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Rethinking Syntactic Boundaries in Old Norse

SYNTACTIC VARIATION
AND INFORMATION STRUCTURE
IN OLD NORWEGIAN

Juliane Tiemann

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Rethinking Syntactic Boundaries in Old Norse

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*Syntactic Variation and Information Structure
in Old Norwegian*

By

Juliane Tiemann



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Preface

*æf þu villt værða fullkomenn í froðleic. þa næmðu allar mallyzkur en
alra hælzt latinu oc valsku. þvi at þær tungur ganga viðazt. En þo tyn
þu æigi at hældr þinni tungo*

[if you want to be perfect in knowledge, then learn all languages,
but most of all Latin and French, because these languages are most
widely spread. And yet do not lose your (own) language.]

Konungs skuggsjá, The King's Mirror



A love for languages sparked my journey into academia and led me to pursue a doctoral degree in Old Norse Philology at the University of Bergen. This book comprises the results of years of dedicated research and the unwavering support of colleagues and friends. Their encouragement has not only fueled my passion but also broadened my research horizons, allowing me to delve deeper into the intricate world of Old Norse syntax and information structure, as well as manuscript studies.

This monograph is a revised version of my doctoral dissertation with the title “Syntactic Variation and Information Structure in Old Norwegian. An Investigation of *Konungs skuggsjá* in AM 243 b α fol.” In this work, I discuss syntactic variation and information structure, as well as aspects of prosodic weight, in Old Norwegian. The investigation includes a comparative perspective with other older Germanic languages and, unlike previous works, analyzes Old Norwegian syntax separately from Old Icelandic syntax. Both are commonly referred to as ‘Old Norse,’ and due to the assumption that there are no syntactic differences (e.g., Faarlund 2004: 2), Old Norwegian is most often discussed alongside studies primarily based on Old Icelandic corpus material (cf. Mørck 2016: 320f.).

The analysis of this topic is divided into four larger studies focusing on various aspects of the language of Old Norwegian and the reflexes of information-structural features on the manuscript page. While presenting the main findings of the four specialized investigations, this book also establishes the framework for the studies conducted within the project. It includes detailed discussions on

theory and methodology, the corpus material of Old Norwegian, and guidelines for annotating Old Norwegian syntax and information structure.

Some questions addressed within this book are:

1. In what way and to what extent was the word order in Old Norwegian governed by information-structural constraints and/or prosodic weight?
2. Can we assign specific positions to specific information-structural notions?
3. How do corpus languages express the need for communicative clarity and stylistic expressional diversity?

Taking previous studies based on purely Old Icelandic material into account, this monograph provides the first comparative results showing that crucial differences in word order and the interplay of information structure and prosodic weight between Old Norwegian and Old Icelandic emerged as early as the 13th century. By highlighting the early shift toward fixed VO word order in the Norwegian language, the research not only challenges the unified treatment of Old Norse but also contributes new data and theoretical perspectives to broader comparative research on older Germanic languages.

My aim is that this book will serve as a valuable resource for scholars and students alike. It provides not only a first glimpse into the possibilities of comparing the closely related languages, Old Norwegian and Old Icelandic, on a syntactic level, but also hopefully sparks interest in interdisciplinary investigations. By combining various disciplines, we can study linguistic features on the manuscript page in greater depth.

Acknowledgments

This publication would not have been possible without the invaluable contributions of numerous colleagues and friends. While working on my dissertation, I received encouragement and support from many people, and I would like to express my heartfelt gratitude to all of them. However, some deserve a special word of thanks.

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Furthermore, I want to thank several colleagues and friends for reading through various parts of my work and providing insightful comments and feedback. I am especially grateful to Alicja Piotrowska, Chiara De Bastiani, Nick Pouls, Alexander Pfaff, and Kristin Bech.

With my colleague and friend Alicja, I also collaborated on comparative analyses of East and West Norse. You were always happy to share your work and data material with me, and I hope we can work on more comparative studies in the future!

Chiara and Nick, you were always welcoming and happy to help with inspiring remarks on various aspects included in this book. The discussions I had with both of you were crucial for organizing my thoughts on various topics.

Moreover, I would like to thank the two anonymous reviewers of a previous version of this research monograph for their feedback, and Jóhanna Barðdal for inviting me to submit my work to Brill and for her careful and insightful comments to my manuscript.

Finally, on a more personal note, I want to thank three special people in my life—without you, I would not be where I am today. First, I want to thank Alisher for being my lighthouse when everything goes dark around me—without you, my world would be a sad place. Then, I want to thank my wonderful husband, Tomi, for your endless support, care, and love. With you, the future looks bright, no matter what, no matter where, no matter when. And last but not least, I would like to thank my mom—without you, I would not be the curious person that I am today. Without you, my path would not have been as straightforward towards academia. Thank you for your constant enthusiasm about what I am doing, even though perhaps not everything was always clear to you. Thank you for always believing in me.

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Abbreviations

ACC	Accusative
AgrOP	Object agreement phrase
AM	Arnamagnæan
ANNIS	ANNotation of Information Structure
ART	Definite free article
Aux	Auxiliary
cf.	Compare
CG	Common Ground
col.a	Column a
col.b	Column b
CP	Complementizer phrase (clause)
DAT	Dative
DEF	Definite bound article
DET	Determiner
DFG	German Research Foundation/ Deutsche Forschungsgemeinschaft
DP	Determiner phrase / Demonstrative phrase
et al.	Et alii
e.g.	Exempli gratia
esp.	Especially
ex.	Example
f.	Following (one page)
ff.	Following (several pages)
fn	Footnote
FUT	Future tense
GEN	Genitive
Holm	Manuscript Collection, Kungliga biblioteket, Stockholm
HómNo	Old Norwegian Homily Book
Holm Perg	Manuscript Collection, Kungliga biblioteket, Stockholm, parchment
i.e.	Id est
IcePaHC	The Icelandic Parsed Historical Corpus
INDEF	Indefinite article
ISWOC	Information Structure and Word Order Change in Germanic and Romance Languages
Kgs	Konungs skuggsjá
KoNoKs	Korpus over den Norske Konungs skuggsjá
MLL	Landslög Magnúss Hákonarsonar Magnus Lagabøtes landslov
mss.	Manuscript

N	Noun
NEG	Negation
NOM	Nominative
NP	Noun phrase
O	Object
ÓHLeg	Óláfs saga ins helga
ov	Object-Verb
perf.part	Perfective participle
PF	Phonological Form; perfect tense
PL	Plural
POSS	Possessor
PossNP	Nominal Possessor
postnom.	Postnominal
PP	Prepositional phrase
pres.part	Present participle
prenom.	Prenominal
pro	Pronominal determiner phrase (DP) without phonological content
PROIEL	Pragmatic Resources in Old Indo-European Languages
PRS=PRT	Historical present
QUD	Questions under discussion
r	Recto
SFB	Collaborative Research Center/Sonderforschungsbereich
SG	Singular
SOV	Subject-Object-Verb
STR	Strong
Streng	Strengleikar
SVO	Subject-Verb-Object
Þiðr	Þiðriks saga af Bern
Upps DG	Manuscript Collection, Uppsala University Library
V	Verb
v	Verso
VO	Verb-Object
VP	Verb phrase
vP	Voice Phrase
V2	Verb second
WK	Weak
xv	X Phrase

Introduction

Syntactic variation in older languages is a broad subject that deals with the ways in which sentences are structured and constructed. This variation is analyzed by studying alternating sequences of various parts-of-speech labels within sentence and phrasal structures, as well as within larger textual structures. To give a simple example of language variation found in Old Norwegian and the possibility of constituents appearing in various positions: in a clause like *gekk hon út* ‘she went out’, all constituents can be fronted. The string can either be a declarative or an interrogative clause, depending on the context (see Ore 2013:6). The positions of the subject and verb do not provide conclusive grammatical information about the sentence type and its interpretation. In recent years, studies within a Nordic context have approached this kind of flexibility in word order from an analytical perspective based on dependency grammar, positing structural equivalence with differing word order (see Old Norwegian: Menotec; Old Swedish: MAPIR).¹

Furthermore, in the last two decades, there has been an increased focus on the mechanisms behind syntactic alternations, with substantial attention given to studies following an information-structural approach. These studies enhance purely syntactic theories with pragmatic analyses, resulting in new insights into the field of variability in complex sentences. Variation based on stylistic and discourse-dependent rules in older language stages can be reinterpreted as core-grammatical rules and the grammaticalization of originally information-structural variety towards their modern counterparts (cf. Hróarsdóttir 2000; Hinterhölzl 2001, 2004). Examples of such reinterpretations include the differentiation between main and subordinate clauses in German and the change from OV- to VO-structures in English.

In the context of Old Norse, Haugan’s study (2000) is one of the first major studies on syntactic variation from an information-structural perspective. He analyzes information structure in material consisting of both Old Norwegian and Old Icelandic between 1050–1350. Haugan describes Old Norse as a configurational SVO language (see also Faarlund 1990), exhibiting phenomena such as scrambling. Considering that scrambling is mainly described for SOV lan-

1 Menotec: <https://www.menota.org/menotec.xml> (Accessed May 2025); MAPIR: <https://spraa.kbanken.gu.se/projekt/mathir> (Accessed May 2025).

guages, this study is quite interesting. Haugan's research also addresses a heavily discussed question within historical linguistics concerning the syntactic base structure in Germanic languages, particularly the position of verbs.

Phenomena such as scrambling, topicalization, and dislocation, which deviate from the established unmarked word order, based on the *Universal Base Hypothesis*, can be uniformly explained using an information-structural approach with a functional/pragmatic emphasis. Analyses like Haugan's thus contribute to the systematization of documented phenomena by explaining them through communicative dynamics.

Internationally, several large projects have been formed around the still relatively young research field of information structure, focusing on various aspects of the broader theoretical discussion and language-specific phenomena. In Germany, in particular, various projects investigate information-structural constraints in both modern and ancient languages. The Collaborative Research Center project SFB 632, titled 'Information structure: the linguistic means for structuring utterances, sentences, and texts', funded by the German Research Foundation (Deutsche Forschungsgemeinschaft / DFG), included 19 subprojects. These subprojects aimed to formalize models of information structure, study its various manifestations, and research the relevant embedding of principles connected to information structure.² Within this project, it was shown that variation and change in sentence structures in older Germanic languages interact with the realization of information-structural categories, which also affect the character of referential expressions (cf. subproject B4).

The German Research Foundation additionally funded two DFG-projects dealing with information structure: 'Informationsstruktur in älteren indogermanischen Sprachen' and 'Informationsstruktur in komplexen Sätzen—synchron und diachron: Erarbeitung eines diachronen Kontrastkorpus'.³ The objective of these projects was to analyze information structure in several corpus languages, including Hittite, Avestan, and Latin. They focused on questions concerning the change from discourse-oriented languages to syntax-oriented languages and the general contribution of information structure to syntactic variation, both synchronically and diachronically. These projects investigated, for example, the structural relations in subclauses and their differences from and interactions with main clauses, the information-structural contribution to variation in complex sentences in correlation with discourse contexts, and phe-

2 <http://www.sfb632.uni-potsdam.de/>. (Accessed May 2025).

3 <https://gepris.dfg.de/gepris/projekt/109055449?context=projekt&task=showDetail&id=109055449&> (Accessed May 2025); <https://gepris.dfg.de/gepris/projekt/199843560> (Accessed May 2025).

nomena such as the development of *that*-constructions and the transition from topic-prominence to subject-prominence.

In Norway too, researchers have investigated the influence of information structure on the development of several languages. The Norwegian Research Council and the Department of Literature, Area Studies and European Languages at the University of Oslo funded the project ‘Information Structure and Word Order Change in Germanic and Romance Languages’ (ISWOC), which examined the relationship between information structure and word order change in earlier stages of English, Norwegian, and French, among others (see Bech & Eide 2014).⁴

This last project focused particularly on the interaction of information structure and syntactic change in older Germanic and Romance languages with reference to their modern counterparts. However, even though Norwegian was initially included in this project, recognizing the need to analyze Old Norwegian separately from Old Icelandic, only a small amount of analytic work has been done on this language within ISWOC. Only parts of the legendary *Óláfs saga ins helga* (Upps DG 8 11) were annotated for information structure, and no publications concentrating on Old Norwegian have been published as part of the project results so far.

Additionally, it is important to note that the annotations done in the projects realized in Germany differ from those done in ISWOC. While the projects in Germany include a phrase-structural analysis, ISWOC followed a dependency-grammatical-based analysis, showing a hierarchical ordering of constituents and following standards set within the Menotec project, which is the first corpus that provides syntactically annotated material for Old Norwegian. Dependency-grammatical-based analyses are inspired by the structure division mechanism of the *Lexical Functional Grammar* framework and enhanced through secondary dependencies (cf. Haug 2011). While this kind of analysis is especially useful for studying textual meanings in languages with relatively free word order, it obscures the linear ordering of constituents provided by phrase-structural annotations. The mentioned international projects, which have focused on the analysis of varying word order and information structure, however, provide positive data for a successful analysis of variation within a phrase-structural framework.

In addition to these larger projects, several individual studies on the influence of information structure in specific corpus languages (cf. Section 2) have

4 <https://www.hf.uio.no/ilos/english/research/projects/iswoc/index.html>
(Accessed May 2025).

been carried out. These studies often include an analysis of prosodic weight as an interacting factor with information-structural constraints in the ordering of constituents within a clause. The influence of the weight of an element as an independent factor on syntactic ordering is well known (see already Behaghel 1909), and the interaction between factors of prosodic weight and information-structural constraints has led to a noticeable split of Germanic languages into two groups:

- a) Languages in which information-structural constraints steer word order and can override the influence of prosodic weight (cf. e.g., Hinterhölzl 2010 for Old High German); and
- b) Languages in which prosodic weight can override information-structural constraints (cf. e.g., Hróarsdóttir 2000, 2009 for Old Icelandic)

The emergence of international projects and studies continuing this research on individual and interacting factors shows that syntactic variation and information structure, as well as prosodic weight, are significant topics within linguistic research over the last decades. To support this type of analysis, continuously expanding corpora have been developed. Providing data and analyses within this field on a less studied language such as Old Norwegian is thus an important contribution to both the international research field and the more specialized study of Old Norse.

The intention of this research monograph is thus to bring detailed, annotated, and analyzed data for Old Norwegian, separate from and in contrast to Old Icelandic, into this discussion and to gain further insights into several syntactic phenomena within the Old Norse branch. By these means, this project discusses different syntactic behaviors of these two languages at the earliest manifest stage in language history. With this, I especially want to break the tradition of treating Old Icelandic and Old Norwegian as one under the broader notion of ‘Old Norse’ when discussing syntactic phenomena (cf. Faarlund 2004: 2, Mørck 2016: 320 f.), especially since the material analyzed in most studies so far is purely or largely Old Icelandic, and thus often does not include Old Norwegian data at all.

To gain this kind of insight and to be able to compare these languages, it was necessary to develop a corpus that focuses on Old Norwegian material. The developed corpus, called KoNoKs (Korpus over den norske Konungs skuggsjá), entails the Old Norwegian text *Konungs skuggsjá* in the Old Norwegian main manuscript, AM 243 b α fol. It follows annotation guidelines that have been proven efficient for the analysis of information structure in older languages within the aforementioned DFG-projects, ‘Informationsstruktur in älteren indogermanischen Sprachen’ and ‘Informationsstruktur in komplexen Sätzen—synchron und diachron: Erarbeitung eines diachronen Kontrastkor-

pus', with minor adjustments (see Section 4.3). A large part of this research project was therefore dedicated to the development of such a corpus (see Section 4).

The benefits of using the same guidelines for annotation as in other projects are two-fold: 1) the data become more easily comparable to data collected in other corpora due to the same type of annotation and using the same notions; and 2) the framework of information structure was originally developed for the analysis of modern languages with a strong focus on intonational patterns. Some of the most prominent information-structural notions are therefore not directly accessible in historical material. A well-developed method of analyzing important information-structural features without access to an active intonation system is thus most welcome and useful to build on.

In research on syntactic variation in modern languages, special emphasis is placed on the interaction of information structure and grammar, as well as on the correlation between syntax, prosody, and information structure. These studies focus on prosodic features such as *stress*, as exemplified in (1), an example discussed by Krifka (2006) and Schmitz (2008), among others. Here, *focus* on different constituents is expressed through pitch accent in speech, illustrated by capital letters:

- (1) a. John only introduced Bill to SUE.
 b. John only introduced BILL to Sue.
 c. John only introduced BILL to SUE.
 d. John only INTRODUCED Bill to Sue.

Even though the linguistic form stays the same in (1a–d), their interpretation varies greatly. Putting stress on different constituents thus arguably has a strong influence on the interpretation of a sentence. When handling information structure in older languages, however, only written texts are available for examination, which makes the process of analyzing features such as *stress* somewhat more complicated. Nevertheless, some criteria can indicate how to determine constituents as *focus*-candidates in a written text.

To extract these criteria, it is prudent to follow studies that have already worked through various difficulties to avoid the same issues and to annotate and analyze data more efficiently. After discussing the annotation work done within the two aforementioned DFG-projects in Germany directly with the annotators, I was able to adjust the annotation according to what has been proven useful for the languages in these projects without taking any larger risks inherent in 'trying out' a new annotation scheme for a framework that was orig-

inally developed for modern languages. Additionally, in this research, I extend the annotation for some specific features that I have a particular interest in, such as punctuation marks.

I also emphasize that the analysis of an accent-missing graphical system should include the analysis of the manuscript page, which may show special graphical markings, punctuation, and/or corrections made on the page, as well as text-critical analyses of recorded manuscripts of the text in question. After all, the mark-up may help with the identification of information-structural features as a visual aid for the reader, just like gestures can underline meaning in speech. The analysis of several witnesses of the same text might furthermore show editorial interferences, guiding a reader through the text in the best possible way.

Within this research project, I consulted the manuscript text of the main corpus directly and included an analysis of visual reflexes of information structure. However, to ensure the feasibility of the project, which was carried out within four years during which I held a PhD position at the University of Bergen, certain restrictions were made. As roughly half of the project time was devoted to the development of the database, an analysis of other text witnesses containing the same text was not included in the research design. However, the combination of linguistics and the research field of manuscript studies shows promising results, as exemplified in study II (cf. Section 5.2).

The syntactic and information-structural annotation of the corpus text follows a morphological annotation that was done in earlier research on Old Norwegian, documented within the ‘Språksamlingane’.⁵ This morphological annotation is digitally available through the *Medieval Nordic Text Archive* (Menota).⁶ Additionally, a dependency analysis of the same text was funded during the period of this research, allowing me to review my own phrase-structural annotation in comparison with the annotation provided by Eiríkur Kristjánsson and Þorsteinn Vilhjálmsson in the web-application of the project *Pragmatic Resources in Old Indo-European Languages* (PROIEL; see Haug 2010; see also Eckhoff et al. 2018), ensuring a concordant understanding of individual clauses and clausal elements.⁷

5 The text *Konungs skuggsjá* was completely annotated at a morphological level; however, one third of the annotation was lost during data conversion. In the first months of the research project, I therefore worked on the completion of the morphological annotation, which is now available in the Menota database (see fn. 6).

6 <https://www.menota.org/> (Accessed May 2025).

7 <http://foni.uio.no/proiel/> (Accessed May 2025). The results of the Menotec project are collected in this database. The PROIEL webpage also hosts the annotations done within the

The description of structural dependencies of sentence elements can additionally be useful for some analytical points within information-structural analyses, especially when it comes to disambiguating difficult structures. Take, for example, the adverbial *ærit* ‘very’ in *ærit er hann milldr* ‘very is he friendly’ (= ‘he is very friendly’; Strengleikar 12,49), where *ærit* is a dependent of the adjective *milldr* ‘friendly’ that appears separate from it. Another example displaying a split construction is the phrase *gamall maðr ok vitr* ‘old man and wise’ (= ‘an old, wise man’; see Ore 2013: 6), where dependencies show that two elements in separate positions denote information about one specific entity within a given clause. Dependency grammar shows how a sentence is hierarchically built but hides some phenomena important for information-structural analyses, such as *fronting*, as the linear order of constituents is not followed.

At the end of the present research project, the annotated corpus material, including a phrase structure analysis and information-structural analysis, consists of a dataset of 40,199 words, 1,848 main clauses, and 2,404 subordinate clauses. Additionally, I consulted other Old Norwegian texts during my studies (cf. Sections 1.1, 4, and 5). However, due to incomplete, missing, or generally differing annotations, these texts were solely consulted for the purpose of verifying specific patterns, not for an empirical examination of the data.

The added value of the annotated corpus material compiled within this research lies both in the complexity of the annotation and the possibility for direct implementation into comparative studies with, for instance, Old Icelandic. In these ways, this research contributes new insights into syntactic and information-structural phenomena, combined with other interacting factors such as prosodic weight, and brings Old Norwegian as a separate corpus language into this internationally relevant research discussion, as was intended in other projects (see for instance ISWOC).

While following newer research and approaches for the annotation of historical corpus material within a phrase structure approach, I build on the important groundwork done within projects including Old Norwegian material, such as transcription work, morphological annotations, and to some degree also syntactic annotations. The KoNoKs corpus is planned to be made publicly accessi-

ISWOC project and follows the same annotation methods based on Nissim et al. (2004). As of May 2022, the text of *Konungs skuggsjá* has been fully annotated in PROIEL (also available in the INESS infrastructure: <https://clarino.uib.no/iness-prod/treebanks>) (Accessed May 2025). A review of this annotation is still pending (status: May 2025). However, the additional annotational analysis of the same text provided a useful source for comparison and validation of my own understanding of complex sentence structures.

ble online as part of ANNIS (ANNotation of Information Structure), which was originally designed within the above-mentioned SFB 632.⁸

For the remainder of this section, the four studies will be presented in a summarizing overview before discussing three factors that stand out as the motivation for undertaking this project. This introductory section concludes with a discourse on the challenges intrinsic to such a project and an overview of the structure of this book.

1 The Four Studies of the Research Project

The research results presented in this book volume are organized within four individual studies. Together, they shed light on different aspects of the following primary research question:

How and to what extent is syntactic variation and textual division in Old Norwegian governed by information-structural constraints, and to what extent is the factor of prosodic weight an interacting factor (where applicable)?

This research question is further detailed through subquestions that are elucidated in each study. Table 1 provides a rough overview of the four studies, the data material, and the relevant subquestions.

TABLE 1 Schematic overview over the four studies of the research project

Research monograph title	Rethinking syntactic boundaries in Old Norse: Syntactic variation and information structure in Old Norwegian			
	Study I	Study II	Study III	Study IV
Title of the study	The Object Position in Old Norwegian: An Interplay between Syntax, Prosody, and Information Structure (see Tiemann 2022a).	Historical Punctuation in Old Norse: Visual Reflexes of Information Structure (see Tiemann 2022b).	Modifying Variation: Adjective Position in Old Norwegian (see Tiemann 2024).	My Kind of Variation! Possessives in Old Norwegian (see Tiemann manuscript).

⁸ <https://corpus-tools.org/annis/> (Accessed May 2025).

(cont.)

