and is also an OBL.

(187) En faðir hennar vildi engum kosti gifta hana, pví at hann mátti aldri af henni sjá. 'But her father would by no means marry her off, because he never wanted her out of his sight.'

As mentioned above (ch. 7.3.3), prepositions with verbs of motion, expressing the source or goal of the movement, are analysed as OBL:
(73) [Hon] kastaði pegar keraldinu frá sér, er drykkrinn var í, ok rann drykkrinn ór ok dreifðisk víða um fjallit.
'[She] threw down the vessel containing the drink, and it spilled out and spread all over the mountain.'

It may be difficult to distinguish between these prepositions and what we have called verbal particles, but since both are analysed as OBL, there is no need to. From a morphological point of view, both types are classified as preposistions.

It can also be difficult to draw the line between prepositions that syntactically are verbal particles (liggja við, lúka upp) and prepositions that are more loosely connected to the verb and should be analysed as adverbials. But the line must be drawn. It would have been possible to look at which prepositions Norron ordbok classifies as parts of fixed expressions with verbs, but this is not sufficient. If we look at (184) above, it turns out that Norrøn ordbok does not list the verbs orða and telja with the prepositions um and at as particles (i.e. as fixed expressions). Our definition entails that prepositions must be completely free if they are to be analysed as adverbs, but um and at modify orða and telja in a quite specific way. Therefore, we analyse these two particles as obliques, OBL, with an elliptical object, OBL. In other instances, the preposition is not closely enough connected to the verb for us to analyse it as a verbal particle. Instead, we tag it as an adverb, connected to the verb as an ADV. In (70), með is not necessary for the meaning of lifa, so we analyse með harmi ok hugsótt as an ADV.
(70) Pá mun faðir minn jafnan lifa með harmi ok hugsótt.
'Then my father will always live with sorrow and anxiety.'
To sum up: The criterion is whether the phrase can occur with any type of verb or only with certain verbs. If the first is true, then it is an ADV, if not, it is an OBL.

## 12 Topicalisation and Dislocation

Topicalisation is the movement of a constituent phrase to the front of a clause, while dislocation is the movement of a constituent outside of the clause while leaving a placeholder, typically the adverb pá or a pronoun.

## 12.I Topicalisation (Fronting)

The unmarked word order in Old Norwegian in subject - verb - object (SVO), but in narrative prose, the verb is often placed at the front of sentences:
(188) Pá lét Óláfr digri stefna ping, svá at eigi var fyrr munat jafnfjǫlmennt ping. En fyrir ástar sakir við hann sóttu menn pingit sem boðit var. Var nú kvatt hljóðs, ok tekr konungr til máls.
'Then, Olaf the stout had a meeting called, the most numerous one in memory. But because they loved him, the summoned men attended the meeting. Silence was now asked for, and the king speaks.'

Other words, like adverbs, can also be fronted:
(189) Eigi em ek vándr maðr; em ek, kvað hann, guðs skepna.
'I am not an evil man; I am, said he, God's creature.'
(190) Gúrun er góðr maðr, en of gjarna vill hann heima sitja, ǿrit er hann mildr at gefa. 'Gurun is a good man, but too often he wants to stay at home, he is quite generous.'

In the last sentence, there is even a dislocated phrase, since the adverb ǿrit 'quite' is an adverbial to the adjective mildr.

Topicalisation is very common in Old Norwegian; see examples in Haugen (2001: 251). In topological models such as the field theory (feltanalyse) of the Danish grammarian Paul Diderichsen, constituents are moved from the middle field (midtfelt) or final field (sluttfelt) to the so-called front field (forfelt). This is normal information structure of Scandinavian languages, and the same applies to Old Norwegian (and a number of other languages).

In dependency analysis, which does not follow word order, this kind of fronting is not expressed. So, for instance, tekr konungr til máls and konungr tekr til máls will be analysed in the same way. The only way to tell the two sentences apart is by indexing words (cf. ch. 5 above). This is both a strength and a weakness of the dependency analysis. In order to study word order in Old Norwegian, dependency analysis must be supplemented by indexing or the like. On the other hand, dependency analysis makes it easier to analyse a language with relatively free word order, both in prose and poetry.

(128) Sem jarlinn leit hann, pá hljóp hann upp ok gekk í móti honum. 'As the earl saw him, he jumped up and walked towards him.'
[See the following section for comments on this sentence.]

### 12.2 Dislocation

Dislocation is the moving of a constituent outside a clause and placing it at the very front, left-dislocation, or at the very back, right-dislocation. In the main clause, the constituent is represented by a placeholder, typically the adverb pá or a pronoun. In the
above-mentioned field theory of Paul Diderichsen, such constituents are said to be in extraposition. We analyse the placeholder as the governing word, i.e. we give the word within the main clause priority. We have found many examples of left-dislocation in Old Norwegian, but no right-dislocation yet (of the type: "It is common, this construction").

In (128) on the previous page, pá is an ADV in the main clause, and on to it we hang the dislocated phrase sem jarlinn leit hann as an APOS. Here, the dislocated phrase is a subordinate clause, introduced by the subjunction sem. Such subordinate clauses can also be introduced by $e r$ or $e f$.

The introductory subjunctions can in turn be modified by adverbs, e.g. pegar sem 'as soon as' in (119):

(119) Pegar sem hann var heiman fórr, pá sendi hann [acc.] faðir hans heiman til konungs hirðar at pjóna konungi.
'As soon as he was able to leave home, his father sent him to the king's court to serve the king.'

In (191) below, we analyse Guiamar as an APOS to the subject bann in the main clause pá dvaldisk hann par mjok lengi. In accordance with our analysis above, we tag the subjunction sem in the adverbial clause sem hann var riddari as an APOS under the adverb pá in the main clause.

(191) Guiamar, sem hann var riddari, pá dvaldisk hann par mjok lengi.
'Guiamar, in that he was a knight, then he stayed there a long time.'

In (191), we could also have hung sem bann var riddari as an APOS on Guiamar, following the order of the constituents. But we interpret sem hann var riddari as a complement of the verb dvaldisk rather than of the subject Guiamar.

Sometimes, the relationship between constituents in such constructions is rather loose, so much that one may wonder if dislocation has occurred at all. In (192) on the next page, the phrase sá er pessa viði skildi hvárn frá qðrum, has no obvious function in the main clause; it should rather be understood as a condition, and the following sentence the result. We do not need to split the sentences apart, because this kind of topicalisation is quite common in Old Norwegian. Instead, we have chosen a solution involving an APOS for (192), in line with the preceding examples, so that sá er pessa viði skildi frá qðrum is an APOS under pá.

(192) En sá er pessa viði skildi hvárn frá qððrum, pá deyr haslinn ok pví nǽst viðvindillinn.
'And the one which separated these trees from each other, then the hazel dies and then the honeysuckle.'

In this analysis, we have inserted an empty verb in pví nást [deyr] við̛vindillinn 'and then the honeysuckle [dies]', slashing from this verb to the overt deyr in the preceding sentence. Also note that the introductory conjunction en is analysed as being dependent on the first PRED, in this case deyr, rather than on the coordinating conjunction ok.

## 13 Ellipsis, Agreement, Discontinuity and Anacoluthon

## I3.I Ellipsis

Sometimes a sentence is missing its predicate. In dependency analysis, the subject may be dropped (as is quite common in Old Norwegian), but not the predicate. Then, an empty verbal node must be introduced. An example is found in Auдunar páttr vestfirzka ch. 1 :
(193) Konungr málti: "Villtu gefa mér [dýrit] pá?"

Hann svarar: "Eigi [vil ek gefa pér dýrit], herra."
'The king spoke: "Will you then give me [the animal]?"
He answers: "[I do] not [want to give it to you], lord."'

The fact that the object dyrit is missing in the first line is unproblematic in the analysis. But in the reply, "Eigi, herra", one must supply an empty verb, as shown here:

(193) "Eigi [vil ek gefa pér dýrit], herra."
'"[I do] not [want to give it to you], lord."'

We shall nevertheless try to avoid adding empty verbs. The empty verb must either be a copula or a verb easily recovered from the context. Apart from that, we have chosen to analyse comparative constructions by inserting empty verbs; see the discussion in ch. 10.6 above.

Sentences may be so ungrammatical (anacoluthic) as to make an analysis impossible without making some corrections. As a rule, we do not analyse such sentences, nor do we analyse sentences in which the editor has added words wrapped in the element <supplied>, or has deleted words using the element <expunged> (or <suppressed>).

### 13.2 Agreement

Words do not always agree as expected in the Old Norwegian texts. Often, the verb is in the singular even though the subject is plural. Similar disagreement may occur between the subject and its predicative (XOBJ). Appositions also furnish examples, as in (124):

(124) Er barnit verðr fø̆tt, skalt pú senda systur minni, er gift er í Norðmandí, rík ok auðig, kurteis ok hyggin frú.
'When the child is born, you should send [it] to my sister, who is married in Normandy, a powerful and wealthy, courteous and wise lady.'

In (124), we have interpreted the phrase rík ok auðig, kurteis ok byggin frú [nominative] as an apposition to systur minni [dative], although they are not in the same case. However, probably because of the distance between the two phrases, the apposition is put into the unmarked case, the nominative. The syntactic analysis remains the same, regardless of agreement. Another analysis would be to attach the phrase rik ok auðig, kurteis ok byggin
frú as an XADV to the PRED er in the preceding relative clause. In this analysis, the case nominative is fully grammatical.

On the coordination within the apposition (i.e. the use of $o k$ ), we refer the reader to the discussion in ch. 9.2 and ch. 9.3 above.

### 13.3 Discontinuity

Discontinuous constructions are fairly common in Old Norwegian. These are completely grammatical, and often easily handled by the dependency analysis, since word order is of no importance. In (93), ljóss can be placed, as an APOS, under madr, regardless of the distance between the two in the sentence:

(93) Pá dreymdi Guðbrand at maðr nǫkkurr kom til hans, ljóss.
'Then Gudbrand dreamed that a man came to him, [a] fair [man].'

Another example of a discontinuous construction is (136) on the next page, which has a complex subject. Here, the analysis would be quite different if we were to delete the phrase með honum.

(136) Ok varð Sóti handtekinn ok allt lið hans með honum.
'And Sóti was apprehended and all his men with him.'

If we ignored the adverbial med honum, the sentence could be analysed as having the discontinuous subject Sóti ... ok allt lið hans, as shown on the right above. But the sentence does have the adverbial með honum, and that can not refer to Sóti - he can not be "with him" if the honum is himself. For this reason, we have to posit two coordinated sentences, one of which has an empty verb. This verb is the same as varð (PID), which is indicated by a slash arrow. Also, there has to be a slash to the XOBJ handtekinn from the empty verb, while for technical reasons it is not possible to slash from handtekinn to lið.

The skaldic poems have an even greater degree of discontinuity, as shown in example (62) in ch. 6.1.2 above.

As already mentioned, one advantage of dependency analysis is that it can treat discontinuity without branches in the sentence tree crossing, but it comes at a price; in this case, the discontinuity is not visible from looking at the tree. It can only be gleaned by indexing the words in the sentence.

## I3.4 Anacoluthon and Textual Correction

From time to time, ungrammatical constructions appear in the texts. If no sense can be made of a sentence, it should probably be skipped. But sometimes, one can come up with an acceptable annotation.

Superfluous words are easiest to deal with. In the morphological annotation, they can be tagged as "xUA" for "unassigned" (cf. ch. 4.5.12 above). In (194), the word "he" is most likely an unfinished dittography, which in fact is dotted by the scribe to indicate that the word should be ignored:
(194) Ok í pví kómu meyjarnar til konungs ok stigu af hestum he sínum.
'And then the maidens came to the king and dismounted from their horses ho.'
In the syntactic analysis, however, every word has to have a function, even if it is superfluous. We solve this problem by tagging the word as NONSUB and hanging it to the nearest parent word (cf. ch. 7.5.3 above). In this instance, it is the noun hestum, but superfluous words may also be hanged on the sentence's PRED directly.