Research monograph title	Rethinking syntactic boundaries in Old Norse: Syntactic variation and information structure in Old Norwegian			
	Study I	Study II	Study III	Study IV
Data material	Main material for the analysis of Old Norwegian: KoNoKs-corpus; comparative material from Old Icelandic: data provided by Hróarsdóttir (2000, 2009)	Main material for the analysis of Old Norwegian: KoNoKs-corpus, Landslög Magnúss Hákonarsonar in Holm Perg 34 4to; comparative material from East Nordic: Äldre Västgötalagen in Holm B59, Gutalagen in B64	Main material for the analysis of Old Norwegian: KoNoKs-corpus, Old Norwegian homily book in AM 619 4to, Óláfs saga ins helga in Upps DG 8 II, Landslög Magnúss Hákonarsonar in Holm perg 34 4to, and in Upps DG 8 I, Strengleikar in Upps DG 4–7; comparative material from Old Icelandic: data provided by Pfaff (2017, 2019)	Main material for the analysis of Old Norwegian: KoNoKs-corpus; comparative material from East Nordic: data provided by Piotrowska (2021)
Research questions	<p>1) In what way and to what extent is the object position in Old Norwegian governed by information-structural constraints and prosodic factors, respectively?</p> <p>2) How does the distribution differ from or resemble what we find in Old Icelandic corpora?</p> <p>3) What can we say about the interplay between information-structural constraints and prosodic weight?</p>	<p>1) Are discourses structured visual on the manuscript page according to the information flow given in the text?</p> <p>2) What evidence do we find supporting an information-structural usage of medieval punctuation?</p> <p>3) How can the framework of information structure help analyze punctuation practices?</p>	<p>1) Can the variation observed at a phrasal level be explained through information-structural constraints, resembling the phenomena found on clausal level?</p> <p>2) How do different factors, such as overt (in)definiteness marking, morphological form of the adjective and information-structural functions interact with each other?</p>	<p>1) How can we explain the positional variation of both nominal and pronoun possessors within a uniform analysis?</p> <p>2) Does the structural analysis of study III, including a nominal left periphery, account for the observed variation of other elements within the extended NP?</p> <p>3) Can we situate Old Norwegian in</p>

(cont.)

Research monograph title	Rethinking syntactic boundaries in Old Norse: Syntactic variation and information structure in Old Norwegian			
	Study I	Study II	Study III	Study IV
		4) Is it possible to define an overall practice of punctuation setting within Old Nordic manuscripts?	3) Can we formulate an efficient method to determine the information status of an adjective?	a broader Nordic context, considering similarities to Old Icelandic and differences to East Nordic?

The order of the studies is chronological according to the time in which they were conducted, also displaying continuously growing annotated corpus material. Regarding subject matter, three studies deal with clausal and phrasal phenomena of word order variation, and one study addresses phenomena of textual division.

Study I, *The Object Position in Old Norwegian: An Interplay between Syntax, Prosody and Information Structure*, presents a study on the most prominent topic of syntactic variation in older languages with freer word order—the position of the object relative to the lexical verb in the clause, the so-called *ov/vo*-alternation. The dataset for the analysis of the object position in Old Norwegian consists of subordinate clauses found in the corpus material of KoNoKs that contain a complex verbal form, and a referential object. Two factors have been tested with respect to their influence on positional alternation: i) the information status of the object and ii) the prosodic weight of the object; parameters, that have been described as decisive factors in other older Germanic languages. Information status has been analyzed within a binary *given–new* distinction (cf. Gundel et al. 1993; Birner 2006), while prosodic weight was measured in two separate ways: i) by the type of the object, i.e., light *DPS*, bare *NPs*, heavy *DPS*, and ii) by syllable count of the object, i.e., light versus heavy.

Another factor considered important in the analysis of syntactic variation is the development from a language that exploits various syntactic positions to reflect information structure towards a language with a relatively fixed word order. This development is already visible in the Old Norwegian material studied here. The results of this study suggest that Old Norwegian, or the language used in the main manuscript of *Konungs skuggsjá* in the 1270s, already displays features indicating a divergent development of Norwegian from Icelandic and shows a tendency towards a fixed *vo* order.

Study II, *Historical Punctuation in Old Norse: Visual Reflexes of Information Structure*, turns to the philological side of this field of study, analyzing visual clues for information structure on the manuscript page and within the textual division. The study consists of a fine-grained analysis of the main manuscript text of *Konungs skuggsjá* and a detailed analysis of three additional older Nordic manuscript texts of the same period to check whether the predictions made for *Konungs skuggsjá* are transferable to a broader collection of data. The manuscripts were analyzed for different punctuation marks, their usage, and especially their position within the written discourse.

The practice of medieval punctuation has already been examined for various single manuscripts of other older languages (e.g., Alonso-Almeida & Ortega-Barrera 2004; De la Cruz Cabanillas 2014; Salles-Bernal 2016), but this topic has not been discussed as a systematic practice focusing on medieval Nordic material, nor within an information-structural context for these sources. Most studies present medieval punctuation as an arbitrary system. Based on Lucas' (1971) analysis, this study suggests a uniform framework for punctuation setting within medieval Nordic manuscript texts by introducing information structure as a structuring device for both linguistic means and visual reflexes on the manuscript page.

As punctuation realizes the same function as prosody by placing an additional graphical marker in a structure, it divides the text into comprehensible cognitive units of information. This study thus addresses the issue of a missing intonation system within the corpus data and substantiates the importance of including the actual manuscript material when analyzing issues of pragmatics.

Study III, *Modifying Variation: Adjective Position in Old Norwegian*, focuses on phrase-internal alternations rather than on clause-internal alternations as in Study I. Both the ancient and modern variants of the North Germanic NP have received considerable attention in recent years (e.g., Vangsnes 1999; Julien 2002, 2003, 2005a/b; Lødrup 2014; Pfaff 2015, 2019), with a focus on the base structure of the NP and the emergence of the article system, as well as the loss of case marking (cf. e.g., Barðdal 2009). This study focuses on the position of attributive adjectives relative to the noun they modify.

Three general surface patterns can be described within the Old Norwegian extended NP containing one or more attributive adjectives: the adjectives may i) precede, ii) follow, or iii) flank the head noun. I refer to the flanking construction as 'split construction' (see Tiemann 2024), of which two types are described—type I with two adjectives in a scope-relation and type II including a coordinator, setting the two adjectives equally next to each other. In both types, the adjective phrases are syntactically continuous, even if there is coordination, which distinguishes them from what is described as a discontin-

uous construction. Included in the examination of the positional alternation of attributive adjectives are discussions of (in)definiteness, the morphological form of the adjective, and information-structural concepts. Prosodic weight was also considered.

As it is arguably relatively hard to determine the information status of an adjective when it is not immediately repeated in the discourse—marking it as *given*—this study presents an alternative approach to encode information status and highlighting effects such as *focus* by introducing the concept of *essentiality*. With this, the study provides new insights into the description and triggers of syntactic variation inside the Old Norwegian nominal phrase and within studies of information structure. Assuming information-structural motivated positions within the extended NP, I argue for including a nominal left periphery into the structure of the Old Norwegian NP (cf. Ihsane & Puskás 2001; Aboh, 2004; Haegeman 2004; Laenzlinger 2005, 2010; Giusti 1996, 2005, 2012). As in Study I, this study also presents a comparative analysis between Old Norwegian and Old Icelandic, mainly based on research provided by Pfaff (2019).

At last, study IV, *My Kind of Variation! Possessives in Old Norwegian*, builds on the structural analysis laid out in Study III, including a left periphery in the Old Norwegian NP, and focuses on the position of the possessor relative to the head noun within the phrase. A distinction of two types of possessors was made: i) noun possessors in genitive case and ii) possessive pronouns. As in the other studies, information status and prosodic weight are the main factors considered in this investigation. However, unlike Study III, the head noun in possessive constructions is also discussed for these features.

The examination of the extended NP and the base position of the two possessor types also includes a discussion of (in)definiteness, in line with Study III. Special attention is paid to the function of possessors as anchoring devices. In contrast to the other studies of this research project, this study also includes notes on Modern Norwegian, as syntactic variation of possessive pronouns is still possible in the modern counterpart of Old Norwegian, although with differing frequency. The analysis of the Old Norwegian data is additionally compared with research on East Nordic (see Piotrowska 2021), situating Old Norwegian within a broader Nordic context.

The four studies in this project follow recent research on syntactic variation and address some previously described issues in the literature, such as the arbitrariness of medieval punctuation and the challenges of classifying adjectives based on their information status. The studies provide separate data for Old Norwegian and Old Icelandic, along with suggestions for new approaches that combine linguistics with manuscript studies. Within these studies, I employ

both corpus-linguistics and descriptive methods to evaluate and analyze the Old Norwegian data, presenting generalizations based on the findings.

Earlier research on Old Norse posits that Old Icelandic and Old Norwegian show no differences on a syntactic level (e.g., Faarlund 2004). This assumption has been repeated in various overviews of Old Norse syntax, most recently in the new language history of Norwegian, *Norsk språkhistorie 1* (Sandøy 2016). However, these claims often rely solely on observed surface patterns in the two languages without detailed comparative corpus studies that examine the frequencies of these patterns. The studies in this book volume, thus contribute new insights into the Old Norse branch by directly comparing Icelandic and Norwegian, demonstrating that there are indeed observable syntactic differences between these languages early in their history. These differences are here interpreted as indicators of the beginning of syntactic divergence, leading to the distinct modern counterparts, which are well-documented for their syntactic differences (cf. e.g., Franco 2010; Bentzen 2014).

However, it should be noted that the dataset used for the four studies is relatively small compared to the dataset for Old Icelandic. Currently, there is only one Old Norwegian text from one manuscript annotated for syntax and information structure within the main corpus KoNoKs. This text is—of course—not representative of the entire Old Norwegian period or all preserved texts from that time. I have also studied other Old Norwegian manuscript texts (cf. studies II & III), although the empirical data are limited due to the lack of annotated corpora. Therefore, I emphasize that the tendencies observed in the Old Norwegian corpus material in these studies should serve as a starting point for broader comparative analyses. Such analyses can determine whether the effects of information status and prosodic weight on word order variation are restricted to the main text examined here or can be generalized to Old Norwegian as a whole.

An enhancement of the corpus with material from other Old Norwegian texts, as well as from the Middle Norwegian period, is thus strongly recommended in future work. This will enable a) verification of the results presented in this book volume with more data, b) description of the development lines of information structure, and c) generalizations about information-structural governed language change. In any case, the findings of this research monograph challenge the assumed equivalence of Old Norwegian and Old Icelandic syntax assumed in the literature, indicating that syntactic differences appear relatively early in their history. This should encourage more detailed comparative analyses within the Old Norse branch and information-structural analyses for medieval Nordic languages, incorporating both not only linguistic evidence, but also visual cues preserved in the physical material.

2 The Motivation behind This Project

The motivation for this project lies behind a combination of three factors. *First*, information structure as a subfield of linguistics is a flourishing research area with various approaches possible due to its complex nature. The theory of information structure refers to the ways linguistically encoded information is presented within a given discourse relative to the knowledge-state of the interlocutors (cf. Chafe 1976; Lambrecht 1998). This project is motivated by the potential to shape this relatively young research field and to contribute to fundamental discussions on notions and reflexes of information structure within a corpus language. The wide range of notational overlap (see Kruijff-Korbayová & Steedman 2003: 254) and the uncertainty of how to assign information status to specific categories such as adjectives (see van Gelderen & Lohndal 2008: 13) indicate a significant need for new discussions and more detailed studies on different languages to formulate a more conclusive framework.

Furthermore, initially used to analyze modern languages, the role of information structure in word order variation in the Early Germanic languages has become a vigorously discussed topic among historical linguistics scholars, leading to numerous publications, especially in the last two decades. It is well-known that older Germanic languages were characterized by variation in the relative order of elements within the VP and NP (cf. van Kemenade 2009; Taylor & Pintzuk 2015; see also the project ‘Constraints on syntactic variation: noun phrases in early Germanic languages’).⁹ The basis for broader studies within historical linguistics has been provided by the aforementioned projects, which have prepared a large amount of corpus data in comparable databases for the analysis of older languages. Since then, various studies have demonstrated how word order variation in Early Germanic is influenced by information structure (e.g., Hróarsdóttir 2009; Hinterhölzl 2010; Petrova 2009, 2012; see also Biberauer & Walkden 2015).

Moreover, it has been demonstrated that Behaghel’s (1932) *Law of Growing Elements* ‘Gesetz der wachsenden Glieder’ interacts with information-structural constraints, introducing prosodic weight as an important factor in the discussion of syntactic variation. The impact on clause-internal organization has,

9 <https://www.hf.uio.no/ilos/english/research/projects/noun-phrases-in-early-germanic/index.html> (Accessed May 2025). Old Norwegian material was originally planned to be included in the analyses of this project; however, the examinations focused instead on purely Old Icelandic material. The wish to include Old Norwegian material in projects like this reflects the recognition of the need to include a separate analysis and underlines the importance of this research monograph.

for example, been shown for Old Icelandic (see Hróarsdóttir 2000, 2009), with the result that prosodic weight is the decisive factor for word order variation that can override information-structural constraints. Discussions within studies like these have developed around the question of an underlying base word order and identified two primary research positions: a *Universal Base approach* with movement either to the right or to the left (see Faarlund 2004; Hróarsdóttir 2000, 2009; Aamodt Nielsen 2013; based on Kayne 1994) and the *Double Base Hypothesis*, arguing for the simultaneous presence of various structures (see Kroch 1989a, 1989b; Rögnvaldsson 1994/1995; cf. also Sundquist 2006 for a discussion of these two approaches).

However, even though several publications on variation within linguistics focus on Old Norse, these publications still concentrate mainly on Old Icelandic (see Rögnvaldsson 1996; Faarlund 2004; Pfaff 2019), leaving Old Norwegian aside and assuming that the results account for both languages (cf. Faarlund 2004: 2; Aamodt Nielsen 2013: 570; Mørck 2016: 320 f.). One reason for this is surely that the corpus material of Old Icelandic is large and diverse, preserved in numerous substantial manuscripts over a long period. *Second*, this research is thus motivated by the lack of comparative studies focusing on Old Norwegian as distinct from Old Icelandic. As mentioned above, studies on word order variation in the Old Norse branch have mainly collated Old Icelandic and Old Norwegian in one common discussion, with a disproportionately high amount of analyzed data material from Icelandic in such examinations. As such, I am not aware of any detailed comparative works on these two languages until this project.

Within the Menotec project, Old Norwegian texts have received more attention, but without a comparative perspective in a Nordic context. Additionally, the annotation done within Menotec is based on dependency grammar, which does not show linear surface patterns and the actual sequence of words in the sentence as it does in phrase structure grammar. These annotations/analyses are not ideal for studies on syntactic variation. To analyze the linear variation and the influence of information structure in Old Norwegian, a new corpus had to be developed to examine constraints and the interplay of information structure and prosodic weight, in order to contribute to the ongoing debate.

Third, the topic of this research combines several disciplines: corpus linguistics, language history—primarily from a synchronic perspective, though with some diachronic notes—and philology/manuscript studies. By examining not only the purely linguistic reflexes of information structure but also visual cues on the manuscript page, the lack of intonation within the written medium can be partially compensated through the analysis of other strategies available to medieval scribes. A monograph that integrates these different fields has the

potential to establish important connections and reveal another level of complexity that has thus far been overlooked.

3 The Challenges Inherent in This Project

After highlighting the potential of the project, it is also important to mention the challenges that a project on the analysis of information structure in a historical corpus language must face, some of which were partially implied in Section 1.

3.1 *Theoretical Diversity and Notational Overlap*

Studies of information structure face various challenges due to the diversity and complexity of this concept. These challenges can, to some extent, be identified as uncertainties that naturally accompany a relatively recently developed field. The phenomena captured under the notion of information structure have been identified by various linguistic traditions and are characterized by features across pragmatics, semantics, morphosyntax, and phonology (Vallduví 2016: 728).

Perhaps the most influential approach to information structure comes from the Prague School, which proposes that the division between known information (the *theme*) and newly introduced elements (the *rheme*) plays a significant role in shaping linguistic structure (Féry & Krifka 2008: 123). Consequently, there is a proliferation of definitions for both the approach itself and the relevant categories, resulting in confusing and overlapping usage of terminology and notions (cf. Féry & Ishihara 2016: 1; cf. also Kruijff-Korbayová & Steedman 2003: 254). An often-cited statement in this context is the following by Levinson (1983: x; see also Kruijff & Duchier 2003):

Terminological profusion and confusion, and underlying conceptual vagueness, plague the relevant literature to a point where little may be salvageable.

To provide two definitions in this section, Zimmermann & Féry (2010:1) describe information structure as a “cognitive domain that mediates between the modules of linguistic competence in the narrow sense, [...] which serve the central purpose of the fixation of belief by way of information update, pragmatic reasoning, and general inference processes.” This definition encompasses different and overlapping linguistic modules, describing the effect information structure has on the final form of the utterance. Notions of information struc-

ture are thus discussed in relation to their cognitive reality and how these are expressed within the grammar. Matic' (2015: 95) further writes that

[u]tterances transmit both the information contained in the message and the implicit or explicit instructions on how this information is to be processed and integrated into the hearer's knowledge stock. [...] The information comes about by relating the 'new' elements (i.e., what the hearer is assumed not to be aware of) to these 'given' elements.

When information structure concerns both the message itself and the way it is encoded, it clearly becomes a rather complex phenomenon, exhibiting different features on various levels. However, there seems to be, at the very least, a consensus regarding a dichotomy within the sentence structure between *topic* and *focus*—albeit with different terminologies—and with this, a contrast in informativeness as a crucial division. Gundel & Fretheim (2006: 14; see also Umbach 2004, and Féry & Ishihara 2016) address this by noting that difficulties lie in distinguishing properties of notions driven by grammar from those that are purely pragmatic when attempting their identification in a given discourse context. In their attempt to unravel the notational complexity associated with information structure, Gundel & Fretheim (2006: 176) note, for instance, that the notions of *theme/topic* and *rheme/comment* are often used as synonyms, but also to distinguish between syntactic (and phonological) and semantic–pragmatic focus.

Because of this notational overlap, it is necessary for any study of information structure to clearly define the notions in use. These definitions should also reflect findings from various studies showing that information structure affects content and concerns context-sensitive aspects of this. However, there is still disagreement about whether information structure should be viewed as a separate interpretive domain within language (Vallduví 2016: 728). The example given in (2) illustrates why both content and context-sensitive aspects are important to consider (cf. also ex. 1; see Féry & Krifka 2008: 124).

- (2) a. We saw a TIGER on the road.
 b. We saw a tiger on the ROAD.

The sentences have the same topic/comment-structure (we = topic) but differ in how they address the given/new information within the comment. Given a concrete context question in (3), the example illustrates how highlighting of constituents can have a certain encoding-effect on the information.

(3) Question: What did you see on the road?

Questions shape how attention is directed, and this attentional setup is mirrored in the response through intonational emphasis (Féry & Krifka 2008: 124)—falling on ‘tiger’ in (a) and ‘road’ in (b). A pitch accent on ‘road’ leads to an unsuitable answer, as it does not fit the context question. This example also points to one of the main analytical problems of using the framework of information structure for the analysis of corpus languages: the lack of intonational features. Intonation is one of the main features used to identify focus, which tends to be prosodically prominent, whereas *givenness* tends to be prosodically non-prominent. So, while information structure is more about form than meaning, it plays an important role in several aspects of meaning.

3.2 *Lack of Intonational Features*

Turning to the problem of lacking intonational features, while there is considerable variation in information-structural strategies across different languages, they always relate to prosody to some degree. Highlighting constituents via pitch accent is an important device to mark and identify a specific element as a focus-candidate. Access to an active intonation system is therefore crucial in detecting various phenomena related to information packaging, such as accentuation and de-accentuation. As the complex phenomenon of information structure was mainly used as an approach to understanding variation in modern languages, combining linguistic and extra-linguistic factors, many of the categories in question, such as prosodic features like *stress*, which are said to have a heavy influence on the interpretation of a sentence, do not apply to the present study. Studying information structure in a corpus language means studying a language that is only available in a limited written form. It is therefore only possible to gain small glimpses of phenomena connected to prosodic features that are perceptibly reflected in syntax, and there are additionally no speakers to consult for native speaker judgments.

Ellipsis, for example, is a strong linguistic cue to prosody that helps assign information-structural notions such as *topic* (cf. e.g., Kuno 1976; Hartmann 2000, 2003; Winkler 2016). Since a topic is prosodically non-prominent, pro-drop can point towards such a candidate. On the other hand, *focus* is prosodically prominent and, as such, cannot be omitted from the discourse. For broad analyses, however, hypotheses on the information-structural status of components in an accent-missing graphical system have to be strengthened through semantic determinations and the exploitation of different syntactic positions available to various elements, as well as the examination of discourse relations and functional assignments that operate on a purely textual level.

Some scholars have also argued for additional visual intonational clues on the manuscript page. Fleischer (2009: 177 ff.) points, for example, to the spacing between words as a potential clue to prosodic information in Old High German manuscripts. He interprets the absence of a blank space between words as a reflection of the fact that these words were pronounced without a phonological break between them, as in the case of cliticized pronouns. Additionally, Fleischer mentions punctuation as a clue to prosody within a written source (cf. Study 11). However, although some graphical indicators of highlighting can also be marked graphically beyond punctuation, a consistent usage of cues, such as capital letters, colored words, and different writing styles throughout a whole manuscript text and every sentence written down, is unfortunately not a common practice and is not found as a strict strategy in the text witnesses. This means that even though such clues can be found, the general problem remains and can only be tackled through complex annotations and analyses.

The analysis of information-structural categories in corpus languages relies mainly on a summary and cumulative interplay of well-defined and clearly distinguishable categories in different structural domains, and thus on a multimodal corpus approach (cf. also Donhauser 2007; Petrova et al. 2009). Categories that qualify as relevant for this kind of research are mainly taken from semantics, pragmatics, and discourse analyses, such as saliency, givenness, definiteness, or anaphoric/cataphoric relations. Even though the strategies in use are restricted due to the medium of a written text with no active prosody, the analysis becomes somewhat more complex because of this.

3.3 *The Data Material*

In addition to the lack of intonational features, any research on the syntax and information structure of a historical text faces an additional problem: the reliability of its data. This raises the question of whether the word order patterns and syntactic constructions provided in the written text sources are representative of the language system under investigation. Depending on the dataset, vernacular translations—such as those of Latin biblical or other religious sources—must be addressed, as the ordering of sentence constituents can be influenced by the syntax of the foreign language original. In syntactic analyses of the text based on instances of word order, differences from the original can, in doubtful cases, be taken as evidence for the authentic syntax of the language system under investigation.

Correlated with this point is the size of the dataset itself. A restricted amount of data is a general problem for smaller corpus languages and for historical corpus languages for which we are still lacking consistently annotated corpora. As mentioned above, a large part of this research project was dedicated to building

and developing a corpus for Old Norwegian aligned with the annotation work undertaken within other projects that focus on information-structural analyses in older languages. Since annotation work requires an immense amount of time, the studies within this project are limited to a certain amount of annotated text. However, the annotation done within this project provides the grounds for analyses on various aspects of the language that go beyond the studies presented here. This corpus material will be useful for scholars who are interested in syntactic and information-structural phenomena in Old Norwegian.

Furthermore, research that includes more data material and builds upon the studies and results presented here is both encouraged and needed. This will enable us to compare Old Norwegian in even more detail with the developments recorded for Old Icelandic, facilitating the inclusion of Old Norwegian in the discourse of current linguistic analyses and approaches.

4 The Structure of This Book

While the first section of this book introduces the inspiration, goals, and challenges of the research, along with a glimpse into the concept of information structure and the work on Old Norse, the remainder of this part of the book provides an in-depth introduction to the topic. It situates the four studies of this research, which are published separately, within the broader theoretical context. The theoretical framework of the research is relatively comprehensive, but a well-established and defined theoretical background is of utmost importance for the kind of analysis done in this research project.

In Section 2, I give an overview of earlier research on the broader topic of information structure and syntactic variation in older Germanic languages. This section also points to different research gaps addressed in this monograph. It includes a discussion of the characteristic features of information structure, providing definitions of information-structural notions and laying out the working definitions used in this book volume.

In Section 3, I discuss the reasons for the choice of the corpus material and the language, including a presentation of the manuscript material used to build the corpus KoNoKs. Section 4 describes the methodology and annotation for the main corpus material in greater detail, and Section 5 presents the main findings of each of the four studies, summarizing and compiling the results and conclusions in light of the overarching research question of the book.