Figure 13:1. Uppsala University Library, DG 4-7, fol. 40rB, 1. 29-33.
In the light box, we first see the word hestum and then the beginning of the word he, which has been dotted.

In other cases, words may be missing, so that one would like to supply one or more words to make the sentence grammatical. The annotator should not do this, because it would have unwanted consequences for the indexing of the words in the text. However, the editor may have done it, and the added words typically appear in parentheses, (...), or angle brackets, $\langle\ldots\rangle$. In such cases, we also analyse the bracketed words:
(195) Pá reiddisk dróttningin ok 〈î̀ reið̀i sinni mismálti.
'Then, the queen became angry and in misspoke in her anger.'


Figure 13:2. Uppsala University Library, DG 4-7, fol. 39vA, 1. 1-5. In the bottom line, the preposition $i$ is missing before the noun reiði.

In (195), the preposition $i$ is inserted by the editor (show with parentheses), which forces us to analyse the word syntactically. Here, it would be the head in the phrase íreiði sinni.

The editor's additions are not always whole words. In (196), only the ending is added.
(196) Sigurðr ávitar hann ok svá hana at hon seldi honum, ok heim〈tir〉 annat sinni ok biðr hann fá sér.
'Sigurd reproaches him [i.e. Olaf] and also her [i.e. Asta], that she should give him [the sword], and demands [it] a second time and asks him to hand it over.'

Here, the editor has added "tir" to "heim" to render the sentence intelligible - and probably closer to the original. This is handled in the morphological rather than the syntactic annotation. In the morphological annotation, it does not make much difference whether heim is analysed as the adverb heim 'home' or as a form of the verb heimta 'demand'. But the syntactic analysis will make more sense if there is a verb here.

Finally, there may be a conflict between words in a phrase, e.g. so that their cases do not agree as expected:
(197) Mik dreymdi draumr nokkurn.
'I dreamed a dream.'

In this example, draumr is unambiguously a nominative form and nekkurn equally unambiguously an accusative form. In the morphological annotation, we tag them as such, even if the phrase is ungrammatical from a syntactic point of view. As for the syntactic analysis, we tag mik as an OBL (cf. ch. 7.3.3 above) and draumr nokkurn as a SUB. Here, the nominative draumr is the head of nqkkurn, and we take that as a sufficient reason for analysing it as a subject.

## 14 Ambiguous Functions

Certain borderline cases are bound to occur where the analysis is ambiguous. Here we list a few of them.

## 14.I OBJ vs. OBL

Accusative objects are consequently tagged as OBJ, while dative and genitive objects are taken as OBL, e.g. (3) and (21) in ch. 7.3.3 above. The indirect object, which is always in the dative, is tagged as an OBL, e.g. (92) in the same chapter. The same applies to socalled oblique subjects in the dative or accusative, e.g. (93), also in ch. 7.3.3.

### 14.2 ADV vs. OBL

When words or phrases, usually prepositions or adverbs, occur under a PRED, it may be difficult to decide whether they are ADV or OBL. The phrase can only be an OBL if the verb requires it to function properly. This is true of verbs of motion and verbs of position, as well as of verbs that are complemented by verbal particles. Phrases that denote place should be analysed as ADV when they are loosely connected with the main verb, and could in theory accompany any verb in any context.

(186) Ok reistisk hann pá upp ór rekkjunni.
'And he rose up from the bed.'

In (186), we analyse upp as an ADV and ór rekkjunni as an OBL. The preposition phrase ór rekkjunni denotes a movement's origin, telling us from where he rose, and it is thus closely connected to the verb reisa 'rise [from one position to another position]'. The adverb upp, on the other hand, only tells us in what manner he rose, and could be deleted without compromising the sentence's meaning.

The situation is different with the adverb heim in (198):

(198) Ok pví nǽst kømr hann heim í land sitt ok í ríki.
'And next he returns home to his land and kingdom.'

Here, the phrases heim and íland sitt ok riki refer to the same thing, but we understand heim to be the primary phrase. Therefore, we make íland sitt ok i riki as an APOS to heim. If heim were deleted, the apposition íland sitt ok í riki would become the OBL.

In many narrative texts, in descriptions of journeys, arguments denoting the source and the goal occur, as in (160), analysed in ch. 10.6 above:
(160) Paðan fór Óláfr konungr í Soleyjar ok létti eigi fyrr en í Svíbjóðu.
'From there, king Olaf went to Solør and did not stop until he came to Sweden.'

Here, baðan 'thence' denotes the source and is therefore an OBL, while í Soleyjar 'to Solør' and íSvípjóðu 'in Sweden' denote the goal, and are also OBL. The last phrase has a locative meaning, as we can see from the dative, but we think it functions as a goal here.

In Old Norwegian, there is a series of adverbs with the suffix -an, like paðan, heiman, neðan, ofan, norðan, sunnan, vestan and austan. These can all be used to denote the source of movement.

Comment: The place name Soleyjar 'Solør' is probably a compund of ${ }^{\text {sol }} \mathrm{n}$. 'mud, mire' (cf. Old English sol in this meaning) and $e y$ f. 'flat land along a river', in this case the river Glomma. The eastern dialects of Norway have seen monophthongisation $e y>\emptyset$.

## I4.3 ATR vs. APOS

This is especially relevant to the distinction between restrictive and non-restictive relative clauses, for which the function REL can be used in exceptional cases (cf. ch. 10.2).

## I4.4 ATR vs. OBL

This distinction applies to e.g. adnominal datives. There is a difference between vin konungs and trúr konungi, where the genitive konungs is an ATR and the dative konungi is an OBL. In the latter case, the adjective trúr requires a dative object, which is why we tag konungi as an OBL rather than an ATR.

### 14.5 The verb vera

The verb vera is used in a number of ways. The first two are formally identical, and slashing should be used in both.

## a. vera + predicative

(97) Af pví var hann hugsjúkr ok harmsfullr.
'Therefore, he was distressed and sorrowful.'
Here, hann is a SUB and bugsjúkr ok harmsfullr an XOBJ. There must be a slash from the XOBJ to the SUB, as shown in the tree in ch. 9.3 above.

## b. vera + participle

(100) Hér er kominn Óláfr konungr digri.
'Here Olaf the stout has come.'
In this sentence, Óláfr konungr digri is the SUB (with Óláfr as the head) and kominn is the XOBJ. Here, too, there must be a slash from the XOBJ to the SUB.

No slash is needed, however, in the two following types, (c) and (d).

## c. vera expressing time

When the verb vera is the PRED for an expression of time, the latter is analysed as an XOBJ (not SUB), like hátíðardagr (199), e.g.:
(199) Nú á nǽsta degi eftir pegar pá var hátíðardagr pess helga konungs um morgininn. 'Now, the next day after, when there was the holiday of the holy king in the morning.'
d. vera as a verb of existence and position
(95) At sonnu var betta í Neustria.
'Truly this was in Neustria.'
It is difficult to distinguish between vera as a verb of existence and a verb of position existence, after all, happens someplace. In accordance with the analysis of verbs of position in ch. 7.3.3 above, we will analyse preposition phrases of the type íNeustria in (95) as OBL.

Similarly, in (56), the preposition phrase $i$ konungs hirð is also an OBL. It is not enough to say that he existed at a certain time, the place must also be expressed.

(56) Hann var oft lengi í konungs hirð [...].
'He was often for a long time at the king's court [...].'
We can illustrate the distinction between two usages of the verb vera in the following artificial example: Hann var oft hugsjúkr ok harmsfullr í konungs hirð 'He was often anxious and sorrowful at the king's court'. This sentence can be interpreted in two ways. Either as type (a), where bugsjúkr ok harmsfullr is an XOBJ with íkonungs hirð as a free

ADV, or as type (d), where $i$ konungs hirð is an OBL and bugsjúkr ok harmsfullr is an XADV. The difference is subtle. The first interpretation could be translated as 'He was often anxious and sorrowful when he was at the king's court', the second as 'He was often at the king's court, anxious and sorrowful.'

### 14.6 Subjective and objective genitive

In ch. 7.3.6 we showed that an objective genitive, e.g. landsins in stjórn landsins 'the government of the land', should be analysed with the function NARG. A subjective genitive, however, should be analysed as an ordinary possessive genitive, using the function ATR. In (200), Óláfs is a subjective genitive:
(200) Eftir fall Óláfs konungs báru peir líkit ór valinum um aftaninn ok pvógu.
'After the fall of king Olaf they carried the body from the slain in the evening and washed [it].'

This is an example of a subjective genitive in the sense that fall Óláfs konungs 'king Olaf's fall' can be derived from Óláfr konungr fellr 'king Olaf falls', in which the corresponding word Ólafr is subject. In our view, there is no strong syntactical arguments for making a distinction between subjective and ordinary possessive genitives.

## Part Three

Appendix

## 15 List of Functions

This is a list of all the functions in the proiel scheme. In the Menotec project, we do not use AG, PART, ARG, PER or ADNOM, but we have included them here for the sake of completeness.

| Abbreviation | Shortcut | Name | Explanation |
| :--- | :--- | :--- | :--- |
| Root functions |  |  |  |
| PRED | p | predicate | - main verb in independent clauses <br> - conjunction coordinating main verbs <br> - main verb in dependent clauses (excluding <br> indirect questions, see COMP) |
| PARPRED |  | parenthetic <br> - empty verb when verb is missing |  |
| predicate | - interpolated sentence fragment, typically <br> the main verb in direct speech |  |  |
| vOC | vocative | - word of address <br> - interjections |  |

## Auxiliary Functions

AUX \begin{tabular}{l|l|l}
auxiliary <br>
word

$\quad$

- the auxiliary verbs bafa, geta, fá <br>
- the auxiliary verbs munu, skulu, mega, vilja <br>
<br>
- infinitive marker <br>
- negation of main verb <br>
<br>
<br>
<br>
<br>
<br>
<br>
<br>
<br>
- introductory conjunction <br>
- the interrogative particle hvárt
\end{tabular}


## Arguments

| s subject | - the subject of a verb (excluding oblique <br> subjects, see ch. 7.3 .3 ) <br> - the accusative in accusative with infinitive <br> constructions |
| :--- | :--- | :--- |


| OBJ | o / j | object | - the object of a verb (excluding oblique subjects and noun phrases, see ch. 7.3.2) |
| :---: | :---: | :---: | :---: |
| OBL | 1 | oblique | - oblique words under PRED (dative and genitive objects) <br> - oblique subjects, in dative and accusative <br> - indirect objects (always dative) <br> - objects of prepositions <br> - objects of adjectives that govern genitive or dative <br> - expressions of source or goal with verbs of motion |
| XOBJ | $\mathrm{O} / \mathrm{J}$ | external object | - infinitives that have external subjects <br> - predicatives, both to subjects and objects |
| COMP | c | complement | - the subjunction in nominal clauses <br> - the finite verb in indirect questions <br> - the infinitive in accusative with infinitive constructions <br> - infinitives as subjects or predicatives <br> - the subjunction en 'than' in comparison |
| NARG | n | adnominal argument | - noun arguments, objective genitive in particular |
| AG | g | agent | - the logical subject in passive (and reflexive) constructions, typically a preposition phrase introduced by af |

Adjuncts

| ADV | Adverbial | ADV is a function which can can modify: |
| :--- | :--- | :--- |
|  | - finite verbs |  |
|  | - prepositions |  |
|  | - adjectives |  |
|  | - other adverbs |  |
|  | ADV can be: |  |
|  | - adverbs |  |
|  | - preposition phrases |  |
|  | - nouns in oblique cases |  |
|  | - subordinate clauses |  |