The Theoretical Framework

The aim of this section is to summarize previous literature and approaches on the correlation of word order, information structure, and prosodic weight of constituents—with a focus on Early Germanic—and to briefly discuss the notions used within those approaches. Due to the notational variety mentioned in Section 1.3.1, Section 2 also provides working definitions of the notions used within the studies of this research, alongside examples of the identification of these notions in Old Norse. This connects the theoretical framework presented in this section with the background and motivation for the study of information structure and syntactic variation in Old Norwegian, as laid out in Section 1.

Early Germanic languages generally show a higher degree of word order variation than their modern counterparts, and this variation has been accounted for using different theoretical approaches, including information-structural constraints and prosodic weight, as well as their interaction to varying degrees. As mentioned in Section 1, several projects and individual studies have targeted these topics, resulting in a significant number of publications on these factors, which I cannot fully address in this section. However, I will discuss some important findings in the literature that demonstrate how word order in Early Germanic languages was influenced by information structure and prosodic weight, and briefly summarize the findings for Old Icelandic, which are of particular interest in light of this project.

The steering of word order through information-structural factors and the pragmatic organization of a discourse, in which the presentation of given and new material is of great importance, was noticed relatively early in the study of the Germanic languages (cf. e.g., Mathesius 1929 [1983]). According to Givón (1979), the *pragmatic mode* of word order is governed by pragmatic principles, meaning that new information follows old information, while word order in the *syntactic mode* reflects case functions. Building on this, the later work of Kiparsky (1996), who integrates information-structural components into a syntactic model of change, as well as the work of Rizzi (1997), who assumes recursive topics and suggests a *Split-CP Hypothesis* with possible landing sites for information-structural categories, are fundamental for the implementation of information structure into syntactic works. Focusing on older languages, the work of Lühr (2011), who presents a secondary information structure for subclauses in complex sentences, and Hinterhölzl (2010), who assumes a phase-

based model in which the unmarked word order of a language is shaped by mapping conditions operating at both the phonological and interpretive interfaces, can be mentioned (cf. also Ferraresi & Lühr 2010). Additionally, right before I started my research project, the *Oxford Handbook of Information Structure* (Féry & Ishihara 2016) was published, providing a broad overview of research and approaches connected to information structure.

The influence of information structure on syntactic variation has been recognized and discussed in numerous works on older Germanic languages, particularly on Old English. It is thus natural to consider this research here as well, although the later focus will lie on Old Norse, meaning Old Icelandic and Old Norwegian. The well-known given-before-new principle is the basis for much research done on word order variation in West Germanic languages (cf. among others Bech 2001; Hinterhölzl & Petrova 2009; van Kemenade & Los 2006; Petrova 2009, 2012; Taylor & Pintzuk 2015). The main focus of these works lies on the position of the object relative to the verb, as well as discussions concerning the base order for these languages (cf. e.g., Pintzuk 1999: *Double Base Hypothesis* versus Roberts 1997: *Universal Base Hypothesis*). To give an idea of the research and general results, I will briefly summarize some of these studies here.

Bech (2001) shows for Old and Middle English that syntactic variation aligns with pragmatic properties of various constituents within a clause, correlated to the given-before-new principle and increasing information value. Most recently, De Bastiani (2019, 2020) showed, in line with Struik & van Kemenade (2018), that givenness plays a distinct role in the ordering of constituents in Old and Middle English, more than newness or factors of weight. OV word order in Old English is marked for information structure, whereby given objects are mapped in preverbal position. Postverbal objects, on the other hand, are not informationally marked in this way.

Furthermore, a correlation between the information status of a constituent and prosodic factors has been suggested in many more recent studies, such as Pintzuk & Taylor (2012), who argue that these two are independent factors for Old English. These approaches are initially based on the observation summarized by Behaghel's (1932) *Law of growing elements*, which states that word order is largely determined by the prosodic weight of a constituent. This generalization predicts, for example, that pronouns and unmodified nouns generally precede the verb, while more complex elements usually follow it (Hinterhölzl 2014: 345)—something that has been proven right for Old Icelandic, Old English, and Old High German. This law has led to more specific generalizations in the literature (cf. Hróarsdóttir 2009: 265 f.; see also Ryan 2019). Prosodic weight might thus override information-structural constraints.

However, for Old High German, a study by Hinterhölzl & Petrova (2018) shows that heavy constituents, meaning in their study phrases containing two words or more, follow the verb more often, but that information-structural requirements can override this condition (see also Hinterhölzl 2010). There is thus widespread agreement that word order variation in older Germanic languages is crucially determined by prosodic factors and information-structural constraints, although to differing degrees.

Turning to Old Norse, the earliest works on syntax are mainly descriptive (e.g., Nygaard 1905; Heusler 1967). However, these works are still considered important literature and reference points in investigations of syntactic phenomena in Old Norse. In later literature, studies on both individual phenomena, such as Christoffersen (1994) on adverbials in Old Norwegian, or Kinn (2015, 2017) on null arguments in Old Norwegian, and general overviews, especially Faarlund (2004), contribute to the understanding of various syntactic issues.

Additionally, in the new language history of Norwegian (Sandøy 2016), Mørck provides a broad and detailed overview of the syntactic developments within Norwegian—from the oldest linguistic material in runic inscriptions to Modern Norwegian. In his description, he addresses phenomena such as fronting and topicalization, extraposition, and remnants of OV word order in Old Norwegian. He shows the changes in grammatical status of subjects and objects, as well as variation within dialectal syntax. Mørck also notes the situation concerning the available material for analyses of Old Norse, which is mainly of Old Icelandic origin, but he tries in his overview to rely on examples taken from Old Norwegian texts only. Prosodic weight is mentioned within his descriptions, noting that pronoun subjects are unstressed and normally fronted, while heavier subjects appear in later positions.

Furthermore, the work of Haugan (2000), who discusses several aspects of Old Norse, such as SVO versus SOV, oblique subjects, and syntactic passive, is relevant in the context of syntactic variation. He even offers an information-structural account of it. However, even though he examines information structure, Haugan regards the influence of pragmatic factors more as a secondary correlation and does not delve deeply into theoretical details concerning information-structural notions, nor does he connect his analysis to the research mentioned above focusing on information-structural influence in other older Germanic languages.

Hróarsdóttir (2000, 2009), on the other hand, addresses syntactic variation strongly connected with this newer research tradition, discussing the variation in the relative order of verb and object in the Old Icelandic VP. This variation is attested throughout the history of Icelandic until OV word order patterns are

lost at the beginning of the 19th century.¹ The following Old Icelandic examples, taken from Hróarsdóttir (2000: 124 f.), show the mixed word order found at this language stage, with full NPs in both OV (4a) and VO (4b) order.

- (4) a. *efftir það þeir höfðu epli-d eted*
 after that they had apple-DEF eaten
 ‘after they had eaten the apple’
- b. *að hann haði eðið kjöt-ið*
 that he had eaten meat-DEF
 ‘that he had eaten the meat’

There is a common consensus in research literature on a head-initial VO base for Old Norse, with a derivation of different word orders from this base, building on Kayne’s (1994) theory of phrase structure (Universal Base Hypothesis; see Faarlund 2004; Aamodt Nielsen 2013; also Hróarsdóttir 1996). Hróarsdóttir states that Icelandic is a VO head-initial language throughout its written history, and following an antisymmetric approach, she analyzes surface OV orders as derived by various movements as a series of cyclic leftward (licensing) movement operations, meaning variable spell-out determined by information-structural conditions. This means short and long object movement, or (remnant) VP intraposition. According to her (2009), OV orders are derived by subextraction out of VP and movement of the remnant vP to SpecFP in the C-domain.

In a comparative perspective to other Germanic languages, this conforms with Hinterhölzl & Petrova’s (2018) description of Old High German, which postulates leftward movement of the finite verb to a designated functional projection in the left periphery of the clause—a licensing movement of arguments to check the c-selection of the verb. Additional operators are then triggered by information-structural and prosodic factors. Hróarsdóttir states that in Icelandic, objects conveying given information tend to appear in preverbal position, whereas objects conveying new information tend to appear in postverbal position. However, she identifies prosodic weight as the decisive factor for word order variation in historical Icelandic. According to her, prosodic weight can override information-structural conditions, with heavy objects generally found in postverbal position and light objects in preverbal position—regardless of their information status.

1 The OV word order patterns lost do not include patterns derived by negative and quantified phrase construction, Object Shift and Stylistic Fronting, which productively derive SOV surface word order in Modern Icelandic (cf. Hróarsdóttir 2009: 274).

For Norwegian, the variation of OV/VO has been studied within diachronic overviews. Sundquist (2006) presents the possible variation in the oldest stages of the language and the decline of XV-word order towards Modern Norwegian from a generative perspective, mentioning information structure as a significant factor for his observations. However, he does not provide any discussion of information-structural notions, nor does he follow recent studies on information structure in examining given versus new elements. As such, his study differs from those discussed in this section but is still an important contribution to the general study of syntactic variation in Old Norwegian. This examination can thus be grouped with more general investigations on syntactic variation.

Additionally, the other Nordic languages have received considerable attention regarding this topic. Swedish, in particular, has been the subject of many investigations. Delsing (2000), for instance, shows in his study on syntactic variation, focusing on the OV/VO alternation in the history of Swedish, that objects in VO order have a filled D-head, while objects with an empty D-head appear both to the right and to the left of the verb. This reflects a clear influence of prosodic weight. However, Delsing suggests different licensing options for this kind of variation. Further, Stroh-Wollin (2009, 2015, 2016), among others, focuses especially on the nominal domain and the development of definite markers (see also Skrzypek 2009, 2010, 2012) and the variation of the position of modifiers. She connects the fronting of modifiers as a means of emphasis and the emergence of definiteness markers. Information-structural triggers have thus been noticed on a phrasal level as well and have been subject to examinations within diachronic studies in the Scandinavian languages (see also Pfaff 2019 for Old Icelandic).

Following this brief presentation of some of the research within information-structural analyses for older languages, and especially studies on various Germanic languages—to which I, as mentioned above, cannot do full justice in this book—I will now focus on the broader discussion of information-structural approaches, presenting the concepts applied, as well as addressing the issue concerning the terminology used within such studies in more detail.

1 Information-Structural Theories and Notational Conventions

Different theoretical and partly overlapping perspectives can be identified when working with information structure. Šimík (2011/2012: 25) provides the following list of the theoretical approaches behind this concept and their interaction with syntax:

- 1) Syntactic category-based theories (e.g., Rizzi 1997; Aboh 1998; Abels & Muriungi 2008)
- 2) Syntactic feature-based theories (e.g., Bošković 1999; Miyagawa 2007)
- 3) Syntactic operation-based theories (e.g., Chomsky 1977; Krifka 2006; Neeleman & van de Koot 2008)
- 4) Syntactic cycle-based theories (e.g., Diesing 1992; López 2009; Slioussar 2011)
- 5) Syntactic configuration-based theories (e.g., Kučerová 2007)
- 6) Quantification-based theories (e.g., Herburger 2000)
- 7) Predication-based theories (e.g., Wedgwood 2003, 2009)
- 8) Special module-based theories (e.g., Vallduví 1992)
- 9) Free variable-based theories (e.g., von Stechow 1994; Stanley 2000)
- 10) Syntax-free theories (e.g., Récanati 2002; Horváth 2010)

Šimík furthermore uses this list to map the landscape of these various approaches, here given in Figure 1 (cf. also Šimík 2021: 36).

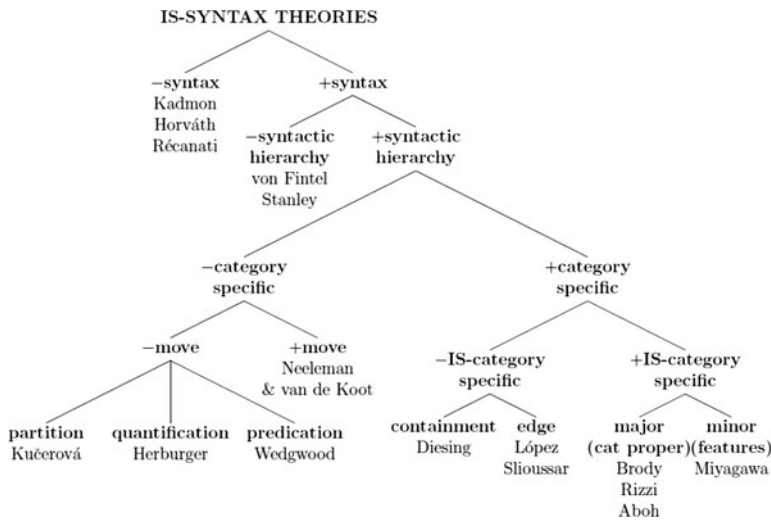


FIGURE 1 Theories of the information structure–syntax relations
ŠIMÍK 2011/2012: 26

These divergent approaches also manifest in discussions concerning the status of information-structural categories as major categories or features. The general prediction behind this discussion is that information-structural categories should be fully integrated into the system of syntactic dependencies and constraints (Šimík 2011/2012: 32). Assuming a universal base, the distinction between deep structure and surface structure and various phenomena oper-

ating on these levels has also been brought into discussion (see e.g., Chomsky 1971: 199 ff.; von Heusinger 2002: 291).

However, concerning the various categories of information structure, we surely cannot talk about a homogeneous profile described in the literature. Kruijff-Korbayová & Steedman (2003: 254) illustrate this well in their comparison of different theoretical approaches. They provide an overview of scholars, various terminology, and terminological dependencies, which simultaneously illustrates the importance of clear definitions mentioned in Section 1.3.1.

Many of the information-structural notions are overlapping and are used neither uniformly nor consistently (cf. also Molnár 1993; von Heusinger 2002). The terminology used to describe information structure and its semantics is thus both varied and under-formalized. Yet it seems that all definitions have some elements in common, including a minimal assumption of a two-part division of sentences, with one part of an utterance relating it to the purpose of the discourse and another part advancing the discourse. Different dimensions of information structure are then realized in two independent but interacting orthogonal domains: topic–comment and focus–background (cf. Halliday 1967; Kruijff-Korbayová & Steedman 2003).

In a Scandinavian context, the traditional terms *theme* and *rheme* are still the dominant terms used for the broader division of sentences (cf. *Svenska Akademiens grammatik*, Teleman et al. 1999: 431; *Norsk referansegrammatikk*, Faarlund, Lie & Vannebo 1997: 855 ff.; see also Table 2). *Theme/topic* and *rheme/comment* are, on the one hand, used synonymously, and on the other hand, entail a differentiation between syntactic (and phonological) and semantic–pragmatic focus. It is thus not possible to talk about a 1:1 ratio for these terms. Von Heusinger (1999: 102) also notes that differences arise from whether *aboutness* and *discourse anchoring* are distinguished or not. He explains that some approaches address both aspects, while others focus on just one, and further assigns theme–rheme and topic–comment to aboutness, and background–focus and old/given–new to discourse anchoring. According to von Heusinger (1999: 102), the terms topic–focus do not clearly fit into this distinction.

For this research project, I chose to use the notions of *topic–comment* and *focus–background* since these are more commonly used in recent international research. The topic–comment division operates on a clause level and, according to Matic (2015: 97), “corresponds roughly to what assertion-based theories of focus describe as information structure”. Information structure, however, is a phenomenon that also acts on a level beyond clause boundaries. This is captured by the focus–background partition, which operates on a discourse level and shows recursive effects. This division captures the existence of alternatives

TABLE 2 Two-part division of sentences in different theoretical approaches

[Information structure terms]	[References]
psychological subject–psychological predicate theme–rheme	von der Gabelentz 1869, Paul 1880 Ammann 1928 [...], Mathesius 1929, Prague School (Daneš, Firbas), Halliday 1967 [...]
topic–comment topic–focus	von der Gabelentz 1869, Reinhart 1982 modern Prague School: Sgall & Hajičová & Benešová 1973
presupposition–focus background–focus	Chomsky 1971, Jackendoff 1972 Chafe 1976 for contrastive focus, Jacobs, 1982
old/given–new open proposition–focus	Halliday 1967 [...], Chafe 1976 Prince 1981
notional subject–notional predicate	É. Kiss 1995

VON HEUSINGER 1999: 102

(focus) referring to the internal structure of an informational unit and the lack thereof (background).

The relation between text and context in terms of discourse organization for communicative purposes is then captured by the information-structural roles within this two-part division of sentences. The different terminology for this dichotomy is summarized in Table 2.

The terms *psychological/logical subject* and *predicate* are earlier terms for the elements that define this distinction in the literature. *Topic, theme, or ground* and their complements, *focus, comment, or rheme* are later terms. The concepts connected to these terms have been integrated into various parts of grammar; however, it is evident that not all the phenomena associated with these categories are attributed directly to grammar (see also Sperber & Wilson 1986 for a discussion on pragmatic effects). While these information-structure concepts are generally understood to have semantic/pragmatic value (Gundel & Fretheim 2006: 176), they have occasionally been grounded in syntactic structure, which has resulted in a dual usage of the terms connected to these concepts, spanning both structural descriptions and interpretive functions.

It is generally held that the dichotomy of the sentence, as shown in Table 2, describes information structure as being responsible for the encoding of sentence entities, stating which part of a sentence is more informative in relation to a particular context. However, von Heusinger (1999: 102) states that scholars

do not agree on the location of this apparent independent level of information structure.

In the following discussion, I will limit the terms used for information-structural categories to *topic-comment* and *focus-background*. To provide a coherent overview of various concepts integrated into the definition of these notions and their assignment to various elements within a clause, I have chosen to present discussions of the following analytical parts in separate sections: i) givenness, ii) aboutness, and iii) common ground. Following these discourses, one important notion, *contrast*, will also be briefly discussed.

1.1 *Information-Structural Categories*

First, Tables 3 and 4, taken from Akortia (2014), summarize the varying definitions connected to the two primary information-structural categories: topic and focus.

TABLE 3 The notion of topic

Researcher	Definition of topic
Lambrecht (1994)	A topic is what is a matter of standing current interest or concern.
Gundel & Fretheim (2004: 179, 182)	A topic is relationally given, independent and outside the scope of what is predicated. Topics provide the context for the main predication and that topics must be familiar or uniquely identifiable.
Amfo (2010: 216)	A referent is considered the topic of a particular proposition if the information contained in the proposition increases our knowledge of it.
Dik (1978: 19); [Casper de Groot (1981: 75)]	Topic is the entity 'about' which the predication predicates something in the given setting.

AKORTIA 2014: 7

TABLE 4 The notion of focus

Researcher	Definition of focus
Gundel & Fretheim (2004: 179, 182)	Focus is what is predicated about the logical subject, i.e. the topic. It is the new information in relation to the topic.

TABLE 4 The notion of focus (*cont.*)

Researcher	Definition of focus
Halliday (1967: 203, 204)	Information focus is one kind of emphasis, that whereby the speaker marks out a part (which may be the whole) of a message block as that which he wishes to be interpreted as informative. Information focus reflects the speaker's decision as to where the main burden of the message lies. Information focus involves the selection within each information unit, of a certain element of elements as points of prominence within the message.
Dik (1978: 149)	The focus represents what is relatively the most important or salient information in the given setting. A constituent with focus function presents information bearing upon the difference in pragmatic information between speaker and addressee as estimated by the speaker.

AKORTIA 2014: 8 F.

Considering the slightly varying perspectives taken into account for these definitions, various subcategories can be identified, here given in Figure 2 taken from Song (2014), as a hierarchical presentation of the connections between these categories.

Icons are individual constraints to incorporate discourse-related phenomena into semantic representation of sentences and represent information structure as a binary relation between individuals and events (cf. also Song & Bender 2012). For the following relations, Song (2014: 14 f.) notes in relation to this figure that 'or' in *focus-or-topic* is exclusive, meaning it divides the notions in either focus or topic, while 'or' in *contrast-or-focus* and *contrast-or-topic* is not. The background *bg* is defined as non-topic and non-focus and is thus not connected to the nodes of these information-structural categories within Figure 2.

In some cases, it can be difficult to assign a specific information-structural meaning to a constituent. This is especially the case in historical corpus languages. However, it is often possible to identify some clues for a less specific information-structural meaning higher up in the hierarchy, e.g., focus or non-topic, pointing towards a more defined meaning of the subnodes. Further following von Heusinger's (1999: 102) discussion of informativeness, sentence meaning can be assessed both internally and in terms of its role within the

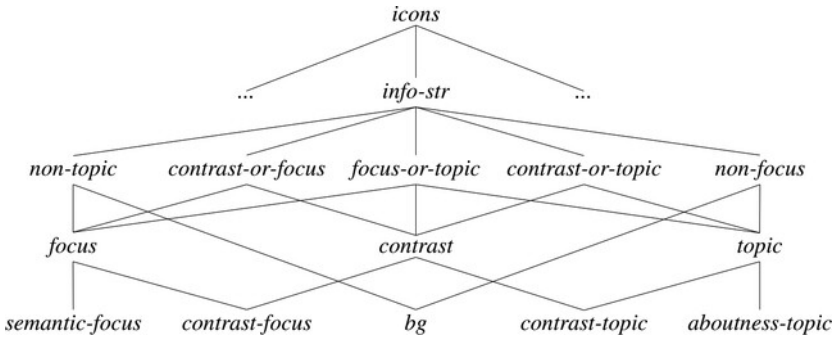


FIGURE 2 Type Hierarchy of information-structural categories
 SONG 2014: 14; CF. ALSO 2017: 114

surrounding discourse. Accordingly, the two described information-structural domains of topic–comment and focus–background correlate with what the sentence is about and how it relates to the current discourse with respect to the established knowledge stock of the interlocutors.

Two competing approaches have been identified in this context: *givenness* as discourse anchoring and *aboutness*. Givenness-based approaches are hearer-centered, whereas aboutness-based approaches focus more on the speaker’s intentions. Matic’ (2015: 96) notes that within an utterance, the topic refers to existing knowledge from a hearer-centered perspective. It is part of the common ground and is accessible to the listener through previous mentions or by being “given in the extralinguistic context.” In an *aboutness*-based approach, the topic is that part of the utterance about which this utterance is meant to give information. The speaker determines what they intend to increase the hearer’s knowledge about and encodes this element as a topic (see Reinhart 1981). Important in both approaches is the interpretation of a topic—at least to some degree—as given/old or familiar/uniquely identifiable and thus easily accessible to the hearer, ensuring successful information transfer (cf. Gundel & Fretheim 2006: 181). Since the given/new distinction is of particular importance for the two main categories of information structure, I will briefly discuss these concepts, as well as the disagreement and confusion regarding the exact nature of the association between *given* and *new*.

1.2 *Givenness*

Given and *new* cannot simply be reduced to grammatical features like definite/indefinite. Gundel (2003), for instance, distinguishes two types of givenness/newness: i) *referential* and ii) *relational*. Referential givenness–newness pertains to how a linguistic expression relates to a corresponding non-linguistic

entity within the context of discourse (Gundel 2003: 125). Importantly, if a topic is unfamiliar to the listener—meaning it lacks a corresponding mental representation—this can impede interpretation. Even when such utterances are grammatically correct, they may nonetheless be pragmatically ineffective (Gundel & Fretheim 2009: 157).

Relational givenness–newness, on the other hand, divides the semantic or conceptual structure of a sentence into two distinct parts (Gundel 2003: 125). One part states what the sentence is about, and the other part states what is predicated about the logical subject (see also Gundel 1999: 296; Gundel & Fretheim 2006: 178). While relational givenness–newness is inherently tied to linguistic expressions (Gundel & Fretheim 2006: 178), referential givenness–newness is dependent on the situation/context, and thus not specifically or necessarily purely linguistic. Referential and relational givenness–newness are thus logically independent.