\(\left.$$
\begin{array}{|l|l|l|l|}\hline \text { XADV } & \text { A } & \begin{array}{l}\text { external } \\
\text { adverbial }\end{array} & \text { - an adverbial that has an external subject } \\
\hline \text { ATR } & \text { t } & \text { attribute } & \begin{array}{l}\text { - adjectives under nouns } \\
\text { - possessives under nouns }\end{array}
$$ <br>

\hline - determiners under nouns\end{array}\right]\)| - restrictive relative clauses |
| :--- |

## Superfunctions

| ARG | argument | - OBL / OBJ |
| :--- | :--- | :--- |
| PER | peripheral | - argument / adjunct |
| NONSUB | non-subject | - OBJ / OBL / ADV |
| - anomalies |  |  |

## Secondary functions

| XSUB | external <br> subject | - the external subject of XOBJ |
| :--- | :--- | :--- |

## 16 Examples

As far as possible, we have been using examples from the Old Norwegian texts in the Menotec corpus, i.e. the texts abbreviated as Hom, ÓHLeg, Streng and Landsl below. For a number of other examples, we have resorted to other texts, some of which are Icelandic. All abbreviated titles are explained in ch. 18.1.2 below.
(1) Ek vil tala við pá. (Streng, Guiamar, ch. 5)
(2) Um pá daga var par jafnan úfriðr ok bardagar. (Streng, Guiamar, ch. 3)
(3) Ríkir báðu hennar. (Streng, Tveggia elskanda lioð)
(4) En dróttningin hverfr í brott reið mjok. (ÓHLeg, ch. 1)
(5) Jarnskeggi átti konu pá er Guðrún er nefnd (ÓT, ch. 71)
(6) Nú var enn í Danmorku greifi nǫkkurr illr ok q̧undfullr. (Hom, ÓH miracle 4)
(7) Hann er ríkr maðr, oflugr ok ǽttgóðr. (Streng, Guiamar, ch. 10)
(8) Ert pú skyldr at sverja honum hinn sterkasta eið. (Thom, A, part 3, ch. 13 )
(9) Hann gekk fyrir of daginn ok steig heldr stórum. (Gylf, ch. 45)
(10) Pótt róa kynni krọfturligan. (Hym, st. 28)
(11) Meðan pessir tveir viðir búa báðir saman, pá lifa ok bera lauf sitt. (Streng, Geitarlauf, ch. 1)
(12) Hví ertu einn kominn í Jotunheima? (Prk, st. 7)
(13) Unnasti, kvað hon, ek veit at vísu at ei getr pú borit mik. (Streng, Tveggia elskanda lioð)
(14) Vit kváðum nei við djǫflinum ok við ollum hans verkum. (Hom, Visio sancti Pauli apostoli)
(15) Hann var mjok ástbundinn af henni ok hon af honum. (Streng, Tveggja elskanda ljóð)
(16) En margir létu illa yfir pví er hann gerði hana sér svá kǽra. (Streng, Tveggia elskanda lioð)
(17) Hvat skal ek nú gera? (Streng, Eskia, ch. 2)
(18) Hví er frú mín svá árla upp staðin? (Streng, Guiamar, ch. 13)
(19) Ok sagði henni hvílíkan harm riddarinn hafði af ást hennar. (Streng, Guiamar, ch. 13)
(20) Ek ann Yðr, frú, yfir hvatvitna. (Streng, Desiré, ch. 5)
(21) Um síðir luku pau bǽði lífi sínu. (Streng, Tveggia elskanda lioð)
(22) Pá lagði hann báða fǿtr í kné konungsins. (Streng, Bisclaret, ch. 5)
(23) Pví nést hljóp fram kọttr einn grár. (Gylf, ch. 46)
(24) Pessa leið fara peir einir er kunnigstir eru um Fljótsdalsheiði. (Hrafnk, ch. 2)
(25) Einir trúðu at hamingjan myndi fagnað ok fremd veita. (Barl, ch. 30)
(26) Pá bera peir, sem hinn vildasti viðr, lauf ok blóm. (Streng, Prologue, ch. 1)
(27) Var petta dýr hverjum manni kért er í hirð konungsins var. (Streng, Bisclaret, ch. 6)
(28) Ok rann hjarta hans allt ór honum. (Streng, Tveggia elskanda lioð)
(29) Ek réð pér pat hitt fyrsta ráð. (Barl, ch. 45)
(30) Óláfr konungr lagði undir sik fyrstr konunga Noreg allan. (ÓHLeg, ch. 46)
(31) Horpum, gígjum, simphanum, organum, timpanum, salterium ok korum ok allskonar qðrum strengleikum. (Streng, Prologue, ch. 1)
(32) Allskonar q̨ðrum strengleikum er menn gera sér ok qðrum til skemtanar. (Streng, Prologue, ch. 1)
(33) Mǽlti hon qððru sinni til hans. (Streng, Guiamar, ch. 13)
(34) Pá sá hann mýss tvǽr, aðra hvíta en aðra svarta. (Barl, ch. 60)
(35) Síðan skildisk hann við konung ok allt hirðlið hans. (Streng, Guiamar, ch. 3)
(36) Í họfninni sá hann eitt skip. (Streng, Guiamar, ch. 5)
(37) Einnhvern dag var pat er Óláfr var á land genginn með liði sínu. (ÓHLeg, ch. 13)
(38) Pá leggi einnhverr hǫnd sína í munn mér at veði at petta sé falslaust gert. (Gylf, ch. 34)
(39) Kaus hverr sér félaga. (Streng, Chetovel)
(40) Minnti hann at hváru á með orðum ok málti svá. (Hom, ÓH miracle 9)
(41) Pá var hann hvergi sénn par í fylkinu. (Streng, Bisclaret, ch. 8)
(42) Hann hugðisk pá at reyna afl sitt. (Gylf, ch. 48)
(43) Pessir er sá dagr er guð gerði. (Hom, homily for Christmas I: De nativitate Domini sermo)
(44) Hann svaf ok hraut sterkliga (Gylf, ch. 45)
(45) Kynligt bykkir mér, kvað hann, hví pú leitar ei rannsaks um slíkt. (Streng, Gurun, ch. 1)
(46) Mjok nár fjallinu lét einn konungr gera mikla borg. (Streng, Tveggja elskanda ljóð)
(47) Pá málti konungrinn at hann skyldi yrkja um pat er skrifat var á tjaldinu jafngengt honum. (ÓHLeg, ch. 58)
(48) Nú var Desiré tíu vetr útan lands, svá at hann fór ekki heim pess á millum. (Streng, Desiré, ch. 2)
(49) Ok hverr sem einn várra manna hefir oftsamliga sét pat ok gengit nár pví, bǽði nǽtr ok daga. (Streng, Bisclaret, ch. 8)
(50) Aldri skalt pú fá svívirðing né hróp né hatr af henni. (Streng, Eskia, ch. 2)
(51) Hon sagði at Baldr hafði par riðit (Gylf, ch. 49)
(52) Svá hvárki viðr komi knífr né sq̨x. (Streng, Guiamar, ch. 18)
(53) En sá kveðr nei við hann. (Landsl, Pjófabolkr, ch. 6)
(54) En pá er peir váru albúnir ór họfninni, pá fóru peir norðan fyrir Prjótshverfi hǫlfum fjórða tig skipa. (ÓHLeg, ch. 66)
(55) Pá viti hann at sǫnnu at svá hefir konungr mált. (Streng, Tveggia elskanda lioð) Hann var oft lengi í konungs hirð ok unni mjǫk konungs dóttur, ok oftsamliga rǿddi við hana at hon skyldi játta honum ástarpokka sinn, pví at hann var vaskr maðr ok hinn kurteisasti, | ok konungr lofaði hann mjok ok var honum hinn kǽrasti. (Streng, Tveggia elskanda lioð) - In this example, (56) refers to the whole sequence, (56a) refers to the sequence until the vertical line, while (56b) refers to the sequence after the vertical line.
(57) Hann skal vera huggan hennar ok skal hon kalla hann Jonet. (Streng, Jonet)
(58) Bretar kalla Gotulǽf, en vér kǫllum Geitarlauf. (Streng, Geitarlauf, ch. 1)
(59) Ok mislíkaði honum mjǫk. (Streng, Tveggia elskanda lioð)
(60) Pá hǫfum vér skóa á fótum ef vér bjǫrgum oss í verkum með dǿmum liðinna feðra við freistni fjánda ok vándra manna svá sem skór hlífa fótum við pyrni ok við ormum. || Pví at oss eru til pess sýnd dǿmi heilagra feðra ór heimi liðinna at vér megim batna af peim í eftirlíkingu góðra verka pá er vér sjám hverja dýrð réttlátir menn hǫfðu fyrir erfiði sitt. (Hom, homily for Easter Day: In die sancto pasce sermo ad populum)
(61) Sjá við manndrápi ok við hórdómi, við stuldum, við skrǫkvitnum, við meineiðum, við ráni, við rǫngum dómi, við svikum, við ofmetnaði, við ofdrykkju, við ofprýði, við ofsínku, við fégirnd, við mútufé, við gulls leigu eða silfrs, við kvennsemi, við víkingu, við ofund, við hatri, við lygi, við lausung, við bakmálgi, við háðsemi, við rógi, við morði, við údáðum, við misjafnaði, við fordǽðuskap, við goldrum, við gerningum, við mikillǽti, við róggirni, við bǫlvan, við gauð, við hǿlni, við fjándskap, við úgrandveri, við frýgirni, við tortrygð, við ofgeytlan, við ofdeildum, við ofkappi, við of ${ }^{\text {and }}$, við tunguskǿði, við ofbráði, við ofsennu, við ofinndǽli, við kvǽlni, við ofkǽti, við ofhlátri, við ábersemi, við úhlýðni, við flǽrðum ̨̣llum. (Hom, moral homily IV: sermo necessaria)
(62) Rétt er at sókn en sétta | (snarr pengill vann Englum | at) par er Óláfr sótti $\mid$ (Yggs) Lundúna bryggjum. (ÓHLeg, ch. 11)
(63) Sverð bitu vǫlsk, en vǫrðu | víkingar par díki, | átti sumt í sléttu | Súðvirki lið búðir. (ÓHLeg, ch. 11)
(64) Pá svaraði Rani. Eigi félltu, herra. (ÓHLeg, ch. 19)
(65) Konungrinn hló at ok málti, ef guð vill at gerisk gagn. (ÓHLeg, ch. 19)
(66) Hér segir frá jartegnum hins helga Óláfs konungs. (Hom, ÓH introduction to miracles)
(67) Enn um hitt sama mál. (Hom, Gemma animae 3)
(68) .v. (Hom, ÓH miracle 5)
(69) En ekki átti hann fleira barna. (Streng, Tveggia elskanda lioð)
(70) Pá mun faðir minn jafnan lifa með harmi ok hugsótt. (Streng, Tveggja elskanda ljóð)
(71) Aldrigi munt pú slíkan stein sét hafa. (Barl, ch. 20).
(72) Hon lét af sér falla skikkju sína, at hon skyldi mega gløggliga sýnask. (Streng, Janual)
(73) Kastaði pegar keraldinu frá sér, er drykkrinn var í, ok rann drykkrinn ór ok dreifðisk víða um fjallit. (Streng, Tveggia elskanda lioð)
(74) Ein man Ásta hvíla sér í nátt, sagði hann, ok svá skulu vér. (ÓHLeg, ch. 1)
(75) Egressus af hǽstum himni í kvið meyjarinnar - pess var á milli brír ok prírtigir vetr - af krossinum í grǫfina. (Hom, homily on the ascension of Christ: In ascensione Domini nostri Iesu Cristi. Sermo ualde necessaria)
(76) Ohó, hversu góðr Israels Guð er. (Barl, ch. 163)
(77) Já, já, sagði hann. (ÓHLeg, ch. 19)
(78) Nei, sagði hinn, ei er pat. (ÓHLeg, ch. 3)
(79) Sem hon hafði yfir sét bréfit. (Streng, Tveggia elskanda lioð)
(80) Ef hann getr borit dóttur hans upp í fjallit. (Streng, Tveggia elskanda lioð)
(81) Hversu má nǫkkurr maðr eftir skírnina fá haldit sik frá syndum ok úhreinundum? (Barl, ch. 55)
(82) Ok svá er hann mér mjǫk kárr at aldri vil ek honum angr gera. (Streng, Tveggia elskanda lioð)
(83) Pá leituðu margir við at bera hana, er allsekki gátu at sýst. (Streng, Tveggia elskanda lioð)
(84) Reiðr var pá Vingpórr \| er hann vaknaði | ok síns hamars \| um saknaði. (Prk, st. 1)
(85) Ormrinn er slớgari en ekki annat kvikvendi. (Barl, ch. 28)
(86) Nú vill maðr annan sǿkja um eitthvert mál. (Landsl, Kaupabolkr, ch. 8)
(87) Enn er mér úkunnigt hvárt pessi frú líkar eða eigi at ek sjá unnasti hennar. (Streng, Equitan, ch. 4)
(88) Konungr lofaði hann mjok. (Streng, Tveggia elskanda lioð)
(89) Hon var í hjá honum bǽði nétr ok daga. (Streng, Tveggia elskanda lioð)
(90) Ok hefir hann heyrt fugla syngja svá fagri rọddu at hann lysti til at hlýða. (Streng, Janual)
(91) Af pessum tveim ungmennum gerðu bretar strengleik er peir kalla Tveggja elskanda. (Streng, Tveggia elskanda lioð)
(92) Hon gaf henni leyfi. (Streng, Guiamar, ch. 11)
(93) Pá dreymdi Guðbrand at maðr nǫkkurr kom til hans, ljóss. (ÓHLeg, ch. 32)
(94) Faðir hennar bjuggi á Laukhamri. (DN vol. 10, no. 21 [Bergen, 1327])
(95) At sǫnnu var petta í Neustria. (Streng, Tveggia elskanda lioð)
(96) Hon hefir par lengr verit en fimmtigi vetra. (Streng, Tveggia elskanda lioð)
(97) Af pví var hann hugsjúkr ok harmsfullr. (Streng, Tveggia elskanda lioð)
(98) Fyrr en pú tókt at unna mér, pá vart pú lofsáll af hreysti pinni. (Streng, Desiré, ch. 4)
(99) Ok fýsti hann ekki aftr at fara. (Streng, Desiré, ch. 12)
(100) Hér er kominn Óláfr konungr digri. (ÓHLeg, ch. 3)
(101) En um várit er íssinn var allr af vatninu, pá senda svíar orð Óláfi svenska konungi sínum. (ÓHLeg, ch. 15)
(102) Hann létr benna mann bera konungsskrúð allt. (Alex, 9th book, fol 32r.3)
(103) En hann lézk ekki vita hvat er pǽr vildu. (Streng, Guiamar, ch. 3)
(104) Hon kom par [...] ok spyrr, hverr maðr hann er. (ÓT, ch. 32)
(105) Nú er um pann atburð pví nǽst at rǿða. (Streng, Bisclaret, ch. 7)
(106) Ok gaf pá hvárttveggja peira qðru samband sitt með umskifti fingrgulla sinna. (Streng, Equitan, ch. 6)
(107) Dessum hafði herra hans fengit gaumgǽfð ok gǽzlu alls ríkisins síns með réttyndum ok refsingum. (Streng, Equitan, ch. 2)
(108) Hér dǿmask oft góðir af illum. (Hom, Alcuin: Um lygvitni)
(109) Ekki er kristnum manni meir flýjanda en ofmetnaðr. (Hom, Alcuin: Um ofmetnað)
(110) Forðum í Norðmandí gerðisk einn atburðr er síðan var víða freginn um tvau ungmenni er mjgk elskuðusk. (Streng, Tveggia elskanda lioð)
(111) Ok mǽlti pá at engi myndi pann fald aftr falda, nema með knífi skǽri eða með sqxum klippi. (Streng, Guiamar, ch. 15)
(112) Hann reið níu nétr d $ø$ kkva dala ok djúpa. (Gylf, ch. 49)
(113) En ef pér líkar, ek vil við hana rǿða. (Streng, Gurun, ch. 1)
(114) Var sá hafr haltr eftra fǿti. (Gylf, ch. 44)
(115) Kringla heimsins, sú er mannfolkit byggir, er mjok vágskorin. (Yngl, ch. 1).
(116) Ok sǿk í hauginn eigi at síðr. (ÓHLeg, ch. 5)
(117) Vinir ok frándr kvámu til hans með rǿðum ok ráðagerðum sínum, eggjandi hann at fá sér eignar púsu. (Streng, Eskia, ch. 8)
(118) Ok at halda honum félagskap pá lét blóð með honum ráðismaðr hans. (Streng, Equitan, ch. 10)
(119) Pegar sem hann var heiman fǿrr, pá sendi hann faðir hans heiman til konungs hirðar at pjóna konungi. (Streng, Guiamar, ch. 3)
(120) Ok tók sér herbergi í lofti einu par sem hann svaf sjalfr í. (ÓHLeg, ch. 68)
(121) Sá konungr er pá bjó par, átti eina dóttur, fríða ok kurteisa mey. (Streng, Tveggia elskanda lioð)
(122) Marhǽs konungr var reiðr Tristram fránda sínum. (Streng, Geitarlauf, ch. 1)
(123) Pat var á degum Haralds konungs hins hárfagra, Halfdanar sonar hins svarta, Guðrøðar sonar veiðikonungs, Halfdanar sonar hins milda ok hins matarilla, Eysteins sonar frets, Óláfs sonar trételgju Svía konungs, at sá maðr kom skipi sínu til Íslands í Breiðdal, er Hallfreðr hét. (Hrafnk, ch. 1)
(124) Er barnit verðr fǿtt, skalt pú senda systur minni, er gift er í Norðmandí, rík ok auðig, kurteis ok hyggin frú. (Streng, Milun, ch. 1)
(125) Illustration: The noun phrases sá binn gamli maðrr (Hrafnk, ch. 4) and bafit pat it djúpa (Gylf, ch. 45)
(126) Sú hin fátǿkasta í hennar pjónustu er fri̊ðari en Pér, frú dróttning. (Streng, Janual)
(127) [...] er oss mátti lofat vera at hafa. (Hom, homily on Ash Wednesday: In capite Ieiunii sermo)
(128) Sem jarlinn leit hann, pá hljóp hann upp ok gekk í móti honum. (Streng, Gurun, ch. 1)
(129) Óláfr konungr stefnir fyrir innan Bókn ok leggr í sundit fyrir norðan tungu í eyjar px́r er svá heita. (ÓHLeg, ch. 63)
(130) Illustration: Overview of the analysis of complex prepositions.
(131) Síðan bjósk konungrinn upp pangat ok mǿtti bóndum qððrum megin ár peirrar er Nitja heitir. (ÓHLeg, ch. 37)
(132) Hann tígnaði hana ok unni yfir alla lifandi. (Streng, Tveggia elskanda lioð)
(133) Fyrir pví hefir hann hér byrgt mik ok lǽst í pessum steingarði. (Streng, Guiamar, ch. 10)
(134) Milun frá orðsending hennar, bjó ríkuliga ferð sína ok kom upp í Norðmandí. (Streng, Milun, ch. 3)
(135) Hvárki sakir pín, kvað hann, né ástarpokka píns, vil ek vera svikari né svívirðing herra míns. (Streng, Janual)
(136) Ok varð Sóti handtekinn ok allt lið hans með honum. (ÓHLeg, ch. 9)
(137) Um pá daga réð pví ríki Odels konungr, stundum í friði, oftsamliga í úró ok í úfriði. (Streng, Guiamar, ch. 2)
(138) Seg mér vilja pinn ok hvat pú kárir. (Streng, Eskia, ch. 12)
(139) Hann spurði hvat títt var með konungi. (Streng, Geitarlauf, ch. 1)
(140) Síðan fór hann aftr til Gúruns ok sagði honum hversu mǽrin unni honum. (Streng, Gurun, ch. 4)
(141) Pví at engi gat fullggrt pat er við lá. (Streng, Tveggia elskanda lioð)
(142) Ok fór hann í fóstrland sitt Suðvales, par sem hann var fǿddr. (Streng, Geitarlauf)
(143) Pá málti gamall maðr einn er pá var í bǫndum með peim. (ÓHLeg, ch. 98)
(144) Pá er frúin hafði allt sagt honum, pá fagnaði hann at faðir hans var áttgóðr ok ríkr at eignum. (Streng, Milun, ch. 3)
(145) Fyrirbauð honum ríki sitt, sakir pess at hann unni dróttningunni. (Streng, Geitarlauf, ch. 1)
(146) Ok fyrir pví íhugaða ek at gera nǫkkura góða sq̧gu, ok ór vǫlsku í bókmál snúa at pat mǽtti flesta hugga er flestir megu skilja. (Streng, Prologue, ch. 1)
(147) Ok pótti peim pat landvọrn mikil, fyrir pví họfðu par margir úslétt farit. (ÓHLeg, ch. 15)
(148) Hann unni pessari frú mjǫk lengi, svá tryggliga at eigi var hugr hans á annarri. (Streng, Equitan, ch. 6)
(149) En hinir allir úgildir hvárt sem peir fá sár eða bana, bǽði konungi ok karli. (Landsl, Mannhelgarbolkr, ch. 4)
(150) Illustration: The syntactic analysis of complex subjunctions
(151) Síðan bað konungrinn pá búa ferð sína (ÓHLeg, ch. 67)
(152) Pá skalt pú mik sjá standa hjá pér. (Streng, Desiré, ch. 6)
(153) Konungrinn kvezk vita bragð peira. (ÓHLeg, ch. 50)
(154) Mér pótti vit vera í hellinum. (Flateyjarbók, Nygaard 1905: 233)
(155) Ok allr póttisk hann á lofti vera. (Streng, Desiré, ch. 3)
(156) Pá var honum Konraðr dauðr sagðr. (Fornsögur Suðrlanda, Nygaard 1905: 233)
(157) Taka við víl ok erfiði at uppverandi sólu. (Hrbl, st. 58)
(158) Fanntaðu mann inn harðara at Hrugni dauðan. (Hrbl, st. 14)
(159) En hơfðingi sá reið hesti peim, er mǫrgum hlutum er goqgari en gervastir allir aðrir. (Niðrst, ch. 4)
(160) Paðan fór Óláfr konungr í Soleyjar ok létti eigi fyrr en í Svípjóðu. (ÓHLeg, ch. 37)
(161) En svá sem ritningar hafa sýnt mér vil ek segja yðr atburði pá sem gerðusk á hinu syðra Bretlandi í fyrnskunni. (Streng, Guiamar, ch. 2)
(162) Svá sem honum helt pessi harmr, pá kom hann pví nást til hafnar par sem hann fyrst skipit sá hjá fylki sínu. (Streng, Guiamar, ch. 16)
(163) Hann hefir sq̣mu lýzku sína ok áðr. (ÓHLeg, ch. 8)
(164) Hann var sólu bjartari. (Niə̊rst, ch. 4)
(165) Pat er par til merkis at Ásta, dóttir hans, er sjúk við barni. (ÓHLeg, ch. 4)
(166) Ok var pat eigi kynligt at Bisclaret vildi sín á honum hefna. (Streng, Bisclaret, ch. 7)
(167) En pess vil ek biðja yðr at pér blótið mik eigi. (ÓHLeg, ch. 2)
(168) Hann man aldrigi kunna deyja. (Streng, Jonet)
(169) Hon kann allra grasa ok róta skyn. (Streng, Tveggia elskanda lioð)
(170) Pessi riddari kann vel kyssa. (Streng, Gurun, ch. 2)
(171) Hann vissi at sár kynni at grǿða. (Streng, Guiamar, ch. 5)
(172) Gat hann ok orrostu pessarar. (ÓHLeg, ch. 61)
(173) Keisarinn sá stjǫrnu eina ljósari en hann hafəi fyrr séna. (Hom, homily on Christmas I: De nativitate Domini sermo)
(174) En eigi ǽtlumk ek at taka trúna. (ÓHLeg, ch. 52)
(175) En vant sýnisk honum um pessa ást at véla. (Streng, Eskia, ch. 6)
(176) Nú er erfingi skyldr at gera honum boð. (Landsl, Pingfararbolkr, ch. 9)
(177) Pá réðu peir vaskliga til at sǿkja hann. (Streng, Guiamar, ch. 21)
(178) Ok hafði hann tíu skip fyrir at ráða. (ÓHLeg, ch. 9)
(179) Til pess em ek eigi fórr at setjask í rúm hǫfuðskálda. (ÓHLeg, ch. 55)
(180) Gef ek pér leyfi at unna peirri. (Streng, Guiamar, ch. 15)
(181) Ok ortu bǿndr á pegar ok bęrðusk við Óláf konung. (ÓHLeg, ch. 37)
(182) Pá mun hon til leggja ráð ok rǿkt. (Streng, Tveggia elskanda lioð)
(183) Pá tók frúin upp lík fuglsins. (Streng, Laustik, ch. 3)
(184) Sem hann heyrði at menn um orðuðu ok at tǫldu [...]. (Streng, Tveggia elskanda lioð)
(185) Um morgininn árla stóð hann upp ok steig á hest sinn. (Streng, Desiré, ch. 5)
(186) Ok reistisk hann pá upp ór rekkjunni. (Streng, Guiamar, ch. 11)
（187）En faðir hennar vildi engum kosti gifta hana，pví at hann mátti aldri af henni sjá． （Streng，Tveggia elskanda lioð）
（188）Pá lét Óláfr digri stefna ping，svá at eigi var fyrr munat jafnfjolmennt ping．En fyrir ástar sakir við hann sóttu menn pingit sem boðit var．Var nú kvatt hljóðs，ok tekr konungr til máls．（ÓHLeg，ch．2）
（189）Eigi em ek vándr maðr；em ek，kvað hann，guðs skepna．（Streng，Gurun，ch．2）
（190）Gúrun er góðr maðr，en of gjarna vill hann heima sitja，ǿrit er hann mildr at gefa． （Streng，Guiamar，ch．2）
（191）Guiamar，sem hann var riddari，pá dvaldisk hann par mjǫk lengi．（Streng， Guiamar，ch．3）
（192）En sá er pessa við̌i skildi hvárn frá qðrum，pá deyr haslinn ok pví nást viðvindillinn．（Streng，Geitarlauf，ch．1）
（193）Konungr málti：＂Villtu gefa mér pá？＂Hann svarar：＂Eigi，herra．＂（Auð，ch．1）
（194）Ok í pví kómu meyjarnar til konungs ok stigu af hestum he sínum．（Streng， Janual）
（195）Pá reiddisk dróttningin ok 〈í〉 reið̌i sinni mismálti．（Streng，Janual）
（196）Sigurðr ávitar hann ok svá hana at hon seldi honum，ok heim〈tir〉 annat sinni ok biðr hann fá sér．（ÓHLeg，ch．8）
（197）Mik dreymdi draumr nǫkkurn．（ÓHLeg，ch．2）
（198）Ok pví nǽst kømr hann heim í land sitt ok í ríki．（ÓHLeg，ch．1）
（199）Nú á nǽsta degi eftir pegar pá var hátíðardagr pess helga konungs um morginninn．（Hom，ÓH miracle 13）
（200）Eftir fall Óláfs konungs báru peir líkit ór valinum um aftaninn ok pvógu． （ÓHLeg，ch．87）