Along similar lines, Lambrecht (1998) defines three categories of information structure connected to the notion of givenness on various levels: i) presupposition and assertion, the propositional information—given and new; ii) identifiability and activation, the state of discourse referents in the knowledge stock of interlocutors; and iii) topic and focus, the pragmatic relations.

Götze et al. (2007) also extend the concept of givenness–newness by presenting a three-fold division of informational status into *given*, *accessible*, and *new* information. Given information, which is discourse-old and hearer-old, is introduced by explicit referents mentioned previously in the discourse and the expressions that co-refer to these. Accessible information, which is discourse-new and hearer-old, is not mentioned explicitly in the context but is part of the *common ground* or situational knowledge. This is captured by referential givenness as described above. Givenness then includes old information, accessible information, salient information, presupposition, and background that is active to some degree (see Halliday 1967, who relates givenness to anaphoric recoverability; cf. also Chafe 1976: 30; Krifka, 2001/2002:2).

New information, which is discourse-new and hearer-new, is not mentioned explicitly and is not inferable from the given discourse/situation. Chafe's (1976) view of givenness, as a kind of activation in the consciousness of the speaker and hearer and as a cognitive category, raises the possibility for a discussion of a scale of givenness. Since the activation can be higher or lower and it can die away (cf. Sections 4.2 and 4.3), a continuum of activation of givenness seems more appropriate. And in fact, research in this direction has proposed several givenness hierarchies, such as the *Scale of Familiarity* (Prince 1981), the *Givenness Hierarchy* (Gundel, Hedberg & Zacharski 1993), and the *Accessibility Marking Scale* (Ariel 1990).

Gundel & Fretheim (2006: 180) note that some scholars “deny that topics must have any degree of referential givenness at all, including familiarity.” They refer to Reinhart (1981), who argues that referentiality alone is sufficient for an element to function as a topic, even if the referent is new or unfamiliar to the discourse—such as in cases where specific indefinites appear in positions typically associated with topics (see also Fraurud’s 1990 mention of subsequent-mention indefinites). *Newness*, as opposed to givenness, is connected to focus and defined as the absence of givenness. This rather insubstantial definition of newness has also been discussed in the literature (cf. e.g., Schwarzschild 1999). In most approaches, the focused element that identifies as new is the crucial part of the comment-domain if it replaces a *wh*-element in an answer, is non-derivable, or stands in contrast to some alternative (cf. Halliday 1967; Götze et al. 2007; see also Féry & Krifka 2008: 125).

As for the identification of a topic-candidate or a focus-candidate, the assignment of given/new is a crucial feature. The linguistic form of a constituent too can help in identifying these candidates; for instance, definite articles, clitics, or pronouns point to entities given within the general or immediate common ground (Krifka & Musan 2012: 23). Personal pronouns and anaphoric pronouns help to identify the information-structural meaning of topics higher up in the hierarchical presentation shown in Figure 2, while demonstrative pronouns more often refer to non-topics. The more activated an element is in the addressee’s mind, the smaller the anaphoric degree will be.

1.3 *Aboutness*

Aboutness-approaches, which describe the semantic core of topics, are said to concern the speaker’s intentions. Here, topics are part of the *predication*, and in this sense, serve as the anchor for the information that is intended to be conveyed (Matić 2015: 56). With this, the speaker determines the locus of the information that is intended to increase the hearer’s knowledge and encodes this element as a topic (cf. also Reinhart 1981, 1982). Reinhart (1981: 81) suggests that information is stored in terms of pairs, with one member being the proposition and the other an entity which the proposition is about ($= (\alpha, \Phi)$; cf. also Portner & Yabushita 1998).

Importantly, only entities whose existence has been established can bear propositional information. Summarizing the main points discussed for the concepts of givenness and aboutness, Table 5 shows the main features of these approaches.

The summary shows that not all ‘old information’-constituents need to be topical; they can also simply be part of the background. This means that the distinction between topic and background can be somewhat fuzzy and requires

TABLE 5 Givenness and aboutness

Givenness	<i>Given/Old/Active</i>	<i>New/Not active</i>
hearer-centered (what is known vs. what is new)	Anaphorically, Recoverable, Presupposition	Textually and situationally non-derivable/ contrary to some predicted or stated alterna- tive/replacing the wh-element in a presump- posed, Questions
	Topic, Background	Focus
Aboutness	Locus of the discourse	Advancing the discourse
speaker's intentions (what an utterance is about vs. how it is said)	Topic (Theme)	Comment (Rheme)

additional clarifications for the identification of actual topic-candidates (cf. Sections 2.2, and 4.3). Additionally, *aboutness topics* are often defined sentence-internal (= *sentence topic*) as part of the local QUD and what is predicated about an entity in a sentence. These must be differentiated from *discourse topics*, which refer to what a part of a discourse is about (cf. van Dijk 1977). The background part of the sentence can be derived from the focus-part, meaning it is the part of the utterance that is not the focus—a negative definition.

1.4 *Common Ground*

Now, I would like to briefly mention how the complex phenomenon of information structure correlates with approaches to *common ground management*, based on the discussion of information-structural notions. Chafe (1976) refers to information structure as the encoding or ‘packaging’ of linguistically presented information relative to the situational communicative needs of the interlocutors, with the goal to optimize the information transfer within a given discourse (see also Vallduví 1992).

He addresses the question of how information is presented and the techniques needed to achieve transmission goals, such as highlighting constituents, in contrast to the information itself.² Chafe thus states that a discourse is organized according to the speaker’s assumptions about the addressee’s knowledge in a specific context, rather than according to the semantic content of linguistic expressions (cf. Chafe 1976: 27 f.).

² See, however, Matić’ (2015: 95) definition of information structure, cited in Section 1.3.1.

For example, the sequence *I have a cat and I had to go to the vet yesterday* is easier to process than the sequence *Yesterday, I had to go to the vet. I have a cat.*

Prince (1981: 224) further emphasizes the significance of how a speaker adjusts their utterance to align with the perceived needs and knowledge state of the hearer. Also this definition includes the mental states of the interlocutors, showing that the phenomenon of information structure exceeds purely linguistic representations, although it is strongly connected to them.

The idea of a *Common Ground* (CG), with a division into CG content and CG management, captures this influence of a shared knowledge stock that advances throughout a discourse (cf. Stalnaker 1974 and especially Krifka 2008). Krifka (2008: 245) explains the relationship between presuppositions, which are necessary conditions for the input CG, and assertions, which represent the intended modifications to the output CG. This distinction is relevant for effective information packaging, as it requires structuring information in line with communicative dynamics.

Returning to the definition of givenness, this means that within the concept of common ground, a givenness feature indicates the presence of a denotation in the common ground and—according to the mentioned variable degree of givenness—situates entities on a ‘Givenness Hierarchy’ (cf. Gundel, Hedberg & Zacharski 1993). The basic idea is that the discourse develops over a series of implicit questions (QUD, see Roberts 1996, 2012), and that information structure connects the utterance with the underlying questions, thereby rendering the discourse structure transparent.

1.5 Contrast

Before turning to the working definitions used in this research monograph, *contrast* should be briefly discussed, following the discussion of givenness and aboutness. The term contrast itself has been used for a number of concepts that cannot easily be summarized under one definition (cf. Repp 2010). In definitions of contrast, it is emphasized that something ‘different’ or ‘opposed’ is expressed. However, a tighter definition capturing the extent to which both of these properties have to be present seems rather difficult to pin down.

Within the field of information structure, contrast is treated as an autonomous notion next to topic and focus (see e.g., Molnár 2002; Repp 2010), although it is entangled with other information-structural categories. As established in Section 2.1.1, the basic information-structural categories are often not complementary and can be divided into the subcategories shown in Figure 2.

Turning back to some of the subcategories shown in this figure, Frascarelli & Hinterhölzl (2007) make a distinction between i) *aboutness topics*, which define what the sentence is about, ii) *familiar topics*, which are given or accessi-

ble constituents, typically de-stressed and often expressed through a pronominal or covert form, and iii) *contrastive topics* (see also Matic' 2003). Contrastive topic is the most discussed notion that displays features of both topic and focus (see e.g., Buring 1997, 2003). A contrastive topic presents a given constituent exhibiting emphasis through a contrastive relation in an oppositional pair to another focused element in the sentence/discourse.

Subcategories have also been identified in connection with the concept of focus (Gundel & Fretheim 2006: 181): i) *information focus*, which is relational and involves assertions made about the topic, and ii) *contrastive focus*, which is referential and highlights content that the speaker emphasizes, often creating contrasting readings with other possible elements for the same position. Contrastive focus often comes with exclusive implications (cf. Kiss 1998).

As with focus, contrast correlates to a set of alternatives and is expressed through emphasis within the given discourse. However, there is a crucial difference between these two notions, best described by Repp (2010: 1335) who writes that “we have focus ON an item but contrast BETWEEN items”, suggesting that contrasted items and the possible alternatives need to be explicitly stated, while alternatives of focused items can be implicit in the given discourse.

If also considering the definition of focus given by Lambrecht (1998: 213), who views this notion as the part of a proposition that distinguishes the assertion from the presupposed information, a fundamentally ‘contrastive’ function for focalized items can be postulated within sentences. Some scholars, such as Chafe (1976), see the evocation of alternatives as the primary function of focus, creating the interpretive space needed for operators that are sensitive to contrast, such as ‘only’, or ‘even’. Others, like Vallduví (1992), argue that contrastive effects are a secondary function to focus or resulting from its primary function to mark the information status of a constituent (Gundel & Fretheim 2006: 181).

2 Working Definitions

This section does not aim to provide an exhaustive overview of all information-structural notions and their annotation within the corpus (cf. Section 4.3 for the annotation guidelines). Rather, it describes the basic working definitions for the notions of *topic* and *focus* and includes some general notes on their annotation in the corpus material of KoNoKs, following the work done within the DFG-projects mentioned in Section 1 and the theoretical work in recent studies (e.g., Krifka 2008; Song 2014).

Building on an existing framework used within studies of corpus languages that has been proven sufficient for this type of analysis reduces the time spent

on establishing annotational categories/tags for the investigation of notions in written sources that are otherwise connected to tonal features. However, even though the most prominent notions of topic and focus have been subject to intense and extensive discussions in the literature, they can still be difficult to identify—especially in historical corpus languages.

Since information structure seems to be multi-modular and multi-levelled, an exhaustive investigation of information-structural phenomena in a language requires input from various aspects of grammar—i.e., syntax, semantics, morphology, and phonology. Zimmermann & Féry (2010: 2) additionally emphasize that analyzing focus involves considering various cognitive processes—like pragmatic inference, belief, and how information is integrated into discourse—which in turn necessitates the corpus annotation to be multi-modal as well. As such, predictions about possible topic- and focus-candidates can be made on the basis of several features instead of on the intuitive assignment of information-structural notions.

The following sections will describe the annotation of these two notions within KoNoKs. The *background* is defined as the non-contrasted part of a sentence, and as such, does not get a specific annotation and is assigned negatively.

2.1 *Topic*

A common definition of *topic*, as highlighted in Section 2.1, is the assignment of information as: **old**, referring to information that is mentioned before in the discourse, which may or may not have the same lexical form or can be anaphorical; **given**, which is information introduced by explicit referents presented earlier in the discourse and by expressions that co-refer to these; **familiar or accessible**, which is information not mentioned explicitly in the discourse but is part of the common ground or situational knowledge. The topic captures what the sentence is about and is the pivot of truth value assessments (cf. e.g., Kuno 1972; see also Strawson 1964 for a philosophical discussion of this notion).

An expression is defined as the topic in this project if the assertion is understood as expanding our knowledge of this referent. An analysis of the direct textual context, as well as assumptions about general shared knowledge, depending on the historical context (e.g., a church as a religious building or the mentioning of God), is thus of critical importance for the identification and annotation of possible topic-candidates. However, the description as ‘old information’ is problematic, as information is a propositional concept that can be true or false, and referring constituents are not propositional. Another problem is that not all constituents that refer to ‘old information’ are automatically topical (cf. Section 4.5).

To identify possible topic-candidates within the corpus material, it was necessary to apply a multi-layer annotation, including various and more well-defined—and hence easier to assign—linguistic features. Features that indicate a connection between a topic and some kind of referential givenness have to do with the ‘definiteness’ or ‘presupposition’ effects of topics, which are important annotation categories of my approach. Indefinites are generally excluded from topic positions, as topical constituents must be able to refer to an entity, unless they can be interpreted generically or are uniquely identifiable. Topic-referents must be familiar, meaning activated to some degree, in the sense that the addressee has an existing representation in their memory (see, however, Reinhart 1981).

This is captured by annotations of *shift* and *givenness* within the corpus material and correlates with an annotation for *frames* that can support new topic-candidates (cf. Section 4.3), as well as *discourse relations* through anaphoric/cataphoric elements. By these means, the conclusions about an element’s topic status rely on a cumulative analysis of several overlapping annotated features. For the element to be analyzed as a topic, at least two of the following annotation tags must point towards such a candidate: definite, given to some degree, and/or anaphoric. These domains are understood as one unit within the corpus design, meaning that if a value is assigned to one of these annotation levels, the other levels must show an annotation value as well, as shown in the screenshot in Figure 3.³

A topic relates a referent to a proposition (aboutness), which according to Dalrymple & Nikolaeva (2011: 49), is a connection established when the speaker believes the referent to be sufficiently salient in the mind of the listener to serve as the basis for what is asserted. In this sense, the topic belongs to the part of the utterance that is assumed to be known by the listener. Since the topic is a predictable/presuppositional part of the proposition, it may also remain formally unexpressed: deletion is thus a way of indicating givenness, while focus-candidates can never be omitted. Following this, a default assignment of topic-relations was made to all pro-dropped elements in the project (see especially Kinn 2017 for pro-drop in Old Norwegian).

3 The quotations of the manuscript text of *Konungs skuggsjá* follow the Menota electronic edition which at times differs slightly from Holm-Olsen’s (1945/1983) edition, both in the segmentation of some words and the numbering of leaves. While the leaves are numbered continuously in Menota, Holm-Olsen’s edition takes the lacunas within the manuscript into account (cf. Section 3.3). Special characters have been exchanged for the corresponding modern keyboard letters in all examples given in this work. Examples refer to the exact place in the manuscript text by the manuscript page (recto and verso), the column on the page (a and b) and the line number within the given column.

	179	180	181	182	183	184	185	186	187	188
[text]	en	þeir	ísar	liggja	mæirr	í	landnorðr	eða	til	norðs
[trans]	but	this	ice	lie	more	in	north.land	or	to	north
[lem]	en	sá	íss	liggja	meirr	í	landnorðr	eða	til	norðr
[glos/morph]		NOM.M.PL	NOM(M).PL	PRS.IND.ACT.3PL	comp		ACC(N)..SG			GEN(N)..SG
[pos]	conj	prdem	noun	v.fin	adv	prep	noun	conj	prep	noun
[v-sem]										
[saliency]		pr3.dem	abstract	pr3			abstract			abstract
[givenness]		access-sit	giv				new			new
[definitness]		def					indef			indef
[gramm_def]			indef							
[context]		demon/deict.ref								
[frame]		scheme:ice								
[I-particle]										
[shift]		continue								
[Topic]		Con-T								
[position-T]		initial								
[Comment]	cm			cm						

FIGURE 3 Screenshot from the annotation (10⁷, col.a:26–27), Topic

Furthermore, Kim (2012) and Song (2014, 2017) point out that relative clauses can be grouped together with cleft clauses in that they assign topic to their head nouns or the relative pronouns (cf. also Bresnan & Mchombo 1987; Bjerre 2011). Thus, the relative pronoun or relativized constituent in relative clauses universally bears a topic function.

If there are two possible candidates for the assignment of a topic, I made a distinction between *sentence* and *discourse topic*. The sentence topic is, strictly speaking, what Reinhart (1981) defines as being what an utterance is about (= *aboutness topic*) or what is predicated about an entity in a sentence, which is commonly assumed to correspond to some specific/definite DP within a sentence. A discourse topic, on the other hand, is the issue/QUD (cf. Vallduví 1992; Roberts 1996), or the locus of a current question and what a part of a discourse is about. Following von Stechow (1994), a discourse topic is a salient partition of the common ground.

Three general functions of topics can thus be defined: i) introduction of a new discourse topic, ii) narrowing down the current discourse topic, or iii) changing the discourse topic. These functions also include *contrastive topics*. Note that I do not take topics as being always given, as sometimes the topic can carry new information. An example of this is given in (5), taken from Liddicoat & Curnow (2004: 48).

- (5) a. Virginia always eats her vegetables, but her brother only likes ice cream.
 b. Virginia does not like ice cream, but her brother likes it a lot.

In (5a), ‘the brother’ functions as the topic, despite introducing new information, while in (5b), the part conveying the comment consists of information that is already known or accessible to the listener.

2.2 *Focus*

Now we will turn to the other prominent information-structural notion, *focus*. Focus is said to capture what is newsworthy and to describe the asserted information of the utterance, here analyzed as *information focus*, which is relational and information predicated about the topic. This notion is the most systematically studied one within formal semantics and formal pragmatics for modern languages.

According to Lambrecht (1998: 213), focus is not to be defined as the complement of topic nor is it to be linked to the activation status of the discourse referents. Instead, he links focus to “the semantic component of a pragmatically structured proposition, whereby the assertion differs from the presupposition”. It refers to a relation, not a property of the constituent. Lambrecht further stresses that the notion of focus as a pragmatic concept should be clearly separated from how it is realized grammatically in a sentence—that is, its position and the prosodic strategies to mark it, such as intonation or stress.

Focus can identify context questions in answers (QUD; see Féry & Krifka 2008), and a broader and more general definition of focus states that it is understood as a device that highlights the existence of contextually relevant alternatives needed to interpret the utterance properly (Féry & Ishihara 2016: 5). Above, I mentioned two subcategories of focus: *information focus* and *contrastive focus*. Both are coded by some type of linguistic prominence, typically by means of some sort of prosodic highlighting, as it is the main predication expressed in the sentence in relation to the topic.

However, since pitch accent as a marker for focus is not accessible in historical corpus languages, I made use of other features relevant to focus, which in line with the analysis of topic, rely on a cumulative analysis on several annotation levels in the corpus. The assignment of focus within the corpus material was thus made on the basis of several tags that point towards a focus-candidate. To be analyzed as such a candidate, the element was tagged as indefinite, or new, or as indefinite, new and contrastive, as shown in Figure 4.

A strategy that is verifiable in corpus languages and can mark contrastive focus is the use of full pronoun forms in contrast to enclitic forms or paral-

	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196
[text]	þeir	isar	liggia	mæir	i	lanndnorð	eða	til	norðs	firi	lanndino	hældr	en	til	suðrs	eða	utsuðrs
[trans]	this	ice	lie	more	in	north.land	or	to	north	country	rather	but	to	south	or	southwest	
[lem]	sá	iss	liggia	meir	i	landnorð	eða	til	norð	fyrir	land	heldr	en	til	suðr	eða	útsuðr
[glos/morph]	NOM.M.PL	NOM(M).PL	PRS.IND.ACT.3PL	comp		ACC(N).SG			GEN(N).SG		DAT(N).SG	comp			GEN(N).SG		GEN(N).SG
[pos]	prdem	noun	v.fin	adv	prep	noun	conj	prep	noun	prep	noun	adv	adv	prep	noun	conj	noun.prop
[v-sem]																	
[saliency]	pr3.dem	abstract	pr3			abstract			abstract		abstract				abstract		abstract
[givenness]	access-sit	giv				new			new		giv				new		new
[definitness]	def					indef			indef		def				indef		indef
[gramm_def]		indef															
[context]	demon/deict.ref																
[frame]	schemeice									scheme:greenland							
[I_particle]																	
[shift]	continue																
[Topic]	Con-T																
[position-T]	initial																
[Comment]			cm														
[NFocus]																	
[CFocus]						ef									ef		
[position-F]						middle									final		

FIGURE 4 Screenshot from the annotation (10⁷, col.a:26–29), Focus

lel structures, including ellipsis. It can also be marked through a syntactically prominent, typically a fronted position. This, however, has resulted in some confusion in the literature, with the term ‘topicalization’ being used to mark the preposing of contrastively focused topics, as well as the preposing of information focus. In the individual studies of this research project, specific positions assigned to these concepts and their possible reflexes on morphological marking in Old Norwegian are especially determined in the studies III and IV.

The main text studied for the analysis of information structure and syntactic variation within this research monograph is written in a dialogue form. This format provides a transparent structure of explicit and implicit QUDs that structures the individual utterances according to their information-structural contributions to the overall discourse topics on the basis of mutual shared knowledge. The speech act of a dialogue additionally plays a crucial role in my analysis since it shows an imitation of an oral conversation, following a question-answer(-repetition) pattern, where the questions typically indicate informational needs, and the information is structured in relation to these. Both candidates for topic and candidates for focus can thus be followed throughout the main text chosen for this research, supported by the multi-modal annotation pointing towards the most relevant candidates.

3 Old Norse and Syntactic Variation

I will now consider some specifics of Old Norse in light of the identification of information-structural candidates, before connecting this section to the project motivations laid out in Section 1.2 and before describing the mate-

rial of the research and the corpus annotations in the following sections in more detail.

I follow the work of Faarlund (2004), Aamodt Nielsen (2013), and Hróarsdóttir (1996, 2000, 2009) and assume that Old Norse had a uniform head-initial base (= VO-base). The order of elements then is—at least at the level of deep structure—determined by the syntax. As Old Norse, however, still shows a wide range of variation on the surface structure, both on a sentence and on a phrase level, a variety of movement operations is assumed to take place (cf. single base hypothesis; Kayne 1994).

Drawing on Hróarsdóttir's (2000: 82; esp. Chapter 8) analysis of Old Icelandic and her discussion of base structure, there appears to be no compelling evidence for variable base generation, rendering the assumption theoretically unnecessary and analytically unsupported. In light of the language history of Norwegian, observable (S)OV patterns have also been described as 'remnants' of (S)OV (cf. Faarlund 1985: 373, see also 1990). These patterns can be accounted for by assuming relatively flexible movement operations allowing different constituent types to appear in the middle field (Haugan 2000: 42). Leftward movement into the middle field is attested in several Germanic languages (see e.g., Haeberli & Ihsane 2016 for Old English or Walkden 2014 for Old Saxon).

The choice between structures with or without such movement operations is assumed to be pragmatically determined. For example, accent placement seems to play an important role in the ordering of information. With the possibility of syntactic variation on the surface and a pragmatic motivation behind this variation, information-structural constraints and prosodic weight become major parts of the actual spell-out form.

Special attention within syntactic variation in Old Norse has been paid to the subject position and to the possibility for null subjects (see especially Kinn 2017 for Old Norwegian). Kinn (2014: 180) argues that Old Norse qualifies as a 'partial null subject language', following Holmberg's (2010) framework. In this system, non-referential and generic subjects are null, and referential subjects typically appeared overtly, though they could also be left unexpressed. Null subjects are co-referential with an antecedent in the preceding sentence, which may be placed in various syntactic positions. Especially in coordinated structures, the subject in the second conjunct is often dropped, as in *Biorn er þar oc a því lannde oc er hvitr* (11^v, col.b:7–8, '(A) bear is there, too, in that land and (he/it) is white'); or *reip þau er fyrr roeddum ver um er mænn rista af fiskum þeim er rostungr er callaðr oc svarðreip heita* (11^v, col.a:12–15, 'the ropes we talked about earlier, which men cut from the fish that is called walrus, and (it) is called leather rope').⁴

4 The Old Norwegian examples are taken from KoNoKs, unless otherwise stated.

If the subject is spelled out, it can occur in different positions in a sentence. A canonical subject position on the surface has been described for the position between complementizer and finite verb (Faarlund 2004: 251). However, subjects are very often topicalized, as in *Marmari er þar mykill a því lannde* (12^r, col.a:8–9, ‘There is a lot of **marbles** [NB: Sg. in the Old Norwegian original] in this land’).

Heavy or complex subjects, or subjects carrying new information, tend to appear at the end of the sentence in accordance with the principles of end-weight and end-focus, often observed in cleft sentences. The initial and final position are both points for focus, and positioning of a constituent in either of these positions can thus be used for achieving focus-reading and cohesion. However, an element in a fronted position usually refers to given information or evokes contrastive readings.

Moving subject or object clauses outside their normal positions can also co-occur with the appearance of a dummy-element used in the canonical subject position of the main clause (= cleft constructions), anticipating the later clause as the logical subject, as in *þat ero þeir fuglar* (found in NRA 58 C; 3^r, 16, ‘this are **these birds**’); or also *þa skaltu þat vist vita, at þat er litill lutr a lanndino er þitt er* (11^v, col.b:19–21, ‘so should you surely know **this**, that **this** is a small part of the land that is thawed’), with a copy of the demonstrative in the second part of the sentence. This strategy is very helpful for the determination of new topic-candidates.

Some other characteristics of Old Norse that might help identify topic- and focus-candidates are found in the use of definite articles that focus the hearer’s attention on this constituent. These elements are not yet obligatory elements in Old Norse and not necessary to mark an entity as definite, as the article system is still under grammaticalization. If present, definite articles can mark an entity as contrastive (= contrastive topic), especially in double definiteness constructions as in *hinn hviti biorninn* (11^v, col.b:13, ‘the white bear [the]’) or *hiner kalldu vægirnir* (13^r, col.a:3, ‘the cold ways (zones) [the]’).

In the literature, we also find explicit descriptions of emphasis through positioning, with the possibility to include definite markers. For example, concerning the position of adjectives, Faarlund (2004: 55) mentions that while adjectives commonly follow the noun on the surface, they precede the noun if they are emphasized or focused (see the findings of Study III for a corrected picture of this correlation). Most often, the emphasis on contrastively focused adjectives is expressed through intonation (cf. Corver & van Koppen 2009), something not accessible in the corpus language of Old Norwegian/Old Norse. Faarlund (2004) therefore points to the syntactically given prominence of the adjective that can be underlined by additional definiteness markers. However,

not all adjectives in the mentioned prominent syntactical position are necessarily focused, making an easy assignment of focus in these cases not possible.

In general, focus with adjectives has been described to be somewhat difficult to determine (see van Gelderen & Lohndal 2008: 13; Allen 2012: 259f.). I therefore introduce the concept of *essentiality* into the discussion of information-structural determinations (see Study III and Section 4.2). Cross-linguistically, it has been noted that adjectives can bear an interpretable feature [FOCUS/CONTRAST] (see e.g., Demonte 1999, 2008). However, a systematic analysis and annotation practice of this features within modified nominal phrases is lacking thus far.

For the analysis of syntactic variation observed with adjectives in correlation to their head noun in Old Norwegian, the concept of essentiality is an efficient way to deal with this problem, focusing mainly on the development of the discourse and the information flow. As Old Norwegian had already started to grammaticalize the prenominal position for all adjectives, the exploitation of syntactic variation is already weakened. The examination of essentiality, however, still enables us to more easily determine whether the adjective is focused or not.

Turning to some other specific linguistic traits of Old Norwegian, the order of verb and complement(s) within the VP also shows syntactic variation. The most common order is head-complement (VO order), which is determined the base order. This structure is found with V2, which is the typical structure in main clauses, as in *Biorn er þar oc a því lannde oc er hvitr* (11^v, col.b:7–8, '(a) bear is there, too, in that land and (he/it) is white'); or *at þeir lata vit sitt* (8^v, col.a:16, 'that they lose their wits').

The complement may, however, also precede its head (OV order) as in *sia þa luti er hanum ero sagðer* (11^r, col.b:24–25, 'see the things that are told to him'); or *er væl tæmpraðan bolstað vil hafa* (12^v, col.b:7–8, 'who wants to have a well-tempered dwelling place'). Other examples show inversion, helping with information flow, intensification, and placement of *focus*, such as in *Eigi væit ec flæiri luti a því lannde væra þeir er mer þyckia til þæss fallner væra at hafa til længðar slicrar ræðu* (9^r, col.b:4–7, 'I do not know (of) more things about that land which I think fall to be in this (discourse/discussion) to lengthen such a talk'), with the sentence negation left-adjoined to the VP. This is quite common in Old Norse, with another example in *En þat er þo mæstr fiolde a því lannde er æigi væit hvat brauð er* 11^v, col.a:21–23, 'but it is (so that there are) yet most people in that land which do not know what bread is').

After this brief discussion of some patterns and features of syntactic variation found in Old Norse/Old Norwegian and a brief presentation of some of the research within information-structural analyses in various Germanic lan-

guages, I will now define some of the research gaps that lead to this research monograph (cf. Section 1.2).

4 Research Gap

Although scholars such as Hróarsdóttir, Pfaff, Sundquist, Kinn, and Haugan discuss the matter of syntactic variation in Old Norse in general and describe—among other things—the mentioned cases of syntactic variation within this language stage, they lack a comparative perspective to other older Nordic languages. This is true even when considering the two languages that are combined under the notion of Old Norse—Old Norwegian and Old Icelandic.

While comparisons have been made on other linguistic levels, with scholarly literature focusing on phonological and morphological differences between Old Icelandic and Old Norwegian (cf. e.g., Schulte 2002: 882 ff.; Kristoffersen 2002: 911 ff.; Hagland 2013: 600 ff.; Bernharðsson 2016: 427 ff.), syntactic comparisons have remained absent. Hróarsdóttir (2000, 2009) concentrates on the Old Icelandic VP, while Pfaff (2019) analyzes variation within the Old Icelandic nominal domain in more detail and in light of change within language history. Kinn (2015) and Sundquist (2006) focus on Old Norwegian with a diachronic view, discussing differences towards Modern Norwegian. Haugan (2000) and Faarlund (2004) both mention Old Norwegian within their observations but still discuss it as one with Old Icelandic, neither offering a direct comparison nor addressing the issue of possible differences.

The main reason for this is an established common assumption that Old Icelandic and Old Norwegian do not differ syntactically (cf. Faarlund 2004: 2). This assumption has been repeated in numerous works, but to my knowledge, no one has compared the two languages in any greater detail. Moreover, this issue builds on the fact that we lack broader annotated corpora for Old (and Middle) Norwegian that follow internationally established guidelines that would make Old Norwegian comparable to other Germanic languages.

Following this, the obvious research gap is two-fold: **firstly**, Old Norwegian has not been properly dealt with in syntactic studies and consequently not in comparative studies either. **Secondly**, approaching alternation phenomena within Old Norwegian from an information-structural framework, which has been shown to play a major role in older Germanic languages, has not been done for this language in detail yet. This gap has, however, been recognized, since projects such as ISWOC and *Constraints on syntactic variation: noun phrases in early Germanic languages* had plans to include purely Old Norwegian material in their investigations.

This research project follows the intentions of these larger Norwegian projects and provides an analysis of Old Norwegian, separately from Old Icelandic, following newer research traditions concerning syntactic variation within older corpus languages. The overview of the theoretical framework, alongside the brief discussion of findings from studies using information-structural analyses for the examination of syntactic variation in older Germanic languages, has shown the complexity of the topic as well as its potential for the study of Old Norse. As information structure encompasses both the content and form of any given utterance in a discourse, the determination of possible topic- and focus-candidates is based on a cumulation of features on various linguistic levels, analyzed both within a given sentence and beyond sentence borders.

Originally developed for the study of modern languages with key features determined by phenomena such as stress, the inclusion of an examination of the manuscript page and the clues given by the written medium are taken into account within this research monograph, combining linguistics and manuscript studies. With a recognized gap within the study of Old Norse due to the lack of comparative studies on a syntactical level, the following section will focus on the Old Norwegian data material, including an argumentation for the choice of the manuscript text annotated and analyzed in KoNoKs.

Criteria for the Choice of Material

This section presents the main source material considered for the four studies of this research project, situating Old Norwegian as a language and within a manuscript tradition in the Nordic context. Alongside some distinguishing features, this section will also provide a brief discussion of the language history of Norwegian and the various periods defined in literature, before presenting the corpus of Old Norwegian texts. Arguments for the selection of the manuscript text chosen for further analysis and annotation within KoNoKs are given before more details on the text and its transmission itself are presented.

Old Norse or Old Nordic are common terms in English that are used more broadly for two closely related languages and literatures—that of Old Icelandic and Old Norwegian, the Medieval West Nordic languages. The language family tree, focusing on North Germanic, is shown in Figure 5.

Old Norse and Old Nordic may refer to both languages, solely Old Icelandic, or are used as collective terms for all the early North Germanic languages: Old Icelandic, Old Norwegian, Old Danish, Old Swedish, and Old Gutnish. Old Norwegian and Old Icelandic are also frequently referred to as West Norse (see Ottosson 2002 for a full discussion of these terms).

Discussing Old Icelandic and Old Norwegian under one term, such as ‘Old Norse’, is in many respects a valid choice. However, as pointed out in Sections 1.2 and 2.4, the sources in various types of analyses are often almost exclusively Icelandic. There is thus every reason to focus on a comparative analysis of Old Icelandic and Old Norwegian to either validate this treatment or to highlight an exciting research gap in the comparison of these two languages, counterposed to each other. Comparative studies may, after all, also highlight some of the emerging characteristics of Icelandic.

The reason that Old Icelandic is more often worked with exclusively as a sample language lies mainly in the number of sources and annotated corpora available to us, such as The Icelandic Parsed Historical Corpus (IcePaHC).¹ The preserved Old Icelandic literature is wide and varied, ranging from skaldic poems of high complexity and eddic poems of great mythological interest, to several autochthonous sagas of ordinary Icelanders and of the Norwegian kings (cf. e.g., Mundal 2013a, 2013b).

¹ <https://clarin.is/en/resources/icepahc/> (Accessed May 2025).

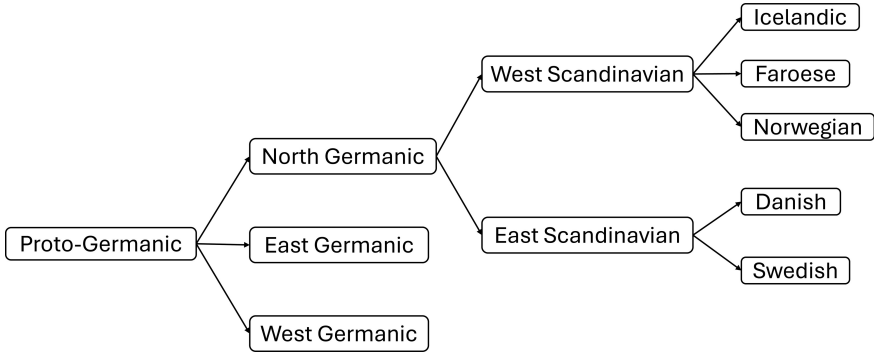


FIGURE 5 Germanic language family with a focus on North Germanic

That there is still ongoing interest in the Icelandic literature from the Middle Ages is reflected, for instance, in the new translation of *Íslendinga sögur* ‘Sagas of Icelanders’ into German in 2011. This follows a longstanding tradition within the field of study, as these sagas, as well as *Konungasögur* ‘King’s sagas’, offer ideologically interesting material for various fields of research.

The preserved Norwegian literature from the same period is of a much smaller quantity and displays to a much higher degree translations from Latin, and occasionally Anglo-Norman. Of course, we also find many publications that focus on these sources from various perspectives (see e.g., Flom 1921–1923; Holm-Olsen 1952; Schnall & Simek 2000; Christoffersen 1994, 2002; Haugen & Ommundsen 2010). However, the examination of Norwegian material is more limited and does not follow the same longstanding traditions that we find in research on Old Icelandic texts.

Within the Menotec project, the first texts of Old Norwegian were broadly annotated for syntax, thus providing ground for various kinds of analyses. However, so far there has been no comparable annotated corpus material in size or of the same complexity as IcePaHC. Thus far, there was also no annotated corpus presenting a phrase-structural analysis of the type undertaken in corpora for other older Germanic languages. The corpus developed during this research project thus provides useful grounds for analyses on syntactic variation in Old Norwegian and for further comparative analyses, both within syntactic studies and within studies on information structure.

Additionally, sometimes, when discussing manuscripts written in ‘Old Norse’, it becomes a challenge to identify where the manuscript under discussion was actually written and who wrote it, an Icelandic scribe or a Norwegian scribe. Distinguishing Norwegian and Icelandic manuscripts from the 12th and early 13th centuries in particular can be difficult (see e.g., Spencer 1994; Hagland 2013; Bernharðsson 2016 for a discussion on *Norwegianisms*; see also Karlsson 1979, 2006 for a discussion of scribal culture and book export).

Bernharðsson (2016: 436 f.) lists some linguistic features that can help keep the two dialects of Old Icelandic and Old Norwegian apart and that can help in classifying a manuscript—or the language of the manuscript—as either Icelandic or Norwegian with more certainty. He mentions changes that took place in Icelandic, although most of those appeared first in the second half of the 13th century or in the 14th century, here given in the following short list:

- 1) the Icelandic merger $\acute{e} + \acute{o} > \text{æ}$ beginning around the middle of the 13th century;
- 2) the Icelandic diphthongization of \acute{e} [e:] > [ie] primarily in the 14th century;
- 3) the orthographic change of $v\acute{a}$ to vo ($v\acute{o}$), which was triggered by the diphthongization of \acute{a} [ɔ] > [au].

If a scribe shows one or more of these changes, it is an indicator that the scribe was Icelandic (Bernharðsson 2006: 437). However, as most of these features first appear in the 13th century, the distinction between the two languages can still be somewhat challenging for the earliest texts. Some clues are, however, given on a palaeographical level (cf. e.g., Benediktsson 1965; Svensson 1974), where Old Norwegian manuscripts show Insular script features,² while Icelandic manuscripts up until the 12th century can be described as overall Carolingian.³ From 1200 onwards, both traditions turn to a Gothic script (cf. e.g., Gunnlaugsson 2005: 253 ff.; Haugen 2013: 194 ff.).⁴

2 'Insular script' obtained its name due to its origin placed to England and Ireland and the scriptorial practices in these regions. The letters in this script have increased strokes, with prolonged descenders, as well as enlarged wedges at the beginning of the ascenders. Letters that show particular shape(s) within this script include the <r> with a long descender reaching beyond the baseline; the <s>, which can be found low, high, or round; as well as the <g> and the <f>, both with long descenders reaching beyond the baseline.

3 'Carolingian script' is a minuscule script with rounded letter forms, dominant on the continental area. It shows an elimination of cursive elements, the absence of feet in minims such as for <m> and <n>, and a clear separation between letters and words, which makes this script relatively easy to read. The oldest Icelandic manuscripts are written in a purely Carolingian minuscule.

4 'Gothic script', also called 'littera textualis' or 'Gothic bookhand', has tall and narrow letters with sharp, straight lines and ascenders. This script had its origin in the Carolingian script, from which it retains the general shape of the letters and spread from the region of Northern France. Compared to the 'Carolingian script', 'Gothic script' is more compact and heavier. Every letter is written alone, but often so close to each other that they overlap, making the transition from one letter to the next difficult. The use of the round <r> or *r-rotunda* is a characteristic of this script, as well as the long <s> in the middle of words. The letter <d> has two forms, one with a curved ascender to the left, and one with a straight or vertical shaft. The minims have an almost uniform addition of feet and serifs.

Furthermore, single orthographic features may point to an Old Icelandic or Old Norwegian origin. For instance, manuscripts produced in Iceland or by an Icelandic scribe show a greater usage of abbreviations than Old Norwegian manuscripts, as well as usage of small capital letters to mark geminates, while manuscripts produced in Norway used small capital letters only for ornamental purposes. A typical feature of Old Norwegian manuscripts is the omission of the letter /h/ in the onset before /l, n, r/ (cf. Hagland 2013: 607, 616).

Through the 14th, 15th, and ensuing centuries, Icelandic and Norwegian grew apart on all levels of their linguistic features and became distinguishable from each other. Today, Modern Icelandic and Modern Norwegian are hardly inter-intelligible. The linguistic features discussed in the overviews of the differences between Old Icelandic and Old Norwegian take into account only phonological and morphological aspects. However, this research monograph also presents syntactic features that indicate a divergent development of Old Icelandic and Old Norwegian as early as the 13th century.

Using these basic insights for broader analyses might help us in the future to unravel the uncertainty of distinguishing a Norwegian from an Icelandic scribe early in language history. This could allow us to revisit some cases that have remained sources of confusion and disagreement from a new perspective.

1 On Old Norwegian

Taking a closer look at Norwegian, the language is roughly divided into three periods: Old Norwegian from around 1050 to 1350, Middle Norwegian from around 1350 to 1525 or 1537, and Modern Norwegian (see e.g., Indrebø 1951; Seip 1955; Rindal 1993; see also Haugen 2018; Berg 2019). The beginning of the Old Norwegian period is marked by significant historical changes that are more external to the language than internal, such as the Christianization of Norway under Olav Haraldsson in 1030 and the beginning of using Norwegian as a written language alongside or instead of Latin (cf. Seip 1955: 62 f.).

Compared to the Icelandic material, the first 150 years of the defined Old Norwegian period have a rather small corpus; only a limited corpus of Runic inscriptions and a handful of fragments of codices in the Latin alphabet are preserved from this time. However, from around 1200 onwards, a larger number of works in the form of codices and charters are preserved, creating a corpus of several million words. This period of literary abundance lasts until around 1350, when the Black Death hit Norway. It took many decades for the literature to regain the same quality and breadth it exhibited before the plague, and it did not reach the same variety of expression in the Middle Norwegian period.

Significantly fewer manuscripts were produced after around 1350; those that exist are almost exclusively law books and a few land registers. The bulk of the literature was mainly made up of charters of various types, commonly referred to as *diplomas* in the Nordic countries and published in series as *Diplomatarium Norvegicum* or *Diplomatarium Danicum* (cf. Jørgensen 2013). Despite the reduced variety of literary work, during the Middle Norwegian period, the language underwent many changes, and distinct linguistic features appeared that separate it from Old Norwegian.

However, since most of the intra-linguistic divisions of Norwegian are based on phonology or morphology, this division is not very informative when examining syntactic changes in the language's history. Additionally, in the studies on syntax that do exist for Norwegian, such as those by Sundquist (2002, 2006), who provides a broader overview of syntactic changes in the history of Norwegian, the defined periods of Old and Middle Norwegian are often combined. This approach is not advisable for more detailed studies, as smaller changes and tendencies towards a fixed word order, which can already be observed relatively early in the language's history, likely appear gradually from one language stage to the next.

In the studies of this research, the exact division into two or more definable periods is not of extreme importance, as I mainly present a synchronic analysis with a close examination of one text in one manuscript, extending the analysis through the inclusion of examples from other manuscript texts of the same time. I do think, however, that discussing all the older Norwegian sources in parallel may result in overlooking important features and tendencies that lead to observable changes between the older stages and Modern Norwegian, such as a gradually developing fixed word order.

Additionally, I argue that a divergent development from Old Icelandic can be observed already in the earliest sources. Specific changes and the influence of factors responsible for this development can be traced in annotated corpus material, where qualitative analyses are enriched with quantitative studies, showing an increase or decrease in specific patterns. Providing more material for such corpora and covering different periods of the older stages of Norwegian would help us better understand these mechanisms and subtle changes.

Therefore, I encourage future research to extend separate analyses on what is defined as Middle Norwegian compared to Old Norwegian, thus obtaining an equally detailed picture of the development and syntactic changes as for the existing corpora for Icelandic. Old Norwegian is an interesting candidate for the analysis of syntactic variation within Old Norse and should be taken as a more serious point of comparison for the divergent development of the two dialects.

2 The Text Selection

Having decided to examine Old Norwegian material separately from Old Icelandic, thus making a comparative perspective possible, two criteria for text selection had to be fulfilled:

- i) the main corpus material should consist of a Norwegian text, and
- ii) the manuscript text should be written by a Norwegian scribe.

As mentioned above, the corpus material for Old Norwegian is remarkably smaller compared to the Old Icelandic material. Unfortunately, up to the 1200s, the Old Norwegian corpus consists only of some smaller fragments of what were previously whole manuscripts. For the analysis of information structure for genuine Norwegian syntax, texts that are mostly fragmentary are unfortunately not the best basis, as context interpretations are needed for examining important notions. Additionally, a certain number of appearances of various syntactic patterns is preferable to define these patterns properly.

Furthermore, both historical and diachronic linguistic studies that rely solely on written texts should consider the importance of sources closer to the spoken language to examine spontaneous language development. Such sources are preferably letters or charters, but these are often rather short and do not provide much of the required textual context. For the kind of examination done within this project, longer passages of text are therefore preferred.

A basic requirement for the choice of material is that the manuscript(s) for the examination of syntactic variation and information structure display a relatively long and coherent text. This leaves seven texts of the Old Norwegian text corpus in eight manuscripts as possible candidates for the analysis of the oldest stage of Norwegian, as shown in Table 6. I mainly follow the ONP (1989) for the dating and signature of the manuscripts and Haugen's (2018: 228f.) overview of Norwegian manuscripts (see Haugen 2018 for an overview of Norwegian manuscripts that are transmitted in a near-complete state).⁵

All of these texts are available in annotated digital editions, which was an important factor in making a choice among them. Creating a transcription and complete morphological annotation of a text would be too time-consuming for such a project. Nevertheless, not all of the texts were equally suitable as candidates for the intended analysis. As the framework of information structure was built around the way modern languages package information within a given discourse that typically shows an exchange within a conversation, the text type

5 See also Haugen & Ommundsen (2010: 10) for the dating of the *Old Norwegian Homily Book*, Kramarz-Bein (1996: 205ff.) for the dating of *Piðriks saga af Bern*, and Schnall (2009) for the dating of *Barlaams of Josaphats saga* and *Konungs skuggsjá*.

TABLE 6 Old Norwegian text corpus (coherent longer texts)

Name of text	Abbreviation	Date of composition	Manuscripts	Extent of the manuscript	Characterization of the text
Strengleikar	Streng	Late 12th century	Upps DG 4–7 (ca. 1270)	44 leaves (Streng on 17 ^v –43 ^v)	Short courtly narratives, translation
Old Norwegian Homily Book	HómNo	Shortly after 1200	AM 619 4to (ca. 1200–1225)	80 leaves (leaves 69–72 are from another book, but the same scribe)	Sermons, partly translation
Landslög Magnúss Hákonarsonar Magnus Lagabøtes landslöv	MLL	1270s	Upps DG 8 I (ca. 1300–1350), Holm perg 34 4to (ca. 1275)	69 leaves (1 ^r –53 ^v) 128 leaves (8 ^r –90 ^r)	Laws
Óláfs saga ins helga	ÓHLeg	Late 12th century	Upps DG 8 II (ca. 1225–1250)	41 leaves (70 ^v –110 ^v)	King's saga
Konungs skuggsjá	Kgs	Late 1250s	AM 243 bα fol. (ca. 1275)	68 leaves	Encyclopaedic work, knowledge-imparting dialogue
Barlaams ok Josaphats saga	Barl	1250s	Holm perg 6 fol. (ca. 1275)	102 leaves	Legend, translation
Þiðriks saga af Bern	Þiðr	Around 1250	Holm perg 4 fol. (ca. 1275–1300)	129 leaves	Sagas of knights, partly translation (partly Old Icelandic)

'Law text' is not the best candidate to choose as a base corpus text. Law texts represent a special language register and do not imitate a conversation in any way. Nor are texts that are mainly translations of other sources especially suited for the analysis of genuine Norwegian syntax, as there might be translational effects and interferences upon the word order of the copy that mirror the original language. This might lead to datasets that do not reflect the system of Old Norwegian truthfully.⁶

Of the texts given in Table 6, four texts are considered possible candidates to provide the dataset needed for the individual studies: *Kgs*, *ÓHLeg*, *HómNo*, and *Þiðr*. For all of these texts, it is clear that other sources are part of the composition. For example, the author of *Kgs* apparently had access to various educational works about the world as well as translations of the Bible, such

⁶ These texts are, however, interesting candidates for a comparative analysis with those that are considered original works.

as the *Vulgate*, from which, according to Larson (1917: 9), “at least one Biblical passage is correctly given, and it is quoted in its Latin form.” These texts are, however, not classified as pure translations like *Streng*, a translation of the *Lais of Marie de France*. In newer literature, the text of Kgs has been analyzed as “an original work in the vernacular” (Johansson & Kleivane 2018: 19; see also Bagge 1987 for a historical analysis) showing genuine Norwegian structures (see also Flom 1921–1923 for examinations of morphology and phonology).