## 17 Special Word Lists

## I7.I Homonyms of the Same Word Class or the Same Gender

The list below is based on Norron ordbok and contains homonyms which can not be differentiated by word class or other parameters within our annotation method. These words are distinguished with Roman numerals in the dictionary, like "á f. I" 'river' and "á f. II" 'ewe'. This list also includes some verbs which have the same lemma form but belong to different inflectional classes, like "bera (pret. beraðı)" 'make bare' and "bera (pret. bar)" 'carry'. They, too, have received Roman numerals.

We have found 380 instances of this kind of homonymy. Many of them have two meanings, a fair number have three, and some even have four, like "rif n. I" 'rib', "rif n. II" 'a tearing asunder', "rif n. III" 'reef (in the sea)' and "rif n. IV" 'reef (in a sail)'. It is interesting to note that of the four words with four meanings, three are monosyllables beginning with "r".

The list does not include words that we can tell apart using our annotation parameters, notably gender in the nouns. This means that forms like "ól f." 'strap' and "ól n." 'ogress' are excluded from the list below. These homonyms are listed in ch. 3.1 above.

For the list, we use the orthography and setup from Norrøn ordbok (5th ed. 2008), but this may later be supplemented with the orthography of Gammelnorsk Ordboksverk (GNO). In the GNO orthography, there are additional homonyms, like "land n." 'urine' (listed as bland in Norrøn ordbok) and "land n." 'land'. These can be rather difficult to find. Large parts of the list are irrelevant for us, since many of the homonyms are rare words from skaldic poetry. But it does give us a clue as to how extensive this kind of homonymy is.

There are a number of grey areas regarding the use of Roman numerals for words in Norrøn ordbok. For example, the common noun "gymir m. I" (which is close to being a proper noun when it means 'Ǽgir') and the proper noun "Gymir m. II" are distinguished by a Roman numeral. Norrøn ordbok usually does not use Roman numerals in such instances, like "lo n." 'bane' and "L\& n." 'The Great (lake) Le'. Furthermore, there is a distinction between verbs separated with Roman numerals in the dictionary and others that are not. For this reason, "mela ( $l t$ )" 'speak' is not taken with "mela (ld) I" 'measure' and "mola (lt) II" 'paint'. We could have gone into more details regarding this, but it is really only relevant within the context of the dictionary and not important for our annotation purposes.
á f. I
alfr m. I
áll m. I
an conj. I
angi m. I
ár n . I
árliga adv. I
árligr a. I
árna, arna I
áss m. I
áttungr m. I
auðligr a. I
auðna f. I
baðmr m. I
bakki m. I
barki m. I
beizla f. I
bekkr m. I
benda I
bera [wk.vb. = I]
bergiligr a. I
berligr a. I
bjórr m. I
bjorg f. I
blekkja I
blíða f. I
blær m. I
borði m. I
bóti m. I
brád f. I
breiða I
brenna [st.vb. $=\mathrm{I}$ ]
brigða [st.vb. $=\mathrm{I}$ ]
brísingr m. I
brún f. I
bræðа I
bygging f. I
byggja I
byrja I
bola I
á f. II
alfr m. II
áll m. II
an conj. II
angi m. II
ár n. II
árliga adv. II
árligr a. II
árna II
áss m . II áss m . III
áttungr m. II
auðligr a. II
auðna f. II
baðmr m. II
bakki m. II
barki m. II
beizla f. II
bekkr m. II bekkr m. III
benda II
bera [st.vb. $=\mathrm{II}$ ]
bergiligr a. II
berligr a. II
bjórr m. II
bjorg f. II
blekkja II
blíða f. II
blær m. II
borði m. II
bóti m. II
brád f. II brád f. III
breiða II
brenna [wk.vb. $=\mathrm{II}$ ]
brigða [wk.vb. = II]
brísingr m. II
brún f. II
bræða II
bygging f. II
byggja II
byrja II
boela II
bræða III
áll m. III
an adv. III
bjórr m. III

硅
byrja III

| dafna I | dafna II |
| :---: | :---: |
| deyfa I | deyfa II |
| draugr m. I | draugr m. II |
| Draupnir m. I | Draupnir m. II |
| dreif f. I | dreif f. II |
| dúnn m. I | dúnn m. II |
| dúsa I | dúsa II |
| dust n. I | dust n. II |
| dœelskr I | doelskr II |
| dof f. I | dọf f. II |
| eð conj. I | eð conj. II |
| eigin n. I | eigin n . II |
| elda I | elda II |
| eldi n . I | eldi n. II |
| en conj. I | en conj. II en conj. III |
| fá $[\mathrm{st.vb} .=\mathrm{I}]$ | fá [wk.vb. = II] |
| falda [st.vb. $=\mathrm{I}$ ] | falda [wk.vb. $=$ II] |
| fang n . I | fang n. II |
| farri m. I | farri m. II |
| feðma I | feðma II |
| ferma f. I | ferma f. II |
| ferma I | ferma II |
| fifla [(ad) $=$ I] | fífla [(ld) $=\mathrm{II}$ ] |
| flá f. I | flá f. II |
| fló f. I | fló f. II |
| flóki m. I | flóki m. II |
| flæmingr m. I | flæmingr m. II |
| fóli m. I | fóli m. II |
| Frosta f. I | Frosta f. II |
| gá [wk.vb. $=\mathrm{I}$ ] | gá (= ganga) [st.vb. = II] |
| gaddr m. I | gaddr m. II |
| galdr m. I | galdr m. II |
| gammi m. I | gammi m. II |
| gelda I | gelda II |
| gerð f. I | gerð f. II gerð f. III |
| gerr a. I | gerr a. II |
| girði n. I | girði n. II |
| giorr f. I | giorð f. II |


| gráói m. I | gráói m. II | grádi m. III |
| :---: | :---: | :---: |
| grand n. I | grand n . II |  |
| grenna I | grenna II |  |
| grennir m. I | grennir m. II |  |
| grǫn f. I | gron f. II |  |
| gymir m. I | Gymir m. II |  |
| gæla f. I | gxla f. II |  |
| há f. I | há f. II |  |
| há I | há II |  |
| haf $\mathrm{n} . \mathrm{I}$ | haf n . II |  |
| hafna I | hafna II |  |
| hall-land n. I | hall-land n. II |  |
| hallr m. I | hallr m. II |  |
| hamla f. I | hamla f. II |  |
| hamla I | hamla II |  |
| harmr m. I | harmr m. II |  |
| hásætr n. I | hásætr n. II |  |
| heiðr m. I | heiðr m. II |  |
| heimr m. I | heimr m. II |  |
| herming f. I | herming f. II |  |
| hirðligr a. I | hirðligr a. II |  |
| hjalmr m. I | hjalmr m. II |  |
| hjalpa [st.vb. = I] | hjalpa [wk.vb. $=\mathrm{II}$ ] |  |
| hjassi m. I | hjassi m. II |  |
| hlaða [st.vb. = I] | hlaða [wk.vb. = II] |  |
| hnefi m. I | hnefi m. II |  |
| hníga [st.vb. = I] | hníga [wk.vb. = II] |  |
| hóf n. I | hóf n. II |  |
| hópr m. I | hópr m. II |  |
| horr m. I | horr m. II |  |
| hót n. I | hót n. II |  |
| hreina I | hreina II |  |
| hrína I | hrína II |  |
| hrinda [st.vb. $=\mathrm{I}$ ] | hrinda [wk.vb. $=\mathrm{II}$ ] |  |
| hringja I | hringja II |  |
| hrjóða I | hrjóða II |  |
| hrjóta I | hrjóta II |  |
| hrókr m. I | hrókr m. II |  |
| hrøkkva | hrøkkva |  |
| hugr m. I | hugr m. II |  |