Of these four texts (Kgs, ÓHLeg, HómNo, and Þiðr), Kgs was considered the most suitable candidate to serve as the main corpus text for this research project. It is considered one of the main works of Norwegian medieval literature (cf. Flom 1921–1923). The text addresses important issues concerning the work of a merchant, information about the duties of a king and his court, and the church and the clergy, dealt with in different chapters within three larger parts of the text: i) the merchant, ii) the court, and iii) the king.⁷ The text is written in a dialogue form, a choice that is not original for this kind of work, but which is a frequently used didactic strategy in the Middle Ages and thus the natural form to adopt for this text. However, the text itself also addresses issues of courtly language and how to express oneself in a refined manner, using a contrastive approach. As such, the text provides concrete examples of what to say and what not to say, giving us natural glimpses of the spoken language during this time (cf. Simek 1984: 451 ff.).⁸

As a literary work, this text is very well defined, with several editions and many translations, including translations into English and German, which present the text as a consistent whole (cf. Section 3.3). As such, Kgs has been the object of a lot of literary and historical research that has identified some of the sources consulted for the text and dated the text with respect to other manuscript texts as well as plotting the interrelation of some of these (see

7 The division of the text into various parts, as well as the relation between the prologue and the main text, have been widely discussed topics in the research on Kgs. I will not delve into this discussion within this book (see, however, Holm-Olsen 1981; cf. also the discussion in Schnall 2000: 33 ff.).

8 See, for example, the following passage in Kgs: En æf sva kann til at værða at konongr mæilir til þin noccor orð þau er þu næmer æigi oc þarftu annat sinni æptir at fretta. þa skallt þu hvarki sægia. haa. ne. hvat. hælldr skallt þu æcki meira um hafa en qvæða sva at orðe .hærra. En æf þu villt hælldr spyria mæð fleirum orðum hœrra minn latið yðr æigi firi þikkia at ec spyria hvat þer mælltur til min þvi at [ec] nam æi gorla (22^v, col.a:10–19)

‘And if it comes to be that the king should speak a few words to you which you did not catch, and you have to ask a second time [what he said], then you should neither say ‘Huh’ nor ‘What’; neither should you [say] more about it but say so the word ‘Sire’. But if you rather want to ask in more words [then say]: My lord, do not be offended that I ask what you said to me, because I did not fully catch it.’

e.g., Jónsson 1921; Falk 1921; Holm-Olsen 1981; Bagge 1987; Vadum 2004; Schnall 2009; Johansson & Kleivane 2018; Heinz 2019). A particular problem discussed in the literature is the identification of overall models and templates for specific text passages (cf. e.g., Schnall 2000; Simek 1996, 2000). Research like this also contributed to the dating of the text due to external dating criteria. This rich scholarly discussion makes this text a good candidate for further examinations in which one can rely on established findings concerning, for instance, the time of composition.

As a result of the literary analyses done so far, it is also possible to make statements about differing grades of independence from other sources within the three parts of the text. Sections that have been identified as obvious translations or paraphrases from e.g., Latin, which are mainly found in the third part of the text, should in general display similar characteristics, but in order to avoid translation effects, these specific passages were not selected for the main analysis of information-structural features. However, the text has not been analyzed in terms of syntax prior to the present project, nor had it been subjected to more specialized linguistic corpus studies that included analysis of syntactical traits.

As previously mentioned, sources that are closer to the spoken language are preferable for the analysis of information-structural phenomena. Kgs may not represent all properties of the language spoken in Norway in the 13th century as faithfully as personal letters or charters of later periods, and it is to be expected that this well-composed text might contain a greater amount of stylistically marked structures. This is, however, true for all more substantial manuscript texts, as the written language usually represents a more elaborate style than spoken language (cf. Larson 1917: x).

Furthermore, as the text type 'Charter' does not provide the needed text length for an exhaustive information-structural analysis, I would need to analyze several charters to make up a corpus of an informative size. If I were to have done this, however, the factor of language user variety would have come into play, something that I do not address in the examinations undertaken within the scope of this research. The main manuscript of Kgs, AM 243 b α fol. (henceforth 243 b α), which is the basis for the corpus studies presented here, is assumed to be written by only one scribe (see Holm-Olsen 1952: 16).

Additionally, the text itself is written in a style that at least tries to imitate spoken language: a dialogue form—albeit in a very elaborate way. It is a didactic and educational text presenting a knowledgeable exchange between father and son with a textual structure that follows a very clear question-answer (repetition) pattern, and with this, a clear QUD discourse structure. As such, the text follows a longstanding tradition of educational texts ('Lehrdialog'; cf.

e.g., *Elucidarius*, *Hortus deliciarum*, *Le Livre de Sidrac*), presenting a transfer of knowledge within the frame of a contrived conversational situation (cf. e.g., Ruhe 1993; Luff 1999; von Moos 1991, 2006; Schnall 2000, esp. 54 ff., 176 f.; Cardelle de Hartmann 2007, esp. Chapter 2).

However, even though the text of Kgs uses the dialogue form in an attempt to reflect a more oral structure, it enhances this strategy by providing unusually complex descriptive passages for both questions and answers, and by presenting the reader with elaborate recursiveness. This goes beyond a narrow way of addressing questions, as we know it from classical literature, and provides a rich foundation for the analysis of informational flow throughout a coherent and complex exchange. The text thus provides a very suitable basis for the analysis of syntactic variation and information structure that need to be contextually grounded.

3 The Manuscript and Its Accessibility

The text of Kgs is not only preserved in the main manuscript 243 b α , which contains around 80% of the text, but also in several smaller fragments. These fragments are, however, not part of the developed database. Nevertheless, I would like to give a better idea of the composition of the text, the language used, and the position of the chosen manuscript in the transmission of the text, and with this conclude the section of the criteria for the choice of the material.

Many medieval works are preserved in several manuscripts, and Kgs is no exception. As given in Table 6, the time of composition of the work was at the end of the late 1250s, but as is the case with all early Old Norwegian works, the original is lost, and the work is only known in apographs. The text of Kgs has survived in around 60 manuscripts—combined Old Norwegian and Old Icelandic ones—all of which are of different ages and all fragmentary. The oldest manuscripts containing this text are all Norwegian and written in the second half of the 13th century, while the youngest manuscripts are from around 1800, written in Iceland. Table 7 shows the Norwegian manuscripts, the date of the manuscripts, and provides some additional comments (cf. Holm-Olsen 1983: XII–XIV).

The *codex optimus* of Kgs, 243 b α fol., is dated to around 1270, which leaves just 15–20 years between the assumed composition of the work and the writing of this specific manuscript text (see also Holm-Olsen's 1952: 179 *stemma codicum*).⁹ The language might therefore be fairly close to the original. However,

⁹ According to the lexicon of stemmatology (Roelli & Marcé 2015: 38), the “*codex optimus* is the

TABLE 7 Comparative table of the Norwegian manuscripts

Manuscript	Dated around	Comment
AM 243 b α fol.	ca. 1270	<i>codex optimus</i> , has around 80% of the text preserved; language: South-West Norwegian (template: South-East Norwegian)
AM 1056 IX 4to (called δ)	ca. 1300	language: Norwegian
NRA 58 A (called α)	later than 1260	has been considerably larger than b α ; language: South-West Norwegian, but there are some linguistically and palaeographical features which are natural for Icelandic
NRA 58 B (called ϵ)	first half of 14th century	has several features that are the same for Icelandic and south-western Norwegian (but some features point more clearly towards a Norwegian writer)
NRA 58 C (called β) and NKS 235g 4to (called γ)	later than 1260–1270	these fragments are part of the same codex; language: South-East Norwegian; the mss. has the same format as b α ; in Holm-Olsen (1952: 155–165) several features are discussed that are the same for the two mss.

also this manuscript has several lacunas. As described by Holm-Olsen (1983: XI), 243 b α fol. consists now of 68 leaves of parchment, each with two columns, approximately 27.8 \times 21.3 cm, and 30 lines per leaf, with some exceptions of 29 or 31 lines. It once had 86 leaves distributed over 11 quires, as illustrated in Figure 6. The first 10 quires had 8 leaves, and the 11th had 6 leaves. Today, the manuscript is missing the first three leaves of quire 1, the entirety of quire 2, the first leaf of quire 5, the last leaf of quire 10, and all except leaf 3 of quire 11.

Because of the lacunas, the main manuscript is missing the prologue completely and the text starting with the words *Goðan dag hærra minn* 'Good day, my lord'. Some scholars deny its existence in the main manuscript in the first place. 243 b α fol. is also missing the final part of the chapter on the tides and the course of the sun, the initial parts of the following chapter on the natural wonders of Ireland, all four chapters about Iceland, discussing whales and the kraken, wonders, volcanic fires, and mineral springs, the final part of the chapter on how to approach the king, the final part of the chapter on the judgements of Solomon, and the initial part of the chapter on promises (Joab).

best manuscript in a manuscript tradition. [...] it usually means that it is the oldest and/or best preserved manuscript [...]. A *stemma codicum* is a model showing how a work has been transmitted through copies through time, as well as their relations to each other. A stemma preferably represents all surviving manuscripts of a given text from a single archetype. See also Brenner (1881) for a discussion of the relation between the main manuscript and e, which has both the prologue preserved and the text of the 8 missing leaves.



FIGURE 6
Lacunas of AM 243 bα fol.
ILL. BY FRANK AGLEDAL

Based on other preserved manuscripts, the textual contents of the work can safely be reconstructed (cf. Figure 7), and from this reconstruction, 243 bα fol. covers approximately 80% of the text. This makes it the most complete manuscript for Kgs. Unfortunately, as shown in Table 7, there are no other Norwegian manuscripts preserved apart from a handful of smaller fragments (cf. Holm-Olsen 1983). Many of the Icelandic manuscripts are from a couple of centuries later than 243 bα fol. and are markedly different with truly Icelandic orthography. The best of these manuscripts are also fragmented.

The task of a modern editor of the text is to select a suitable reference manuscript, typically the *codex optimus*, and record the variation in the other manuscripts with reference to it. In this rather ideal situation, the specific orthography of the base manuscript is followed throughout the work, and orthographic variations in other manuscripts are only visible in the apparatus.

An editor of a full version of the text is thus faced with a tough challenge in the *constitutio textus*:¹⁰ either (a) render the text in the orthography of its source, so that there might be a leap from one orthography to another in the middle of a sentence, or (b) regularize the orthography to a single orthography, either (b1) that is attested in the *codex optimus* or (b2) the standard Old Norse language as found in grammars and dictionaries. From a linguistic point of view, at least when studying phonology and morphology, the first solution is to be preferred.

In the case of Kgs, there are in fact editions of both types. Holm-Olsen (1983) filled the lacunas in the main manuscript with the text of later Icelandic manu-

10 According to the lexicon of stemmatology (Roelli & Marcé 2015: 46), the “[c]onstitutio textus, or the determination of the critical text, [...] appears to be employed in the sense of ‘the reconstruction of the text’. [Or the term is used to refer] to the stage of producing a critical edition in which readings are compared and reduced to that which will appear in the edition.”

	bα	a	c	e	f	g	hi	hiii	k	n	q	9	α	βγ	ε
1.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2.11 [Enn	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2.18 [þiodir	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3.1 [Sunr	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3.16 [at þer	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4.31 [oc reinni	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5.8 tungur]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5.12 yðr]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5.35 nauð]synlect	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5.38 lannz]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6.16 [þau	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6.19 hafa iaf]nan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7.23 at æc]ki	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8.14 [mæð	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9.35 Nu]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9.41 luter]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10.13 [er af	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10.16 [fullu	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10.22 [med	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

FIGURE 7 Comparison of manuscripts used in Holm-Olsen’s edition of *Konungs skuggsjá*
 HOLM-OLSEN 1983: XXII

scripts in his edition, making it a type (a) edition. This work does not present a complete apparatus of what is considered a critical edition, and one should be fairly familiar with the manuscripts in order to fully understand the edition of Holm-Olsen. It does, however, provide the groundwork for this and includes a presentation of a stemma. Jónsson (1921), on the other hand, presents an edition of type (b2); type (b1) has not yet been produced.

Figure 7 shows an excerpt from Holm-Olsen’s (1983) textual comparison of the manuscripts used in his edition, including both Norwegian and Icelandic witnesses. In the overview, unbroken lines indicate that the text is preserved in the given manuscript, while broken lines indicate a lacuna. The first column shows the page and line number in Holm-Olsen’s edition of *Kgs* (1983, see also 1952), the second column gives the first and last words of each preserved text section, marked with []. Holm-Olsen did not include δ in this overview, as it only covers about 16 lines of text.

For a linguistic project, it is of great help that the text of 243 b α fol., and only this text, including its lacunas, has been published on a diplomatic level, as no changes have been made, which might happen in normalized editions. For syntactic studies, this is important with regard to changed word order. The manuscript text is published in the Menota archive.¹¹ I used the xml-file in

11 <https://clarino.uib.no/menota/> (Accessed May 2025).

Menota as a primary file for the database that I developed during this research project. Furthermore, I used the facsimile edition of Flom (1915) for my studies as an additional point of access to the manuscript text and to check some parts of the transcription. This was especially helpful for the analysis of punctuation and other mark-ups that are not part of the transcription in Menota, such as notes in the margins. I also compared the transcription with the facsimile edition in cases of doubt concerning transcription errors, e.g., to check if there really is a space between two parts of a compositum in the manuscript.

The requirement of a reliable edition was also considered important for an equivalent analysis of complementary texts used to verify certain patterns found in the corpus material for the individual studies presented in this book volume. These texts were mainly studied through the editions available in the PROIEL web-application, which follow specific manuscripts as well, without switching from one text witness to another.¹² All manuscripts that were consulted are mentioned in Table 6.

Examples included in this book are shown with the same spelling as in the corresponding editions in Menota and PROIEL. However, special characters used in the transcriptions were exchanged for the corresponding modern keyboard letters, since I do not offer a palaeographic analysis for which these would be of importance. Thus, problems of font-representations could easily be avoided. This concerns the short and long variants of the letters ⟨s⟩ and occurrences of insular ⟨v⟩.

I chose not to normalize the examples given in this book volume, as it is not necessary for the purpose of a syntactic analysis, and as the standard normalization within Old Norse studies follow Icelandic orthography rather than Norwegian orthography. A normalized version of Kgs would, of course, be desirable at some point; however, this is a project in itself. All examples in the individual studies were marked with an abbreviation of the name of the corresponding text, alongside information about the page number in the manuscript, the column—if there is more than one—and line number.

This section has presented the criteria for the choice of the material for this study, underlining the benefits of a comparative study of Old Norwegian and Old Icelandic. It also mentions the limitations of using historical language material for the study of information structure. As written sources normally present a more elaborate style than we find in ad-hoc oral discourses, the study

¹² <http://foni.uio.no/proiel/> (Accessed May 2025).

of information structure in historical corpus languages naturally differs from the possibilities certainty of analyses focusing on modern languages with an active intonation system.

However, the text of Kgs has been identified as a promising and well-suited candidate for such an analysis of Old Norwegian based on several predefined criteria. Following these discussions, Section 4 will give a comprehensive presentation of the content and annotation of KoNoKs, including additional notes on theoretical assumptions that lay the groundwork for any annotation work.

Corpus Presentation and Methodology

As mentioned above, this research project seeks to contribute to the broader topic of syntactic variation within Old Norse studies and to fill the aforementioned research gaps by closely investigating purely Old Norwegian data separately from Old Icelandic data. This investigation is conducted within similar, more recent research traditions and includes comparative discussions.

When any syntactical phenomenon is examined, various debatable questions are bound to arise. The only sensible way to reach significant conclusions is to try to maintain standardization and consistency in the data collection and its classification. Therefore, the collection of data and the corpus study in general were done by only one person.

The main data material analyzed, following the methodological choices that I have made, consists of the corpus KoNoKs (Korpus over den Norske Konungs skuggsjá) that serves as a pivot and provides the statistical base. This corpus, developed at the University of Bergen (2017–2021), entails the Old Norwegian text of *Konungs skuggsjá* in the Norwegian main manuscript, 243 b α fol. The text is annotated for syntax and information structure following the work colated in ANNIS, and in accordance with the annotation done in the two DFG-projects ‘Informationsstruktur in komplexen Sätzen—synchron und diachron’ (2011–2017) and ‘Informationsstruktur in älteren indogermanischen Sprachen’ (2009–2016). The annotation itself was done in the 1.6. EXMARaLDA Partitur Editor, while the individual searches were performed directly in the ANNIS application (see also Schmidt & Wörner 2014).¹

This section will give a detailed overview of the corpus material used in the four studies, as well as a description of the querying strategies. The theoretical framework laid out in Section 2 will be revisited with more concrete annotation practices in mind. At the end of this section, a discussion of potential sources of errors is presented, reflecting on the human element within this project.

1 EXMARaLDA for Windows, tool-set 2017: <https://exmaralda.org/de/offizielle-version/>; <http://exmaralda.org/de/partitur-editor-de/> (Accessed May 2025). The files are coded within an xml-format, which ensures that the data can be used rather flexibly with easy data transformation using tools such as Praat, ELAN, Transcriber etc., and a long-living archiving. The files can additionally be transferred into various presentational formats such as RTF, HTML, and PDF, and can be converted for larger databases such as PROIEL or ANNIS using programs such as PAULA.

As the development of a corpus and the annotation within it is a time-consuming process, KoNoKs so far consists of 40,199 words and counts 1,848 main clauses and 2,404 subordinated clauses and can thus—to some extent—only offer preliminary results. It does, however, provide enough data to allow for useful empirical generalizations. For the four studies in this research project, this dataset was sufficient to analyze different patterns and present results that already show interesting tendencies, underlining the importance of more detailed studies of Old Norwegian and comparative studies within the branch of Old Norse.

Additionally, the corpus was enhanced within the individual studies by including analyses of other Old Norwegian manuscript texts, either in their entirety, as in the study of punctuation in Study II, to verify the existence of a defined pattern found in KoNoKs, or to illustrate a pattern mentioned in other studies without any example present in KoNoKs (cf. Study III).

For the study presented in Study II, I additionally chose material from East Nordic, analyzing the broader function of punctuation in the structuring of the discourse on the manuscript page. The chosen manuscripts are dated to the 13th century, displaying a variety of Nordic dialects, and can be categorized into two genres: law texts and educational texts. The inclusion of law texts was not considered an issue here, as the examination was based on visual cues on the manuscript page. The hypothesis was that there exists an overall system for possible positions of punctuation which is not bound to a specific text type, in contrast to word order phenomena, which might show higher influence of a text genre.

The KoNoKs corpus served as the source for the main analysis and for quantitative examinations in all studies. The punctuation in Kgs has been annotated within KoNoKs alongside the syntactic and information-structural annotation, making data gathering relatively easy. I also included one additional West Nordic manuscript in Study II, the *Landslov* in Holm Perg 34 4to, which is accessible through PROIEL and Menota. Thus, through a simple XML search, it is again relatively easy to search for punctuation marks. However, both West Nordic manuscripts were examined by consulting available facsimile editions as well. The East Nordic manuscripts were only examined manually through online facsimile editions. No additional digital editions were available to me or strictly necessary for this study. The manuscripts included are *Äldre Västgötalagen*, Holm B59 (ca. 1225) for Old Swedish, and the text of *Gutalagen* in the manuscript B64 (ca. 1350) for Old Gutnish.

For Study III, I included an examination of the *Old Norwegian Homily Book* in AM 619 4to, *Óláfs saga ins helga* in Upps DG 8 II, *Landslög Magnúss Hákonarsonar* in Holm Perg 34 4to and in Upps DG 8 I, and *Strengleikar* in Upps DG 4–

FIGURE 8 Screenshot PROIEL search function

Location	Match
KS ✓	Goðan dag hærra minn.
KS ✓	...yðars funndar sæm byriar lyðnum syni oc litlilatam at finna ...
KS ✓	...byriar lyðnum syni oc litlilatam at finna astsamlegan foður oc ...
KS ✓	...oc litlilatam at finna astsamlegan foður oc gofgan.
KS ✓	...finna astsamlegan foður oc marga luti
KS ✓	...yðra at yarla fai yitrari mann i þæssu lannde en ...
KS ✓	...þyi at ec em hæfilegr arfi yðar til fiargezlo þa ...
KS ✓	...at þat er mer mikel huggan at ec hæfi til ...

FIGURE 9 Screenshot PROIEL results (immediate context)

7. These texts were analyzed using the PROIEL application. The annotation done within the PROIEL corpus follows, in contrast to the annotation done in KoNoKs, a dependency analysis, where annotating word order is not a factor. However, the web-application offers a search function, which makes it possible to search for specific syntactic entities such as adnominal adjectives, definite articles, etc. It shows the result firstly within a surrounding context, and secondly in the longer textual context through further manual examination, as presented in the following screenshots in Figures 8–10.

Within Studies I and IV, I compared the findings from KoNoKs with existing analyses for Old Icelandic and East Nordic respectively and did not include an analysis of additional Old Norwegian texts. In any case, the results formulated in the four individual studies have to be tested on the basis of broader corpus

Sentence in context

⁶Sunnr ¹Goðan dag hærra minn. ⁷Ec em sva kominn til yðars fundar sœm byriar lýðnum syni oc litillatom at finna astsamlegan foður oc gofgan. ⁸Oc yll ec þæs yðr biðia at þer hafer þolenmœðe at lýða þeim lutum er mec fyser at spyria, en litillæsti at syara mæð goðfysi spurnum lutum. ⁹Faðer ¹⁰Mæð þri at þu ert æinkason minn þa licar mer fœl at þu komer opt til mins fundar. þri at skylt yæri tal occat um marga luti ¹¹Oc yll ec giarna lýða þri er þu yllt spurt hafa oc yæita annsýor þeim lutum er ec em mæð skynsæmð spurðr. ¹²Sunnr

FIGURE 10 Screenshot PROIEL context (text passage)

studies in the future, including other Old Norwegian texts with annotations as equally detailed as those offered for the material in KoNoKs and other older languages included in ANNIS, following the same annotation guidelines.

Constitutive corpora should also include different text genres, since we know from other languages that texts can be quite different with respect to word order and information structure. The annotation done within KoNoKs is explained in detail in Section 4.3.

1 Some Theoretical Assumptions

In addition to the annotation of the corpus material, the discussion in this section will address the following issues, which form the basis of the annotation and analytical work:

- 1) the theoretical assumptions concerning movement and a possible base-structure, following the Universal Base Hypothesis (or following the Double Base Hypothesis) are mentioned;
- 2) as far as the trigger of movement is concerned, it is stated to what extent this is tied to a syntactic feature, and to what extent this has to do with pragmatic features, depending on the focus of the analysis;
- 3) different approaches to information structure can involve confusing and numerous notions, whether they are all used together or used interchangeably but slightly differently; clear definitions are therefore provided.