| hugró f. I | hugró f. II |  |  |
| :---: | :---: | :---: | :---: |
| hverfa [st.vb. = I] | hverfa [wk.vb. = II] |  |  |
| hylja [st.vb. = I] | hylja [wk.vb. = II] |  |  |
| hæll m. I | hæll m. II | hæll m. III |  |
| hæra f. I | hæra f. II |  |  |
| hætta I | hætta II |  |  |
| hætinn I | hætinn II |  |  |
| hǫll f. I | holl f. II | hǫll f. III |  |
| inn adv. I | inn adv. II |  |  |
| jafni m. I | jafni m. II |  |  |
| jaga I | jaga II |  |  |
| kanna f. I | kanna f. II |  |  |
| karfi m. I | karfi m. II |  |  |
| ker n. I | ker n. II |  |  |
| kilja f. I | kilja f. II |  |  |
| kløkkva | kløkkva |  |  |
| kneppa I | kneppa II |  |  |
| kol n. I | kol n. II |  |  |
| kolla f. I | kolla f. II |  |  |
| korki m. I | korki m. II |  |  |
| kviðr m. I | kviðr m. II |  |  |
| kvitta I | kvitta II |  |  |
| kyn n. I | kyn n. II |  |  |
| kæra f. I | kæra f. II |  |  |
| leiða I | leiða II |  |  |
| leik-bróðir m. I | leik-bróðir m. II |  |  |
| leikligr a. I | leikligr a. II |  |  |
| leikmaðr m. I | leikmaðr m. II |  |  |
| leka [st.vb. = I] | leka [wk.vb. $=\mathrm{II}$ ] |  |  |
| léna [(að) = I] | léna $[(\mathrm{nd})=\mathrm{II}$ ] |  |  |
| lest f. I | lest f. II |  |  |
| letr n. I | letr n. II |  |  |
| liða [(að) = I] | lía $[($ ast $)=\mathrm{II}]$ |  | liða [st.vb. = IV] |
| liðr m. I | liðr m. II |  |  |
| lík n. I | lík n. II |  |  |
| líka I | líka II | líka III |  |
| lína f. I | lína f. II |  |  |

lind f. I
ljóðr m. I
lof n. I
lofa I
lofan f. I
lófi m. I
lofliga adv. I
lok n. I
loka [(að) $=\mathrm{I}$ ]
lómr m. I
lukta I
lúta [st.vb. $=\mathrm{I}$ ]
lykt I
lykta [(að) $=\mathrm{I}$ ]
loд f. I
mál n. I
málamaðr m. I
máli m. I
marr m. I
mát n. I
mél n. I
mella f. I
mér pron. I
merki n. I
(minna) $[(n t)=I]$
minni n. I
móða f. I
mór m. I
morð n. I
morna I
mót n. I
motti m. I
muna [st.vb. $=\mathrm{I}$ ]
munaðr m. I
mynda I
mæla I (ld)
mœddr a. I
mork f. I
nátt-verðr I
lind f. II
ljóðr m. II
lof n. II
lofa II
lofan f. II
lófi m. II
lofliga adv. II
lok n. II
loka $[(\mathrm{kt})=\mathrm{II}]$
lómr m. II
lukta II
lúta [st.vb. = II]
lykt II
lykta $[(\mathrm{kt})=\mathrm{II}]$
log f. II
mál n. II
málamaðr m. II
máli m. II
marr m. II marr m. III
mát n. II
mél n. II
mella f. II
mér pron. II
merki n. II
(minnast) [(ast) $=\mathrm{II}$ ]
minni n. II
móða f. II
mór m. II
morð n. II
morna II
mót n. II
motti m. II
muna [wk.vb. $=\mathrm{II}$ ]
munaðr m. II
mynda II
mæla II (ld) mæla [(lt) = III]
mœeddr a. II
mork f. II
nátt-verðr II

| nesti n. I | nesti n. II |  |
| :---: | :---: | :---: |
| neyti n . I | neyti n . II |  |
| niðr m. I | Niðr m. II |  |
| nis f. I | nis f. II |  |
| nista I | nista II |  |
| níta | níta |  |
| nótt f. I | nótt f. II |  |
| nykr m. I | nykr m. II |  |
| nýta I | nýta II |  |
| óðr a. I | *ódr a. II |  |
| ofra I | ofra II |  |
| ofran f. I | ofran f. II |  |
| op n. I | op n. II |  |
| óra $[(\mathrm{r}) \times \mathrm{I}$ ] | óra [(að) $=\mathrm{II}$ ] |  |
| óss m. I | óss m. II |  |
| par n. I | par n. II |  |
| past n. I | past n. II |  |
| patim. I | pati m. II |  |
| pipra I | pipra II |  |
| prísa I | prísa II |  |
| rá f. I | rá f. II rá f. III | rá f. IV |
| rak n. I | rak n. II |  |
| rakna I | rakna II |  |
| rasan f. I | rasan f. II |  |
| raumr m. I | raumr m. II |  |
| rausn f. I | rausn f. II |  |
| refla I | refla II |  |
| reiða I | reiða II |  |
| rekkja I | rekkja II |  |
| reklingr I | reklingr II |  |
| renna $[\mathrm{st.vb} .=\mathrm{I}$ ] | renna [wk.vb. $=\mathrm{II}$ ] |  |
| repta I | repta II |  |
| rétta I | rétta II |  |
| réttr m. I | réttr m. II |  |
| reynir m. I | reynir m. II |  |
| reyra I | reyra II |  |
| reyrr m. I | reyrr m. II |  |
| ría I | ríða II |  |


| rif $\mathrm{n} . \mathrm{I}$ rifa I | rif n. II rifa II | rif n. IV |
| :---: | :---: | :---: |
| rím n. I | rím n. II |  |
| ript f. I | ript f. II |  |
| rist f. I | rist f. II |  |
| ró f. I | ró f. II ró f. III | ró f. IV |
| rod n. I | roð n. II |  |
| roða I | roða II |  |
| rokkr m. I | rokkr m. II |  |
| rot n . I | rot n. II |  |
| rót n. I | rót n. II |  |
| røkkva [st.vb. $=\mathrm{I}$ ] | røkkva [wk.vb. $=\mathrm{II}$ ] |  |
| rost f. I | rost f. II rost f. III |  |
| saðr a. I | saðr a. II |  |
| sála f. I | sála f. II |  |
| salr m. I | salr m. II |  |
| Saxland n. I | Saxland n. II |  |
| sefi m. I | sefi m. II |  |
| seiðr m. I | seiðr m. II |  |
| selja f. I | selja f. II |  |
| seta f. I | seta f. II |  |
| sía f. I | sía f. II |  |
| síða [st.vb. $=\mathrm{I}$ ] | síða [wk.vb. $=\mathrm{II}](=$ seiða $)$ |  |
| sig n. I | sig n. II |  |
| siga I | siga II |  |
| signa I | signa II |  |
| sina f. I | sina f. II |  |
| skarfr m. I | skarfr m. II |  |
| skelkinn a. I | skelkinn a. II |  |
| skelkja I | skelkja II |  |
| skelkr m. I | skelkr m. II |  |
| skemma I | skemma II |  |
| skipari m. I | skipari m. II |  |
| skjalfa [st.vb. = I] | skjalfa [wk.vb. $=\mathrm{II}](=$ skelfa $)$ |  |
| skjalla [st.vb. $=\mathrm{I}$ ] | skjalla [wk.vb. $=$ II] |  |
| skolbrúnn a. I | skolbrúnn a. II |  |
| skopa $[(\mathrm{pt})=\mathrm{I}]$ | skopa [(ad) $=\mathrm{II}$ ] |  |
| skozkr a. I | skozkr a. II |  |
| skrámr m. I | skrámr m. II |  |
| skript f. I | skript f. II |  |

skúli m. I
skutill m. I
skýfa I
skýra I
slá [wk.vb. = I]
slangi m. I
sleppa [wk.vb. = I]
snáldr m. I
sníða [st.vb. = I]
spán f. I
spenna I
sperna [st.vb. = I]
spjall n. I
spretta [st.vb. $=\mathrm{I}$ ]
spýta f. I
spýta I
sponn f. I
sporr m. I
staka f. I
stakkr m. I
stál n. I
steðja [(að) $=\mathrm{I}$ ]
stefna I
stjóri m. I
stóli m. I
stóll m. I
storð f. I
stulka f. I
styrja f. I
støkkva [st.vb. = I]
sveipa [st.vb. $=\mathrm{I}$ ]
svella [st.vb. = I]
svelta [st.vb. = I]
svíða [st.vb. = I]
svipa I
synda I
syndugr a. I
sæta f. I
s $\varnothing \mathrm{kkva}$ [st.vb. $=\mathrm{I}$ ]
skúli m. II
skutill m. II
skýfa II
skýra II
slá [st.vb. = II]
slangi m. II
sleppa [st.vb. $=$ II]
snáldr m. II
sníða [wk.vb. = II]
spán f. II
spenna II spenna III
sperna [wk.vb. = II]
spjall n. II
spretta [wk.vb. = II]
spýta f. II
spýta II
spenn f. II
spgrr m. II
staka f. II
stakkr m. II
stál n. II
steðja [(dd) $=\mathrm{II}]$
stefna II
stjóri m. II
stóli m. II
stóll m. II stóll m. III
storð f. II
stulka f. II
styrja f. II
støkkva [wk.vb. = II]
sveipa [wk.vb. = II]
svella [wk.vb. = II]
svelta [wk.vb. = II]
svið́a [wk.vb. = II]
svipa II
synda II
syndugr a. II
sæta f. II
s $\varnothing \mathrm{kkva}$ [wk.vb. $=\mathrm{II}$ ]
tá f. I
tá f. ? II
tjá I
tolla [(ld) $=\mathrm{I}]$
trjóna f. I
tæla I
pekkja [st.vb. $=\mathrm{I}$ ]
pekta I
berna f. I
porn m . I
prifa [wk.vb. $=\mathrm{I}$ ]
pruma f. I
pruma $[(\mathrm{md})=\mathrm{I}]$
pverra [st.vb. $=\mathrm{I}$ ]
býða I
pykt f. I
byngja I
pægja I
úfr m. I
upsi m. I
úr n. I
ú-reiðr a. I
úrigr a. I
usli m. I
vá f. I
vákr m. I
val n. I
valr m. I
vandi m. I
vani m. I
vanr a. I
$\operatorname{vara}[(\mathrm{ad})=\mathrm{I}]$
vari m. I
vári m. I
vé n . I
vega I
veggr m. I
vegr m. I
vekja I
véla I
tjá II
tolla [(að) $=\mathrm{II}$ ]
trjóna f. II
tæla II
pekkja [wk.vb. $=\mathrm{II}$ ]
pekta II
perna f. II
porn m. II
prifa $[$ st.vb $=\mathrm{II}$ ]
pruma f. II
pruma [(að) = II]
pverra $[(\mathrm{r} \partial)=\mathrm{II}] \quad$ pverra $[(\mathrm{a} \mathrm{\partial})=\mathrm{II}]$
pýða II
pykt f. II
pyngja II
pægja II
úfr m. II
upsi m. II
úr n. II
ú-reiðr a. II
úrigr a. II
usli m. II
vá f . II
vákr m. II
val n. II
valr m. II
vandi m. II
vani m. II
vanr a. II
$\operatorname{vara}[(\mathrm{r} \partial)=\mathrm{II}]$
vari m. II
vári m. II
vé n. II vé n. III
vega II
veggr m. II
vegr m. II
vekja II
véla II véla $[(a \partial)=I I I]$
úfr m. IV
vélendi I
vella $[$ st.vb. $=\mathrm{I}$ ]
velta $[$ st.vb. $=\mathrm{I}$ ]
vengi n. I
ver n. I
Veraldr m. I
verða [wk.vb. = I]
verja f. I
verja I
vernda I
verr I
verbjóð f. I
vexa I
viða I
víðir m. I
viðra [(að) $=$ I]
víl n. I
vinda [st.vb. $=$ I]
vindr m. I
virði n. I
virkja I
vísir m. I
vægja I
vqr f. I
ynglingr m. I
æðr f. I
æra I
ørendi n. I
ond f. I
qrleikr m. I
vélendi II
vella [wk.vb. $=$ II]
velta [wk.vb. = II]
vengi $n$. II
ver n . II
Veraldr m. II
verða [st.vb. = II]
verja f. II
verja II
vernda II
verr II verr III
verpjóð f. II
vexa II
við口 II
víðir m. II
viðra [(rð) = II]
víl n. II
vinda [wk.vb. $=\mathrm{II}$ ]
vindr m. II
virði n. II
virkja II
vísir m. II
vægja II
vor f. II
vor f. III
ynglingr m. II
æðr f. II
æra II
æra III
$\phi$ r-endi $n$. II
ond f. II
qrleikr m. II
vindr [m. pl. = III]

正
ond f. III

## I7.2 Non-Inflecting Adjectives

This is a list of non-inflecting adjectives in Old Norse, extracted from Ordbog over det norrøne prosasprog. It includes 624 words. Each adjective is marked with its frequency.
(1) Adjectives in $-a$
aðilja 4
afhuga 15
-afla
aflima 3
aflvana 5
afsiða 1
afsinna 1
afskapa 1
afskipta 1
aftrbata 5
aftrreka 33
afvelta 1
áheyrsla 6
-ala
albata 6
-alda
aldauða 14
aldeyða 1
-aldra
aldǽla 2
áleiksa 1
aleyða 4
algangsa 1
algjafta 1
algx́fta 1
alhuga 2
alkunna 5
alkyrra 1
alltíða 1
alsiða 8
alsolla 1
alverkja 1
ámálsa 1
andorða 4
andvaka 2
andvana 7
andvara 1
annarrabrǿð ra 4
áskynja 20
áttlera 2
ávíga 1
ávita 5

| bakvana 2 | eyða 2 | fullveðja 13 |
| :---: | :---: | :---: |
| -bata | eymuna 3 | fullvita 1 |
| -beina | fáliða 6 | gavita 1 |
| -bjarga | -fanga | gamalóra 1 |
| blóðrisa 4 | -fara | gamalø̊ra 1 |
| blósma 5 | -feðra | -gangsa |
| -bóndaliga | -ferla | gestfeðra 1 |
| -bóndliga | féskarða 1 | -gjafta |
| -borða | févana 2 | gjafvaxta 5 |
| bótparfa 6 | fépurfa 2 | grátparfa 1 |
| bótpurfa 2 | -fjá | greiðfara 2 |
| -brusta | flaumósa 2 | -gródra |
| -brǿðra | flótfanga 1 | guðsifja 1 |
| ?búferla 1 | -flota | -gáfta |
| -burða | -flótta | -hafa |
| -byrja | -fluga | hafreka 1 |
| dagsanna 8 | forflótta 15 | halffara 1 |
| -dauða | forkunna 1 | halloka 2 |
| dauðvána 14 | forveða 1 | -hama |
| -deyða | forveðja 5 | hamstola 4 |
| -dóma | forviða 9 | handa 3 |
| dómrofa 1 | forvitra 9 | handhafa 2 |
| -drepa | fótlama 3 | harmdauða 2 |
| dumba 12 | fráskila 28 | heilhjarta 2 |
| -dusta | frumvaxta 27 | -heilla 15 |
| -dx́la | fullafla 3 | heilvita 9 |
| eðla 2 | fullaldra 3 | heitrofa 2 |
| -efla | fullborða 3 | heitsa 1 |
| eiðrofa 7 | fullefla 1 | heraðflóta 1 |
| -eiga | fullelda 2 | hernuma 3 |
| eimuna 2 | fullfjá 2 | -heyrsla |
| einbjarga 2 | fullhuga 1 | heyprota 1 |
| einhama 3 | fullkaupa 1 | hírsa 1 |
| einmana 9 | fullkosta 19 | -hjarta |
| einmuna 3 | fullleiksa 1 | hjartsára 1 |
| einskipa 32 | fullliða 7 | -hlaupa |
| einsliða 1 | fullnuma 2 | -hljóða |
| einstaka 9 | fullráda 1 | -hluta |
| einvala 39 | fullskriða 3 | -hlýra |
| ekta 1 | fullsvefta 2 | holunda 2 |
| -elda | fulltíða 66 | horfinalda 3 |
| endrrjóða 1 | fullvaxta 5 | horfinheilla 4 |


| hosa /vb. pret. part. 1 | mannpurfa 1 <br> matbrjóta 1 | samkaupa 3 samkjora 1 | -stola <br> -stunda |
| :---: | :---: | :---: | :---: |
| hraðfara 7 | matprota 7 | samkynja 2 | sundrhljóða 2 |
| hressliga 1 | mergunda 2 | samlaga 2 | sundrorða 4 |
| hríðdrepa 1 | miðaldra 2 | sammála 4 | sundrskila 7 |
| -huga | ${ }^{\circ}$ miðjaaldra 1 | sammǿðra 24 | sundrskilja 1 |
| húsbóndaliga 2 | ${ }^{\text {o }}$ mótglíka 1 | samráða 7 | sundrslita 4 |
| hvimsa 1 | munnvana 1 | samsaga 2 | svefnvana 1 |
| iðglíka 3 | -mǿðra | samskapa 1 | -svefta |
| íelda 1 | námuna 3 | samskipa 7 | sveita 1 |
| íglíka 2 | -nátta | samskóla 1 | svídauða 3 |
| ígróðra 2 | nauðreka 1 | samskulda 2 | svidda 10 |
| íhuga 1 | nauðskilja 1 | samskylda 1 | synsaka 3 |
| ? ? 1 étta 1 | -numa | samstunda 1 | sáhafa 9 |
| ?illvilja 1 | nýfola /vb. pret. | samtaka 1 | -taka |
| ínýta 2 | part. 1 | samtíða 3 | -tíða |
| jafnaldra 5 | nýtaka/vb. | samvista 1 | tolfvetra 1 |
| jafnkosta 2 | pret. part. 27 | sampinga 11 | ${ }^{\text {o }}$ trollriða 1 |
| jafnliða | nǽstabrǿðra 7 | -sanna | tvísaga 2 |
| játbeina 1 | óbyrja 28 | -sára | tvítala 1 |
| jáza 9 | óðfluga 13 | sáttrofa 1 | tvívetra 2 |
| -kaupa | offara 6 | -seta | -unda |
| -kola | ofleiksa 2 | -siða | útlaga 41 |
| -kosta | ofskynja 3 | síðskota 1 | -vaka |
| -kunna | ókveða 22 | -sinna | -vala |
| -kveða | ómála 11 | ?sjaldkvǽm- | -vana |
| -kynja | -orða | liga 1 | -vána |
| kynvana 1 | orkuvana 8 | sjalfala 11 | vanafla 2 |
| -kyrra | -ósa | sjalfbjarga 7 | vanburða 1 |
| -laga | óvita 5 | sjalfkrafa 21 | ?vandlaga 1 |
| lagtaka /vb. pret. | -ráða | sjalfráða 10 | ?vandvita 1 |
| part. 1 | ráðparfa 1 | sjalfrǽða 3 | vanhluta 11 |
| lama 11 | reiðfara 29 | sjalfvalda 1 | vanlaga 2 |
| landflótta 22 | -reka | -skamma 100 | vanmátta 2 |
| landfrelsa /vb. pret. | -riða | -skapa | vanmega 1 |
| part. 1 | -risa | -skila | vanmegna 2 |
| -leiksa | -rjóða | -skilja | vanmeta 3 |
| -lera | -rofa | -skipa | vanvita 1 |
| -létta | rokinbrusta 1 | -skipta 595 | vápnvana 1 |
| -liða | rokindusta 1 | -skóla 21 | -vara |
| liðvana 2 | rǽða 1 | -skota | varhluta 6 |
| liðprota 3 | -saga | -skriða | -vasa |
| -lima | samdauna 1 | skriftrofa 8 | -vaxta |
| limhlaupa 3 | samdóma 13 | -skulda | -veðja |
| límsetja /vb. pret. | samfara 3 | -skynja | veðrvana 1 |
| part. 2 | samfeðra 22 | -slita | -velta |
| loglaga 1 | samflota 6 | -solla | -verkja |
| málbarfa 4 | samhlaupa 1 | sóttlera 2 | vetra |
| málpurfa | samhljóða 7 | spánósa 2 | vetrseta 1 |
| mannprota 4 | samhuga 21 | -staka | -viða |


| viðskila 1 | -vǽna |
| :--- | :--- |
| -víga | pakvana 1 |
| -vilja | ?pessjafna 1 |
| villiráða 4 | -pinga |
| villráða 1 | prekvana 1 |
| -vista | priðjabróðra 6 |
| vistaprota 1 | -prifráða |
| -vita | prítugnátta 1 |
| -vitra | -prota |
| vitstola 4 | protráða 9 |

## (2) Adjectives in -i

## -afli

aflvani 14
aftrbati 3
aftrreki 3
áheyrsi 1
áheyrsli 2
aldauði 5
-aldri
aldǽli 1
áleiksi 1
alfari 8
algangsi 2
?alkunni 2
alskyldi 1
alvirki 1
andvaki 2
andvani 12
annarrabrǿðri 2
?áttleri 1
áviti 3
barhǫfði 1
-bati
beinapurfi 1
-bergi
bilsi 3
-bjargi
blóðrisi 1
brúnvǫlvi 4
-brǿðri
dagfari 9
-dái
-dauði
dauðváni 8
-dauni
draumstoli 2
dumbi 11
-dǽli
eftirstazi 1
eiðfalli 1
eiðrofi 1
-eigi
eimuni 8
einhami 1
einhugi 1
einlagi 2
einmani 3
einteiti 2
eintómi 1
einvali 2
eyði 3
eymuni 3
-falli
farflótti 1
-fari
farlami 1
farpurfi 1
-feðri
févani 11
fépurfi 13
fjárpurfi 2
flaumósi 1
flótti 1
forflótti 5
forveði 3
forvitri 29
fótlami 5
framandi 7
fráskili 2
frí 3
frumvaxti 7
próttvana 1
punnskipa 1
purfa 1
ǽttlera 9
-ǿra
ørbjarga 1
øreiga 8
ørhjarta 2
ørkola 1
${ }^{\circ}$ ørkula 2
ørkynja 3
ǿrna 2
ørskamma 1
фrtaka 1
ørvasa 11
ørvita 11
ørvǽna 7
ørprifráða 1
фxna 6

| frumvexti 1 | hvimsi 1 |
| :---: | :---: |
| fullafli 1 | -hǫfði |
| fullkaupi 1 | ílandi 2 |
| fullnomsi 1 | illráði 1 |
| fullnumi 6 | jafnaldri 3 |
| fullsǿfði 1 | jafni |
| fulltíði 23 | ?játi 1 |
| fulltingi 1 | jázi 2 |
| -fúsi | -krafi |
| -fǽri | -kunni |
| -fǿti | -kveði |
| -gangsi | -lagi |
| gestfeðri 4 | lami 5 |
| -hafi | landflótti 19 |
| -hagi | -leiksi |
| ?halftki n .1 | -leri |
| halloki 3 | liðsparfi 1 |
| halzi 2 | liðspurfi 4 |
| -hami | liðpurfi 1 |
| hamstoli 9 | lítilmagni 4 |
| handhafi 22 | málóði 16 |
| handlami 3 | mannbroti 1 |
| harmdauði 49 | mannpurfi 1 |
| heilhugi 1 | mergundi 2 |
| heilundi 2 | miðaldri 1 |
| heilviti 2 | mishugi 1 |
| heitrofi 2 | -muni |
| heitsi 1 | námuni ? 3 |
| -heyrsi | náttfari 8 |
| -heyrsli | -nomsi |
| heyproti 1 | -numi |
| hlessi 1 | nǽstabrǿðri 6 |
| holundi 2 | nǽstnǽrri 1 |
| -hugi | óðflugi 3 |
| hugsi 11 | óðfúsi 1 |