As mentioned above, variation within the VP has been discussed more widely for Old Icelandic (see among others Sigurðsson 1988; Rögnvaldsson 1994/1995, 1996; Indriðason 1987; Hróarsdóttir 1996). Especially Hróarsdóttir (2000, 2009) analyzes mixed OV/VO word orders as the result of prosodic parameters and information-structural triggers in Old Icelandic. Concerning a possible underlying base structure, she (2000:80) lists four possible base word orders for the Old(er) Icelandic VP based on approaches to OV/VO variation in various languages (see also Sundquist 2006: 110 ff., 127 f.):

- (a) head-final (OV-base order), with movement of arguments (DPs, PPs, adverbials, etc.) to the right;

- (b) head-initial (VO-base order), with movement of arguments (DPs, PPs, adverbials, etc.) to the left;
- (c) head-final (OV-base order), with leftward V-movement (cf. Larson's 1988 VP-shells);
- (d) both head-initial and head-final (variable OV- and VO-base generation).

These are based on two general competing assumptions—the Double Base Hypothesis and the Universal Base Hypothesis. Within the Double Base Hypothesis (see e.g., Kroch 1989a, 1989b; Rögnvaldsson 1994/1995, 1996; see also Pintzuk 1999, 2005 for Old English), language change is a gradual process where one of two synchronic competition grammars dominates over time. Rögnvaldsson (1994/1995, 1996) for instance, takes time into account and argues against the universal base for the Icelandic VP, since there would be too many movement operations involved over a timespan of more than six centuries.

The Universal Base Hypothesis on the other hand, indicates that language change and variable surface structures are solely the result of movement operations (cf. Hróarsdóttir 1996; Roberts 1997; Haugan 2000; see also Biberauer & Roberts 2005). Hróarsdóttir (2000, 2009) follows an anti-symmetry framework and assumes an underlying (S)VO structure for Old Icelandic. This also supports the general analyses by Faarlund (1985, 1990) for Old Norse and is consistent with the analysis of most linguists who have studied Old Norse. Sigurðsson (1988: 33, cited in Haugan 2000: 45f.) emphasises further that adopting a double base analysis for Icelandic would fail to provide a well-founded explanation for the significant word order differences within the VP between Old and Modern Icelandic and the language's development into a strict SVO language.

The choice between structures with or without movement operations then seems, in most cases, to be pragmatically determined. This too is in accordance with Faarlund (1985: 367) and the theory of information structure (see Haugan 2000:47; see also Chapter 5 in Haugan). For the studies of this research, I assume a uniform head-initial base for Old Norse (VO-base; see Faarlund 2004; Hróarsdóttir 1996, 2000, 2009; and Aamodt Nielsen 2013) based on Kayne's (1994) theory of phrase structure and reject the assumption that there are two basic word orders in Old Norse as supposed in Rögnvaldsson (1996). For Icelandic, Hróarsdóttir (2000: 90) states that it is a VO head-initial language throughout its written history. The varying surface orders, including OV structures, are then derived as the result of a series of cyclic leftward movement operations, e.g., short and long object movement, and (remnant) VP-intraposition.

Hróarsdóttir (2000, 2009) describes the OV derivation in Old Icelandic by subextraction out of VP and movement of the remnant vP to SpecFP in the C-domain, with the crucial difference between VO and OV languages being the

lack of VP-intraposition (see also Hinterhölzl & Petrova 2018 for Old High German).² This means movement of the finite verb to a functional projection in the left periphery of the clause as well as licensing movement of arguments to check the c-selection of the verb (see also Biberauer & Roberts 2005; Hinterhölzl & Petrova 2018). Additional operators are then triggered by information-structural constraints and prosodic factors.

As for the second point in the list given above, and following these theoretical assumptions, I take it as given that surface structures that are different from the unmarked structure are the result of pragmatic factors triggering movement. This is to, for example, highlight specific referents within the discourse, such as is the case for contrastively emphasized elements.

Lastly, within studies building on an information-structural framework, it is important to define the notions used in every study to avoid misunderstanding or internal theoretical disagreement on the notions used. I have already discussed this more thoroughly in Section 2. For the studies presented in this research monograph, I follow the assumption of a division into two levels: topic–comment, operating on a clause-level, and focus–background, which is recursive, context-dependent, and applies to every defined textual unit. The following example (6) illustrates this division:

(6) The two layers of Information Structure

S-Topic				Comment						
Flæstra	allra	luta	þeira	ætla	ec	at	ver	hafim	nu	getit
the.most	all	things	those	think	I	that	we	have	now	come
Background										

² Hróarsdóttir (2009: 269) accounts for three transformations: 1) derivation of OV obligatorily involves subextraction out of VP, 2) unfocused DPs move to Spec, AgrOP; focused DPs do not, and 3) obligatory preposing of remnant VP, containing at least the finite verb. OV word order disappears as a possible order in the history of Icelandic as soon as the possibility of subextraction out of VP was lost.

 Comment

er	hællzt	ero	naud̥synleger	at	geta	or	þæссо	lannde.
which	most	are	necessary	to	mention	of	this	land
Background	C-Focus			Background				

‘I believe we have now mentioned just about all the features of this country that are most necessary to discuss.’ (AM 243 b α fol. 9^r, col.a:5–7)

Within this example, it can be discussed whether the last part of the sentence should be considered part of the *focus*, since it is a structure that lies hierarchically under the focused element, dependent on *naud̥synleger*; or whether it is part of the *background*, as shown here. Furthermore, it is assumed that every sentence adds information to the previous one. These continuation-sentences are then divided into known information and new information (cf. Steube 2006).

In terms of dissimilarities between narrative texts and texts written in a dialogue form, it can be expected that there is made more use of contrast marking at the beginning of sentences, more particles that refer to the truth-value of the utterance, and possibly a specific use of mood in dialogues. Additionally, as mentioned in Lühr (2010, 2011), subclauses in complex sentences are expected to show an information structure of their own—a secondary structure.

Furthermore, I also assume a left periphery for the analysis of the extended NP, including landing sites for topic- and focus-candidates on a phrasal level as well (cf. studies III and IV). For the analysis presented in the four studies, I argue that there are universal principles in the way information-structural roles are encoded, even though the most prominent one, *pitch accent*, cannot be part of my analysis.

2 Information Status and Prosodic Weight

As information status and prosodic weight are the main analytical features in the studies of this research, I will describe their annotation in more detail in this section, before presenting the annotation manual that I wrote for this project. These are based on the discussions I had with the annotators of the two aforementioned DFG-projects and their manual (Schnaus & Schneider unpublished).

2.1 *Information Status*

The information status in KoNoKs was annotated as either *given*, *new*, *anchoring*, or *bridging*. As can be drawn from the discussion in Section 2.2, these categories are assigned through a detailed discourse analysis and the accumulation of various other annotated categories. Given includes previously mentioned entities, as shown in (7), as well as shared/cultural knowledge and situationally evoked entities, where a referent forms part of the situation of the discourse and is 'known' to speaker/hearer.

Anchoring cases are elaborating inferables (cf. Birner 2006)—in these, the referent X has not been mentioned before but is connected to a known referent Y (anchoring), and the referent X is also accessible without the anchor, as in (8). These entities are situationally evoked under the assumption that the hearer/reader is familiar with X.

(7) Given discourse referent

þviat þægar er orsökir hinum mæsta haleic hafsens þa er sva **mikell gnotr isa** ihafino at ec vita ægi dæmi til þvilicra annar staðar íallum heiminom **Ðeir isar** ero sumer sva flater sæm **þeir** hafa frosit a hafino siolfu annat hvart fiugurra alna þiucker eða fim. (10^r, col.a:15–23)

'because when one has passed over the most highest (deepest part) of the ocean then (there) is such a **large mass of ice** in the ocean, that I know no equal example another place in all the earth. **These ice (masses)** are sometimes as flat as (if) **they** have frozen on the ocean itself. Others (are) four ells thick or five'

The example refers to the ice masses in the seas of Greenland. These are first introduced by a presentational clause (*and there are ...*) and are then further elaborated on in the following discussion. In this discussion, the ice masses of Greenland are first referred back to with the same noun repeated, including a demonstrative (*Ðeir isar*), and then solely by the demonstrative (*þeir*).

(8) Elaborating inferable/situational and world knowledge referent

þar er mikel manna bygd í öy þeiri oc er þar æin kirkia í þvi at sva nockor miket folk er i öynni sæm væra man æin kirkiu socn. En þo at mænn anndezc þar þa ero þeir æigi í iorð grafner hælldr ero þeir reister umhværfis kirkiuna við **kirkiugarðenn** (6^v, col.a:15–21)

‘there is a large village on this island and there is a church because (there is) a large enough population on (the) island to be able to have a parish. But even though (when) people die there, then they are not buried in the earth but rather they are set up around the church at **the churchyard**’

Here the churchyard has not been mentioned before in the context, but it can be assumed that the hearer/reader of this text was familiar with the fact that churches are surrounded by churchyards. The entity is additionally introduced with a definite article (*-enn*) attached to it.

New, in contrast to given, includes referentially new objects (cf. Gundel, Hedberg & Zacharski 1993) and new discourse referents (cf. Karttunen 1976). Bridging refers to bridging inferable (cf. Birner 2006), describing cases in which the referent is anchored to an already mentioned entity, most often by the usage of possessive pronouns, but the referent is not accessible without the anchor, introducing a truly new entity into the discourse as in (10).

(9) New discourse referent

sva er oc sagt at þar se oc oll **sæla kyn** i því hafi oc fylgia þæir mioc ísum þæssum sva sæm þar se æcki þrot ærinnar ato. En þæssor ero þau kyn sæla er þar ero. eitt kyn af þeim er þat er **norðsælar** hæita [...] Ða er þat annat sælakyn er **ærcnsælar** heita ... (10^v, col.a:14–20)

‘so is it also said that there would be too all **kinds of seals** in those seas, and (that) they much/often follow this ice, so as (if) there would be no lack enough food there. And these are the kinds of seals that are there. One kind of them is called the **corse seal**. [...] Then (there) is another kind of seal which is called the **erken-seal** ...’

In this passages, different kinds of seals are introduced, including a description of their appearance by length, measured in ells. Even though the overarching topic to this passage is clear (= seals), every kind described refers to a new entity that cannot be expected to be known to the hearer/reader. These are therefore analyzed as new discourse referents.

(10) Bridging inferable

Nu skalt þu at kaupum þinum fara alt til dagurðar mals eða miðs dags æf sva bærr nauðsyn til. en siðan gacc þu til matar þins. **Borð þitt** skaltu væl bua mæð hvitum ducum oc reinni fœzlo oc goðum drycc. (2^r, col.b:14–20)

‘Now, you should proceed with your business till breakfast or till midday if necessity demands it; and then you should go to your meal. You should prepare **your table** well with a white cloth, and clean victuals, and good drinks.’

In this example, *Borð* is anchored to the son/a good merchant in the discussion of the meals of the day using the possessive pronoun *þitt*. The introduction of this entity, however, cannot itself be inferred from the anchored referent and represents a new entity within the given discourse.

For the later analyses presented in the individual studies, based on the insights from Birner (2006; building on Prince 1981), Gundel, Hedberg & Zacharski (1993), and following Struik & van Kemenade (2018), I collated the information status labels into a binary given–new distinction for information status. Given then includes anchoring cases, and new includes bridging cases. While given information is recoverable or inferable from the preceding discourse, here limited to referents previously mentioned within five preceding sentences to account for their active status, new information is unrecoverable or unpredictable from the preceding discourse.

As mentioned in Section 2.3, the information status of some elements can be difficult to determine. Especially adjectives have been mentioned in this context, and for the study of Old Norwegian, I therefore introduce the concept of *essentiality*. This concept offers an efficient way to assign emphasis to adjectives, focusing mainly on the development of the discourse and the information flow (cf. Section 5.3). An adjective is *non-essential* if it conveys information that is known from the previous discourse, is not necessary to identify the noun’s referent, and does not carry information needed for the interpretation of the following developing discourse (cf. Tiemann 2024). These adjectives can thus be omitted without a change in the reference interpretation and without causing difficulties for the encoding of information that may follow, as the adjective ‘arrogant’ in (11a) below (examples under (11) are taken from Tiemann, 2024). It is by these means unstressed, unfocused, and activated to some degree in the interlocutor’s knowledge stock. Within KoNoKs, these adjectives are part of an active scheme, annotated under *frames* (cf. Section 4.3.4). An example of the annotation given in KoNoKs is shown in Figure 11.

If an adjective, however, cannot be omitted without altering the interpretation of the reference or potentially causing encoding issues for subsequent phrases, it is analyzed as *essential*. Essential adjectives are emphasized, in focus, and may carry information that cannot be assumed to be active information within the common ground. These adjectives add important information nec-

	90	91	92	93	94	95	96	97
[text]	Ðat	er	uphaf	spæki	at	ræðaz	almatkan	guð
[trans]	this	be	beginning	wisdom	to	fear	almighty	god
[lem]	sá	vera	upphaf	speki	at	hræða	almáttigr	guð
[glos/morph]	NOM.N.SG	PRS.IND.ACT.3SG	NOM(N):SG	GEN(F):SG		INF	ACC.M.SG	ACC(M):SG
[pos]	prdem	vfin	noun	noun	inf.m	v.inf	adj	noun
[v-sem]		#				feeling		
[saliency]	pr3.dem		abstract	abstract				human/abstract
[givenness]			giv	giv			access-gen	access-gen
[definitness]	def		indef	indef			indef	indef
[context]	kata.ref							
[frame]							scheme:god	

FIGURE 11 Screenshot from the annotation (1^v, col.a:24–25), Scheme-annotation, non-essential adjective (given/access-gen/sit)

essary for the progression of the discourse and are more prominent than the noun (= *essential by context*), as the adjective ‘old’ in (11b) below. Again, an example of the annotation given in KoNoKs is given in Figure 12. In contrast to non-essential adjectives, essential ones are not part of an active scheme within the frame annotation.

As I differentiate emphasized adjectives from non-emphasized adjectives, I also describe adjectives as essential if they are emphasized by contrast (= *essential by contrast*). These adjectives are needed to identify the noun’s referent within the discourse or to identify the transferred core information clearly, as in (11c), which is less problematic to assign to adjectives than adjectives of the type found in (11b). Figure 13 shows the annotation of these cases in KoNoKs. As with adjectives analyzed as essential by context, contrasted adjectives are part of an active scheme in the frame annotation.

The core information given by the essential adjectives is needed to correctly encode the utterance it appears in, thus identifying the noun’s referent correctly, as well as to encode the following utterance within the development of the common ground, which makes it the focus-candidate of the utterance.

(11) a. Non-essential adjective

My cat may seem arrogant from time to time. But this is not surprising, as cats are known to have an **arrogant nature** in general. I still treat her like a queen.

b. Essential adjective by context (~presentational focus)

The **old man** had difficulties doing squats. I am impressed, though, that he started working out again so late in his life.

c. Essential adjective by contrast (reference; ~contrastive focus)

	111	112	113	114	115	116	117
[text]	Kona	þærs	hins	rika	mannz	ælskaðe	Ioseph
[trans]	woman	this	the	rich	man	love	Joseph
[lem]	kona	sá	hinn	rikr	maðr	elska	Ioseph
[glos/morph]	NOM(F):.SG	GEN.M.SG	GEN.M.SG	GEN.M.SG.pos	GEN(M):.SG	PRT.IND.ACT.3SG	ACC(M):.SG
[pos]	noun	prdem	prdem	adj	noun	v.fin	noun.prop
[v-sem]						feeling	
[saliency]	human	pr3.dem	pr3.dem		numan	pr3	human
[givenness]	new	access-sit	access-sit	anchoring	giv		giv
[definitness]	indef	def					indef
[gramm_def]				def	ndef		
[context]			demon/deict.ref				
[frame]				schemerich.chief			scheme:Joseph
[Comm]			def.art				

FIGURE 13 Screenshot from the annotation (35^v, col.a:14–15), Scheme-annotation, essential adjective (by contrast; anchoring, existing scheme)

They had a lot of bikes at the store in various colours (including grey, yellow, blue, and brown). I decided to buy the **yellow bike** since you can see it better in the dark.

Both in (11b) and (11c), the following sequence refers to the property of the adjective, not the property of the noun. In these cases, the adjective acts as an identifier—this overlaps partly with the common definition of restrictive adjectives (see Study III for a detailed discussion of (non-)essential adjectives).

2.2 Prosodic Weight

Prosodic weight is the other feature analyzed, following the observations in the literature on the role of prosodic factors in word order variation and its interaction with information-structural constraints (see e.g., Hawkins 1992). The role of prosody in syntactic ordering has already been recognized relatively early in the literature. One of the most cited generalizations is introduced by Behaghel's (1909) *Law of growing elements* (see e.g., De Bastiani 2020: 30, referring to Behaghel 1909: 138 f.).

This Law of Growing Elements has been studied extensively within different approaches, examining the tendency for short and structurally light elements or structures to be placed before longer or complex and structurally heavier ones. This is summarized under the end-weight principle (see e.g., Quirk et al. 1985: 1361f.; Biber et al. 1999: 898). Many scholars have confirmed this tendency through quantitative and qualitative studies on older Germanic languages (e.g., Hinterhölzl, Petrova & Solf 2005 and Petrova 2009 for Old High

	0	1	2	3	4	5	6	7	8	9
[text]	þa	kœpti	hann	æinn	rikr	hofðingi	<p>	En	siðan	hann
[trans]		buy	he	one	rich	chief		but	since	he
[lem]	þá	kaupa	hann	einn	rikr	hofðingi		en	siðan	hann
[glos/morph]	pos	PRT.IND.ACT.3SG	ACC	NOM.M.SG	NOM.M.SG.pos	NOM(M).SG			pos	NOM
[pos]	adv	v.fin	prpers	det.quan	adj	noun		conj	adv	prpers
[v-sem]										
[saliency]			pr3			human				pr3
[givenness]			access.sit		new	new				access.sit
[definitness]			def	indef	indef					def
[gramm_def]						indef				
[context]			ana.ref							ana.ref
[frame]			scheme:Joseph	schemerich.	chief					scheme:Joseph
[Comm]				indef.art	new scheme			pmain		

FIGURE 12 Screenshot from the annotation (35^v, col.a:1–3), Scheme-annotation, essential adjective (by context; new, new scheme)

German; Hróarsdóttir 2000, 2009 for Old Icelandic; Struik & van Kemenade 2018 for Old English; see also Hinterhölzl 2014, 2017). Hróarsdóttir (2000: 109), for instance, mentions a cross-linguistical tendency for pronouns to occupy a higher position rather than full NPs, stating additionally that the heaviness factor is stronger than the information factor in Old Icelandic (2009: 265).

Even though the principle of end-weight is studied in numerous works, the definition of ‘weight’ has been subject to vivid discussions, approaching the issue from various perspectives, such as syntactic complexity in the sense of syntactic nodes or words, phonological complexity in the sense of stress, phonological length by syllable number, or in light of processing effects. As different studies thus take up different measurements of weight/heaviness of a constituent, it is necessary to define prosodic weight, to be able to track its influence. I decided to perform two separate analyses in the studies presented here (where applicable) that are meant to complement each other to define a common tendency in the data. Hróarsdóttir (2009) too differentiates several groups concerning weight and analyzes the number of words within a DP, as well as a separate analysis of full DPs versus pronouns. Heggelund (2009) uses a syllable count approach, following the analysis presented by Biber et al. (1999), Struik & van Kemenade (2018) measure the number of letters, and De Bastiani (2019/2020) defines a metric system of heaviness, following the work of Hinterhölzl (2013, 2014, 2017). As this is such a diverse factor, Heggelund (2009: 27) aptly note that wight is a relative concept rather than an absolute one.

As both length and complexity are related to effects of prosodic heaviness/weight, I measured prosodic weight for referential objects continuously by the number of syllables, measured from nucleus to nucleus: 1–3 syllables

for light objects and 4–6 syllables for heavy objects. Additionally, I measured prosodic heaviness/weight by the type of the object: NPs, (full) DPs, and PPs, as presented in a hierarchy for prosodic weight in Study I (cf. Section 5.1), here given in (12).

- (12) Hierarchy for prosodic weight by object type
 [*light elements* light DP (pronoun < demonstrative) < bare NP < full DP < PP *heavy elements*].

Statements about the influence of prosodic weight in the ordering of elements within the clause were made based on the common tendencies seen in the two independent analyses. In studies III and IV, prosodic weight was analyzed by syllable count for the elements in question—adjectives and possessives respectively—as well as for the head noun in Study IV.

3 Corpus Annotation

The final analysis strongly depends on a multimodal annotation on different layers. Such an annotation (and analysis) is cumulative and partly redundant, but it shows a certain transparency of the analysis because of this. This transparency is of utter importance, as information-structural functions must be extracted through context analyses, and as the assessments of the information status can be difficult for some parts of the text. Redundancy and transparency make it also easier to check the annotations in a later stage and, if necessary, revise the annotation. A cumulative annotation furthermore ensures that elements that are ambiguous on a morphological/syntactical level can be extracted based on various analytic criteria.

Since information structure is a phenomenon that operates on sentence and contextual levels, annotating a coherent text rather than short passages of several texts is the natural thing to do. This includes discourse analyses that were added at a later stage of the analysis, and which cannot be exerted only from fragmentary units. As mentioned above, this project is not the first project working on the syntax of Old Norwegian, as Old Norwegian texts are included in PROIEL as a result of the Menotec project and were also included in the project design of ISWOC. However, the core analysis of my study does not take this corpus into consideration for the main analyses, as the annotation follows a dependency analysis which—in contrast to a phrase structural analysis—hides the linear surface patterns that I am interested in. Because of this, KoNoKs has not been tied to PROIEL, but will rather be implemented

within the project results gathered in larger international projects collected in the ANNIS database (see Section 1).

Yet, as mentioned above, the annotated texts from PROIEL were still considered in the individual examinations, mainly for the purpose of finding further patterns mentioned in other works (e.g., Bech 2017) and to verify the patterns found in KoNoKs by simple part-of-speech search queries and manual context analyses. Overall, however, the annotations of PROIEL are regarded as not efficient enough for the kind of research on syntactic variation intended within this project. But the data provided is helpful for the understanding of phrases and hierarchical sentence structures. During the development of KoNoKs, the annotations done within PROIEL for Kgs were constantly consulted for reviewing purposes for the syntactic analysis, i.e., sentence readings and common understanding of dependent elements—not so much, however, for any information-structural examination.

Additionally, another purpose of this project is to make Old Norwegian data directly comparable to data of other older languages. To be able to compare the data drawn from this study, the guidelines used for KoNoKs follow the work done for the languages annotated in the mentioned DFG-projects, with the results compiled in the ANNIS-corpus project (see Krause & Zeldes 2016).³ However, while writing the guidelines, I adjusted the annotation slightly to the needs of this project, as not all features apply to every language, and as a result of the discussions on what was useful/not useful for the annotators of these projects in their annotation. These discussions made it possible to go beyond a testing phase of information-structural annotations for an older language, as the concept of information structure has its roots in studies of modern languages (cf. sections 1 and 2), with a special focus on intonation which is a missing link in every study on a historical corpus language.

These projects showed that information structure in older languages can only be exploited through rich and diverse/manifold annotated features and a combination of grammatical, prosodic, semantic, and stylistic features with word/sentence order and discourse relations. The text of Kgs, in the manuscript 243 b α fol., was thus tagged multimodally (cf. Götze et al. 2007) according to information-structurally relevant criteria and grammatical functions. As there are no unambiguous syntactical markers for information-structural entities, and additionally sentence prosody is only indirectly accessed in a corpus

3 As mentioned earlier, for the annotation within this research, I used the EXMARaLDA Partitur Editor. For the performance of different searches within the corpus, I used the ANNIS query system to extract the results for the individual studies.

language, hypothesis about the information status of entities within the focus–background and topic–comment division are supported by the analysis of the textual surroundings and semantic analyses. With competing candidates for topic or focus within one clause, the number of relevant features decides which candidate will be assigned this feature. More general grammatical annotations such as part of speech make the corpus additionally useful for other types of analyses. The corpus material has been annotated for the following levels:

- A) **Source** [text, lem, glos/morph]: The primary text as given in the manuscript is translated word by word, including a grammatical assignment of part-of-speech categories.