| -ódi | sammáli 1 | -sǿfði | -viti |
| :---: | :---: | :---: | :---: |
| óðvirki 1 | sammǿðri 24 | -teiti | -vitri |
| offari 4 | samráði 3 | -tídi | vitstoli 3 |
| offǽri 2 | sampingi 1 | -tómi | -volvi |
| ofgangsi 1 | sjalfbergi 1 | -trúi | -barfi |
| ókveði 7 | sjalfbjargi 5 | tvenni 20 | pjóðhagi 1 |
| ómáli 18 | sjalfkrafi 27 | -undi | priðjabrǿðri 1 |
| -ósi | sjalfráði 24 | útlagi 9 | -prifrádi |
| ósjalfráði 1 | sjalfrǽði 1 | -vaki | -prifsráði |
| óviti 5 | sjalfvaldi 3 | valdi 3 | -broti |
| óparfi 1 | skapdauði 2 | vanafli 6 | protráði 1 |
| -ráði | skapvani 1 | ?vanefli 1 | purfi 16 |
| reiðfari 4 | skattfrí 1 | vanhluti 5 | pverafǿti |
| -reki | -skili | -vani | ǽttleri 2 |
| rétthafi 1 | skriftrofi 1 | -vani | øreigi 23 |
| -rofi | -skyldi | vápnvani 1 | ørsauði 1 |
| -rǽði | -stazi | -vasi | ørvasi 20 |
| salfalli 1 | steinóði 3 | -vaxti | ørviti 12 |
| samdauni 1 | -stoli | -veði | $\not \mathrm{rarbrifrá}^{\text {i }} 2$ |
| samfari 1 | svídái 5 | verkóði 2 | ørbrifsráði 1 |
| samfeðri 16 | synsaki 2 | vinpurfi 1 | qlteiti |
| samfloti 4 | sǽhafi 6 | -virki |  |

### 17.3 Non-Inflecting Adverbs

As mentioned in ch. 2.6.1 above, we regard suppletive forms as separate lemmas. Thus, gjarna will be one non-inflecting adverb, and beldr another, inflecting adverb which only has comparative and superlative forms. The same is true of illa (verr, verst), litt (minnr, minnst), mjok (meir(r), mest) and vel (betr, bezt).

| áðr | gjarna | mjok | vel |
| :--- | :--- | :--- | :--- |
| austan | heðan | norðan | vestan |
| ei | heim | nú | pá |
| eigi | heiman | síðan | paðan |
| einkar | hér | stundum | par |
| ekki | illa | súnnan | pegar |
| framan | inn | svá | ǽ |
| framleiðis | innan | sváleiðis |  |
| gerla (gørla, gqrla, | jafnan | út |  |
| gjgrla) | lítt | útan |  |

## I8 Sources and Literature

## I8.I Primary Sources

## I8.I.I Main Norwegian text corpus

AM $6194^{\circ}$. Old Norwegian Homily Book. Ca. 1200-1225. Norwegian, some parts translated from Latin, other parts based on Latin or other sources.
DG 8 II. The legendary Óláfs saga ins helga. Ca. 1225-1250. Norwegian, Icelandic sources.
DG 4-7. Strengleikar. Ca. 1275. Norwegian, translated from Old French.
Holm perg $344^{\circ}$. Landslog by Magnús lagabǿtir. Ca. 1275-1300. Norwegian.

I8.I.2 All texts with abbreviations and editions used
Alex $=$ Alexanders saga . Ed. Finnur Jónsson (1925).
Auð = Auðunar páttr vestfirzka. Eds. Björn K. Pórólfsson and Guðni Jónsson (1943: 359-368).
Barl $=$ Barlaams ok Josaphats saga. Ed. Magnus Rindal (1981).
Gylf $=$ Gylfaginning. Ed. Anthony Faulkes (1982: 7-55).
HákHerð = Hákonar saga herðibreiðs in Heimskringla. Ed. Bjarni Aðalbjarnarson (19411951, vol. 3: 347-372).
Hom = Old Norwegian Homily Book. Ed. Gustav Indreb $\varnothing$ (1931).
Hrafnk = Hrafnkels saga. Ed. Jón Jóhannesson (1950: 95-133).
Hrbl = Hárbarð̊slóð. Ed. Jón Helgason (1971: 31-39).
Hym $=$ Hymiskviða. Ed. Jón Helgason (1971: 40-46).
Landsl = Landslog by Magnús lagabǿtir. Eds. Rudolf Keyser and Peter Andreas Munch (1848).

Niðrst $=$ Niðrstigningar saga. Ed. Odd Einar Haugen (1993: 251-265).
ÓHLeg $=$ The legendary Óláfs saga ins helga. Ed. Oscar Albert Johnsen (1922).
ÓT = Óláfs saga Tryggvasonar in Heimskringla. Ed. Bjarni Aðalbjarnarson (1941-1951, vol. 1: 223-272).
Streng $=$ Strengleikar. Eds. Mattias Tveitane and Robert Cook (1979).
Thom = Thómass saga erkibiskups. Ed. Carl Richard Unger (1869).
Yngl = Ynglinga saga in Heimskringla. Ed. Bjarni Aðalbjarnarson (1941-51, vol. 1: 9-83).
Prk = Prymskviða. Ed. Jón Helgason (1971: 58-62).

### 18.1.3 Editions

Bjarni Aðalbjarnarson, ed. 1941-1951. Snorri Sturluson. Heimskringla. 3 vols. Íslenzk fornrit, vol. 26-28. Reykjavík: Hið íslenzka fornritafélag.
Björn K. Pórólfsson and Guðni Jónsson, eds. 1943. Vestfirðinga segur. Íslenzk fornrit, vol. 6. Reykjavík: Hið íslenzka fornritafélag.
DN $=$ Diplomatarium Norvegicum. Vols. 1-20, 1847-1915. Christiania/Kristiania: Det Norske Historiske Kildeskriftfond.
Faulkes, Anthony, ed. 1982. Snorri Sturluson. Edda: Prologue and Gylfaginning. Oxford: Clarendon Press.
Finnur Jónsson, ed. 1925. Alexanders saga. Islandsk oversattelse ved Brandr Jónsson. København: Gyldendal.
Haugen, Odd Einar, ed. 1993. Norrøne tekster i utval. Oslo: Gyldendal Ad Notam.
Indrebø, Gustav, ed. 1931. Gamal norsk homiliebok. Oslo: Kjeldeskriftfondet. Reprinted, Oslo: Universitetsforlaget, 1966.
Jón Helgason, ed. 1971. Eddadigte. II. Gudedigte. 3rd ed. København: Munksgaard.
Jón Jóhannesson, ed. 1950. Austfirðinga segur. Íslenzk fornrit, vol. 9. Reykjavík: Hið íslenzka fornritafélag.
Johnsen, Oscar Albert, ed. 1922. Olafs saga ins helga. Utg. for Den Norske Historiske Kildeskriftkommission. Kristiania: Dybwad.
Keyser, Rudolf, and Peter Andreas Munch, eds. 1848. Norges Gamle Love. Vol. 2. Christiania: Gröndahl.
Rindal, Magnus, ed. 1981. Barlaams ok Josaphats saga. Norrøne tekster, vol. 4. Oslo: Norsk Historisk Kjeldeskrift-Institutt.
Tveitane, Mattias, and Robert Cook, eds. 1979. Strengleikar. An Old Norse Translation of Twenty-One Old French Lais. Norrøne tekster, vol. 3. Oslo: Norsk Historisk Kjelde-skrift-Institutt.
Unger, Carl Richard, ed. 1869. Thomas saga Erkibyskups. Fortelling om Thomas Becket Erkebiskop af Canterbury. Christiania: Bentzen.

## I8.2 Old Norse Dictionaries

Fritzner, Johan. 1883-1896. Ordbog over Det gamle norske Sprog. 2nd ed., 3 vols. Kristiania: Den norske Forlagsforening. Supplementary volume by Finn Hødnebø. Oslo: Universitetsforlaget, 1972. - Reprint, Oslo: Universitetsforlaget, 1973.
Ordbog over det norrøne prosasprog. København: Den Arnamagnæanske Kommission, 1989-.
Simensen, Erik, Leiv Heggstad, and Finn Hødnebø. 2008. Norrøn ordbok. 5th ed. Oslo: Samlaget.

## I8.3 Secondary Literature

Bamman, David, Marco Passarotti, Gregory Crane, and Savina Raynaud. 2007. Guidelines for the Syntactic Annotation of Latin Treebanks (v. 1.3, 1 March 2007). http://nlp.perseus.tufts.edu/syntax/treebank/1.3/docs/guidelines.pdf [last visited 25.09.2014]
Eagles [Expert Advisory Group on Language Engineering Standards]. Recommendations for the Morphosyntactic Annotation of Corpora. Version of March 1996. http://www.uni-leipzig.de/~burr/Verb/htm/LinkedDocuments/annotate.pdf [last visited 25.09.2014]
Faarlund, Jan Terje, Svein Lie and Kjell Ivar Vannebo. 1997. Norsk referansegrammatikk. Oslo: Universitetsforlaget.
Faarlund, Jan Terje. 2004. The Syntax of Old Norse. Oxford: Oxford University Press.
Hanssen, Eskil, Else Mundal and Kåre Skadberg. 1975. Norrøn grammatikk. Oslo: Universitetsforlaget.
Haug, Dag Trygve Truslew. 2010. Proiel Guidelines for Annotation. 29 June 2010. http://folk.uio.no/daghaug/syntactic_guidelines.pdf [last visited 25.09.2014]
Haugen, Odd Einar. 2001. Grunnbok i norrønt språk. 4th ed. Oslo: Gyldendal Akademisk.
Haugen, Odd Einar, ed. 2008. The Menota Handbook. Version 2.0. Bergen: Medieval Nordic Text Archive. - http://www.menota.org/HB_index.xml [last visited 25.09.2014]
Johannessen, Janne B. and Kristin Hagen. 2007. "Nye grammatiske termer i skoleverket". http://www.sprakradet.no/Toppmeny/Publikasjoner/Spraaknytt/Arkivet/ Spraknytt-2007/Spraknytt-22007/Nye-grammatiske-termer [last visited 25.09.2014]
Knudsen, Trygve, ed. 1952. Gammelnorsk homiliebok etter AM 619 Qv. Innledning. Corpus Codicum Norvegicorum Medii Aevi, Qvarto Serie, 1. Oslo: Selskapet til utgivelse av gamle norske håndskrifter.
Mel'čuk, Igor A. 1988. Dependency Syntax: Theory and Practice. Albany: State University of New York Press.
Nivre, Joakim. 2005. "Dependency Grammar and Dependency Parsing." MSI report 05133. Växjö University: School of Mathematics and Systems Engineering.

Nygaard, Marius. 1905. Norrøn syntax. Kristiania: Aschehoug.
Særheim, Inge. 2013. "Person- og stadnamn". Ch. 10 in Handbok inorrøn filologi, ed. Odd Einar Haugen, 512-555. Bergen: Fagbokforlaget.
Tesnière, Lucien. 1959. Éléments de syntaxe structurale. Paris: Klinksieck. - 2nd rev. ed. 1965.