	0	1	2	3	4	5	6	7	8
[text]	Faðer	Mæð	þvi	at	þu	ert	æinka	son	minn
[trans]	father	with	this	that	you	be	only.son	mine	
[lem]	faðir	með	sá	at	þú	vera	einkasonr	minn	
[glos/morph]	NOM(M):SG		DAT.N.SG		2.NOM.SG	PRS.IND.ACT.2SG	NOM(M):SG	NOM(M):SG	

FIGURE 14 Screenshot annotation (1^r, col.b:8), Source

- B) **Morphosyntax** [pos, v-sem, grfunct, clause-st]: The grammatical function is given on this level (e.g., subject, accusative object, etc.) to determine a grammatical assignment of the information-structural entities. Also, *pro* (subject and object drop) is part of the annotation, assigning a separate field for these empty elements. Additionally, the semantics of adverbials and adjuncts are described here. All of these functions and forms are not only relevant to information structure, but also for the determination of unmarked structures in *all-focus-sentences*. The type of the sentence, whether declarative, exclamative, imperative, etc., is also marked on this level.

	30	31	32	33	34	35	36	37	38	39
[text]	oc	vil	ec	giarna	lyða	þvi	er	þu	vilt	spurt
[trans]	and	want	I	gladly	hear	this	as	you	want	ask
[pos]	conj	vfin	ppers	adv	vinf	prdem.correlat	subjunction	ppers	vfin	vfin/vadj
[v-sem]		modal			perception				modal	utterance
[MEclause-st]	main:decl									
[MEgrfunct]		prcompl-i	subj	adv:mod	prcompl-i	dat-o		app/dat		
[SE1clause-st]								sub:re/restrict		
[SE1grfunct]								subj	prcompl-k	prcompl-k

FIGURE 15 Screenshot annotation (1^r, col.b:21–22), Morphosyntax

- C) **Prosody** [syl_no]: The number of syllables of constituents is annotated, as, according to the *heaviness principle* ('Law of growing elements'), light elements precede heavier elements.

	0	1	2	3	4	5	6	7	8
[text]	Faðer	Mæð þvi	at	þu	ert	æinka son	minn		
[trans]	father	with this	that	you	be	only.son	mine		
[MEclause-st]		main:decl							
[MEgrfunct]		adv:caus							
[MEsyl_no]		10							
[SE1clause-st]		sub:caus							
[SE1grfunct]		adv:caus		subj	v.copul		pred/subj		
[SE1syl_no]		3		1	1	4	1		

FIGURE 16 Screenshot annotation (1^r, col.b:18), Prosody

- D) **Semantics** [saliency/animacy]: On this level, especially semantic saliency is annotated. Other types of saliency are visible in other annotation tags, e.g. [givenness], or [definiteness]. The tagging incorporates Silverstein's (1976) *Animacy Hierarchy*.

	1	2	3	4	5	6	7	8	9	10	11
[text]	Mæð þvi	at	þu	ert	æinka son	minn	þa	licar	mer		
[trans]	with this	that	you	be	only.son	mine	then	like	I		
[saliency]			pr2			human	pr1.poss				pr1

FIGURE 17 Screenshot annotation (1^r, col.b:18–19), Semantics

- E) **Context** [context]: References about anaphoric and cataphoric pronouns, adverbials, etc. are made on this level. The reference, in combination with other annotation levels, is important for identifying the topic-candidate, as the choice of pronouns or articles influences the anaphor resolution (cf. Givenness Hierarchy).

It is also important to bear in mind that cataphoric pronouns can only co-refer with the topic. Introductory sentences normally do not contain any background information; they are all-focus-sentences and contain indefinite DPs and indefinite pronouns, with the exception of unique expressions.

	1	2	3	4	5	6	7	8	9
[text]	Mæð þvi	at	þu	ert	æinka son	minn	þa		
[trans]	with this	that	you	be	only.son	mine	then		
[context]	caus			personal.deict				sit.deict	junctive

FIGURE 18 Screenshot annotation (1^r, col.b:18–19), Context

- F) **Discourse** [discourse]: The definition of discourse relations is useful for the distinction of elements that are relevant in an information-structural

context. Additionally, the speech act is annotated here, such as explicit performative speech acts, directives, etc.

The more content consecutive event-descriptions have in common, the clearer the narrative structure.

	0	1	2	3	4	5	6	7	8	9	10
[text]	Faðer	Mæð þvi	at	þu	ert	æinka son	minn	þa	licar		
[trans]	father	with this	that	you	be	only.son	mine	then	like		
[discourse]	turn.speaker.father	precondition								result	

FIGURE 19 Screenshot annotation (1^r, col.b:18–19), Discourse

- G) **Style** [style]: Annotation of sentence figures, e.g., prolepsis, ellipsis, inversion, etc., is given on this level.

	7	8	9	10	11	12	13	14	15	
[text]	skilning	<p>	millim	illra	luta	oc	godra	#	en	
[trans]	difference		between	bad	thing	and	good		but	
[lem]	skilning		millum	illr	lutr	ok	góðr	#	en	
[style]				ellipsis						

FIGURE 20 Screenshot annotation (40^v, col.a:28–29), Style

- H) **Pragmatics** [givenness, definiteness, shift, Topic, position-T, Focus, position-F, frame]: I distinguish between given, anchoring, new, and bridging (see Section 4.2.1). This type of annotation can only be determined after a thorough text analysis. *Shift* indicates if there is immediate coherency between topic-candidates.

Following Frascarelli & Hinterhölzl (2007), the following distinctions concerning the topic are made: a) *Continuing*, which is connected to the preceding information and continues the text in correlation to it, b) *Shifting*, which changes the perspective within the text to a new referent, c) *Familiar*, which does not evoke *smooth* or *rough shift* but establishes the relations *continue* or *retain*, and d) *Contrastive*, where both the reference and the assertion about it are highlighted.

Within the comment-domain, two different types of focus are annotated: *new information focus* (wide and narrow focus) and *contrastive focus*. Both the position of the topic and of the focus are annotated here as well, i.e., initial, middle, final, preverbal, etc.

When the most relevant information is examined, the rest is interpreted as the background. The background does not get its own annotation. Finally, the theory of frames concerns the processing of information or exact entities that stand in a tight relation to each other.

	34	35	36	37	38	39	40	41	42
[text]	oc	parf	maðr	iafnan	leiða	at	huga	at	hann
[givenness]			giv			new			giv
[definitness]			indef			indef			def
[frame]			schememerchant						schememerchant
[shift]			continue						
[Topic]			Con-T						
[position-T]			initial						
[Comment]				cm					
[NFocus]									
[CFocus]				cf					
[position-F]									

FIGURE 21 Screenshot annotation (2^r, col.a:21–22), Pragmatics

I will discuss the levels mentioned here in more detail in the next sections. The annotation guidelines are also presented in a comprehensive way within the appendix of this book. But before addressing the technical details of the annotation, some remarks concerning the following descriptions must be kept in mind:

1. The annotation labels are, to a certain extent, motivated by Old Norse data. Even though most of them will be more broadly applicable to Germanic languages, some will be irrelevant outside of North Germanic. Conversely, it may be the case that the inventory lacks labels that are relevant to other languages.
2. The files are processed in EXMARaLDA-xml, which allows for adjustments or changes using the free Partitur Editor of this program. These files are imported to the ANNIS database (public access is planned in the future), allowing for a simple view or SQL-searches within the corpus. When using the ANNIS-database to search for specific features and structures within KoNoKs, this corpus must be selected in the left panel.
3. In ANNIS, it is possible to examine the metadata given for the corpus, either in selected files or in the corpus material as a whole.
4. The search within ANNIS requires knowledge about the tags assigned within the corpus. An overview is given within the guidelines presented here.

3.1 *Morphological Annotation*

The text of the manuscript has been morphologically encoded according to the standards set out in the Guidelines for linguistic annotation within the Menotec project.⁴ The text was lemmatized and morphologically analyzed

4 <https://doi.org/10.15845/bells.v4i2> (Accessed May 2025); https://www.menota.org/menotec_en.xml (Accessed May 2025).

under the *Gammelnorsk Ordboksverk* and then transformed according to the rules specified in Chapter 8 of the Menota Handbook, v. 2.0, to compile the xml-file that lies within the archive behind the webpage representation of Menota.

Unfortunately, only approximately 60% of the lemmatization made it into the digital file. The rest of the morphological annotation (around 19,172 words) was supplied by me in preparation for the later syntactic and information-structural annotation and analysis during the first phase of the research project. Each sentence consists of an annotation on three major units in this corpus: 1) glossing, 2) tiers that are relevant to the information-structural analysis, 3) elements of sentence structure.

A morphological analysis by word classes and grammatical forms is a requirement for the following syntactical annotation. The glossing described here contains the word form as given in the text on a diplomatic level, with the expansion of abbreviations inclusion of punctuation marks, while ignoring special characters in the tier [text]. Its corresponding lemma is in [lem], and the English translation in [trans].⁵ The glossing itself is annotated in [glos/morph].

Following the aforementioned projects in Germany, I use a variant based on the ‘Leipzig Glossing Rules’ for the declarations in the editor, which are more reader-friendly than the code given in the Menota-xml file.⁶ Finally, I annotated the part-of-speech in [pos].

In cases of subject and/or object drop (= null-subject/object), *pro*-forms are inserted to the right of the finite verb, this is usually the first finite verb even if they are copied within the same sentence. The same applies if there is more than one null-subject or null-object in a sentence, and if these refer to different entities. Thus, *pro* will be placed in the VP of the first finite verb that is influenced by the referential shift. Every null-element is marked with ‘#’ where it is important to do so, such as on the tiers [text], or for verbal-semantics.

	48	49	50	51	52	53	54	55	56	57	58
[text]	Bjorn	er	þar	oc	a	þvi	lannde	oc	er	#	hvitr
[trans]	bear	be	there	also	on	this	country	and	be	#	white
[lem]	bjorn	vera	þar	ok	á	sá	land	ok	vera		hvitr
[glos/morph]	NOM(N):.SG	PRS.IND.ACT.3SG	pos	pos		DAT.N.SG	DAT(N):.SG		PRS.IND.ACT.3SG		NOM.M.SG.pos
[pos]	noun	v.fin	adv	adv	prep	prdem	noun	conj	v.fin	pro	adj

FIGURE 22 Screenshot annotation (11^v, col.b:7–8), Pro-drop

5 Within the corpus, all words received an English translation to make the annotation transparent for scholars not familiar with Old Norwegian. In addition, I have inserted a tier providing a coherent translation of every sentence.

6 <https://www.eva.mpg.de/lingua/resources/glossing-rules.php> (Accessed May 2025).

The glossing is done for all lexemes. Word-classes that do not have any inflection, such as prepositions, conjunctions, subjunctions, infinitive marker, and interjections, will not get any annotation in [glos/morph]. So-called *semantic roles* are not included here.

Pronouns are divided into three groups (see Haugen & Øverland 2014 on pronouns in Old Norwegian):

- 1) Personal pronouns (word class is closed and includes: *ek, vit, vér, þú, þit, þér, hann* and *hon* with forms in SG, PL and DU);
- 2) Interrogative pronouns (word class is closed and includes: *hvat, hveim, hvílíkr*);
- 3) Indefinite pronouns (word class is closed and includes: *báðir, hvatki, hvatvetna/hvetvetna* and *manni*).

Additionally, there is a reflexive pronoun *sik* in the 3rd person (no nominative form, inflected in case) that is accounted for as a personal pronoun here. Determinatives are *þat, þeir, þér, þau* (> *sá*). They can also function as personal pronouns in SG/PL. Determinatives are divided into the following groups (see Haugen & Øverland 2014 on determiners in Old Norwegian):

- 1) Demonstratives (word class is closed and includes: *hinn/inn/enn, sá* and *sjá/þessi*);
- 2) Quantores (word class is closed and includes: *allr, annarr, annarrtveggi, annarrtveggja, báðir, einn, einnhverr, engi, fyrstr/fyrsti, hvárgi, hvárr, hvárrtveggi, hvárrtveggja, hvergi, hverr, nokkurr, samr* and *sumr*. In addition, there are cardinal numbers as well: *einn, tveir, þrír, fjórir, fimm*, etc.);
- 3) Possessives (word class is closed and includes: *mínn, þínn, sinn, okkarr, ykkarr, yðvarr* and *várr*).

For the verbs, only synthetic forms are annotated in [glos/morph]—periphrastic forms are annotated in [grfunct]/[Comm]. The historic present (PRS=PRT) is also annotated separately with a mention in [Comm]. Old Norwegian has two tense forms: present and preterit. The present is an unmarked tense that can be defined as not-preterit (also used for the past: PRS=PRT), atemporal relations (e.g., *maðr er manns gaman*), and the future tense. Other tense forms can be expressed by periphrastic forms, such as FUT: *munu+Inf*, and PERIPHRAST.PF: *hafu+perf.part*. These are annotated in [grfunct]/[Comm].

In Old Norwegian, the perfect does not have analytical forms. However, there is a perfective content in perf.part. (e.g., *sleginn, kastaðr* with the verbs *vera* and *hafu*)—these indicate terminated actions. The participle form or *supinum* (perf.part. and pres.part.) can be attributive, predicative, or adverbial. Pres.part. is no longer considered a verbal form but is categorized among adjectives, also within the annotation, albeit with some doubts.

	6	7	8	9	10	11	12
[text]	Ec	em	sva	kominn	til	yðars	funndar
[trans]	I	be	so	come	to	you	find
[lem]	ek	vera	svá	koma	til	ér	funnr
[glos/morph]	1.NOM.SG	PRS.IND.ACT.1SG		PRT=PF.M.SG		2.GEN.M.PL	GEN(M):SG
[pos]	prpers	vfin	adv	vfin/vadj	prep	prposs	noun
[v-sem]		#		#			
[Comm]		v.copul		v.part			
[MEclause-st]	main:decl						
[MEgrfunct]	subj	prcompl-i	adv.mod	prcompl-i	prep-o/adv		

FIGURE 23 Screenshot annotation (1^r, col.a:20–22), Particle form, Pres.part

Three modes are annotated within the Old Norwegian corpus: indicative, optative, and imperative. The term ‘optative’ is used instead of ‘conjunctive’ as the Germanic mode expressing possibility/wish is etymologically identical to the optative, and not the conjunctive (see Ringe 2017).

	112	113	114	115	116	117	118	119	120	121
[text]	þa	þat	at	fim	se	ægimir	i	himnum	tvær	þeir
[trans]		this	that	five	be	way	in	heaven	two	this
[lem]	þá	sá	at	fim	vera	vegr	i	himinn	tveir	sá
[glos/morph]	pos	NOM.N.SG		NOM.M.PL	PRS.OPT.ACT.3PL	NOM(M):PL		DAT(M):PL	NOM.M.PL	NOM.M.PL
[pos]	adv	prdem	subjunction	det.quan	v.fin	noun	prep	noun	det.quan	prdem
[v-sem]					#					

FIGURE 24 Screenshot annotation (12^v, col.b:17–18), Mode

Old Norwegian further has three forms for diathesis (= voice of a verb) that describe the relationship between action and participants identified by its arguments and connected to semantic roles. Those are: active, mediopassive, and passive, with distinct inflectional forms for the active and mediopassive. The passive forms are often expressed periphrastically with *vera* or *verða*+perf.part. In some cases, reflexive forms may also have passive content, which are therefore not part of the annotation mentioned above.

	10	11	12	13	14	15	16	17
[text]	En	af	stafröfe	kynnaz	allar	bæcr	oc	er
[trans]	but	of	alphabet	know	all	book	and	be
[lem]	en	af	stafróf	kynna	allr	bók	ok	vera
[glos/morph]			DAT(N):SG	PRS.MED.IND.3PL	NOM.F.PL.pos	NOM(F):PL		PRS.ACT.IND.3SG
[pos]	conj	prep	noun	vfin	det.quan	noun	conj	vfin
[v-sem]				knowledge				#

FIGURE 25 Screenshot annotation (1^v, col.b:18–19), Diathesis

In the Menotec project the mediopassive forms are annotated as reflexives. I have, however, decided to stick to the more traditional mediopassive annotation within this corpus annotation.

There is a frequent group of words that can be members of more than one word class, such as *at*, which can be a preposition, subjunction, infinitive marker, adverbial, or noun. These words need special attention when annotating the text. Concrete relations of elements are annotated in the syntactic analysis in [grfunc].

For a complete list of tags used for the annotations done in [glos/morph], as well as the following levels, the annotation manual is included in the appendix of this book.

3.2 Saliency

Semantic saliency or animacy, which may be important for the position of topic or focus, has been annotated in [saliency]. Pronominal elements referring to salient elements are considered here as well. Other types of saliency are annotated in, e.g., [givenness] or [definiteness].

	0	1	2	3	4	5	6	7
[text]	Sunr	Goðan	dag	hærra	minn	<p>	Ec	em
[trans]	sunr	góðr	dagr	herra	minn		ek	vera
[lem]	son	good	day	sire	my		I	be
[glos/morph]	NOM(M):SG	ACC.M.SG	ACC(M):SG	NOM(M):SG	NOM.M.SG		1.NOM.SG	PRS.IND.ACT.1SG
[pos]	noun	adj	noun	noun	prposs		prpers	vfin
[v-sem]								#
[saliency]	human		proper/abstract	human	pr1.poss		pr1	
[givenness]	new		access-gen	access-sit	access-sit		access-sit	
[definitness]	indef	indef		def			def	

FIGURE 26 Screenshot annotation (1^r, col.a:17–20), Saliency

(13) Animacy Hierarchy

Local person (= 1. & 2.P.) > Pronoun 3rd > Proper Noun 3rd > Human 3rd
> Animate 3rd > Inanimate 3rd > Mass

In accordance with the DFG-projects, I use the *Animacy Hierarchy*—a variant of Silverstein (1976)—where the original hierarchy has been expanded to include the category ‘proper noun’, as shown in (13).

3.3 Givenness, Definiteness, and Context

The tiers [givenness], [definiteness], and [context] cover the features of otherwise accessible information (*anchoring, bridging, part-whole, set-relation*) and

	26	27	28	29	30	31	32
[text]	Öc	vil	ec	þæs	yör	biðja	at
[trans]	and	want	I	this	you	request	that
[lem]	ok	vilia	ek	sá	ér	biðja	at
[glos-morph]		PRS.IND.ACT.1SG	1.NOM.SG	GEN.N.SG	2.ACC.PL	INF	
[pos]	conj	vfin	prpers	prdem	prpers	vinf	subjunction
[v-sem]		modal					
[saliency]			pr1	pr3.dem	pr2		
[givenness]			access-sit	access-sit	giv		
[definitness]			def	def	def		
[context]	junctive		personal.deict	kata.ref	personal.deict		

FIGURE 27 Screenshot annotation (1f, col.a:26–27), Reference kind

its status (*new*, *given-active* or *given-inactive*). Following Götze et al. (2007), the information status can be divided into *given*, *accessible* (= bridging, anchoring), and *new* information. These labels are annotated in [givenness].

An information's givenness is a crucial feature for the ability of a discourse element to be defined as the topic. If further pronouns refer to an element, decisions about its topic status can be made relatively clearly, as personal pronouns—and anaphoric pronouns in general—often refer to topics, while demonstrative pronouns more often refer to non-topics. The more activated an element is in the addressee's mind, the lower the anaphoric degree will be.

The annotation for givenness may also be responsible for an element's status of *definiteness*. As both grammatical definiteness inherent to a specific element and its correlation with surrounding elements are relevant to this research, definiteness is annotated in two separate tags under [gramm_def] and [definiteness]. Just as it is the case in the tier [saliency], givenness and definiteness are also annotated in cases of single pronouns referring to an element in the context.

Conclusions about an element's topic status can be drawn from its saliency, givenness and definiteness features. Further information about a pronoun's status of givenness and saliency can be drawn from the following cell, [context]. In [context], the kind of reference (e.g., anaphoric, cataphoric, deictic, situational etc.) that pronouns, particles, adverbials, and nomina propria show is annotated. The reference, together with the above-mentioned categories, is important for finding the position of the topic. The choice of the pronoun or determinative can influence the anaphor resolution (see Givenness Hierarchy).

	62	63	64	65	66	67	68	69	70	71
[text]	holme	æinn	litell	spá	sæm	flota	holme	se	hann	flytr
[trans]	islet	one	little	so	as	isle		be	he	float
[lem]	holmi	einn	litill	svá	sem	flotaholmi	vera		hann	fljóta
[glos/morph]	NOM(M).SG	NOM.M.SG	NOM.M.SG.pos	pos		NOM(M).SG	PRT.SUBJ.ACT.3SG	3.NOM.SG	PRS.IND.ACT.3SG	3SG
[pos]	noun	det.quant	adj	adv	subjunction	noun	v.fin		ppers	v.fin
[v-sem]							#			
[saliency]	abstract					abstract	pr3		pr3	pr3
[givenness]	new					new			access-sit	
[definitness]	indef					indef			def	
[context]									ana.ref	
[frame]	scheme.islet								scheme.islet	

FIGURE 28 Screenshot annotation (6^t, col.b:19–20), Frames

3.4 Frame

The theory of *schemes* and *frames* deals with the processing of entities that are in a firm relation to each other. Elements can open a scheme by simply being mentioned. As soon as the scheme is active, the other elements contained within it are treated like slots that want to be filled. If a slot is not saturated, the reader will fill it by inference, and the typical information will be assumed. For example, the mention of an ‘apple’ can open the *scheme* ‘tree’. Other elements of that scheme include the typical parts of the tree, such as ‘leaf’, ‘stem’, ‘branch’, etc., as well as its features like ‘to grow’, the ‘need of sun and water’, etc. This scheme can be handled with different levels of complexity in different contexts.

Even though this information is not mentioned in the context before, its status can be neither new nor given but is a relation of its own: *bridging*. Understanding the effect this relation has on an entity’s possibility to be an utterance’s topic is an important question (are there *frame-setting-topics*?, see e.g., Matic 2003; Reese et al. 2007). Frames can support new topic-candidates.

3.5 Topic

In the annotation of immediate coherence between two sentences in [topic], I follow Frascarelli & Hinterhölzl (2007) and their above-mentioned distinction into four types: 1) *continuing*, 2) *shifting*, 3) *familiar*, and 4) *contrastive*. Sentential topic and focus positions, i.e., *initial*, *middle*, *final*, *preverbal*, etc., are annotated in [position-T]/[position-F].

	96	97	98	99	100
[text]	En	hinn	hviti	biominn	er
[trans]	but	the	white	bear	which
[lem]	en	hinn	hvitr	bjom	er
[glos/morph]		NOM.M.SG	NOM.M.SG.pos	NOM(M):.SG	
[pos]	conj	art	adj	noun	subjunction
[v-sem]					
[saliency]				animate/concrete	
[givenness]		giv			
[definitness]		def			
[context]	contrast				
[frame]		scheme:white.bear			
[I-particle]	contrastive				
[shift]		shift			
[Topic]		C-T			
[position-T]		initial			

FIGURE 29 Screenshot annotation (11^v, col.b13), Topic

3.6 Comment/Focus

The comment-annotation is the domain that contains the focus. Focused information is not considered to be activated in the receiver's mind at the moment when the utterance is made (*new information focus*). For that reason, there is no restriction on the word material that a *focus* can contain. Even single morphemes can be focused.

First, the **comment domain**, which contains everything that can be focused (the widest possible focus), is annotated as *cm* in [comment]. The comment can be found alone, meaning without a topic (= all-focused sentence), while there must be a comment if a topic has been identified. The type of the focus, i.e., wide versus narrow focus, determines its further annotation. *New information focus* is annotated in [NFocus], while *contrastive focus*, as well as *verum focus* and *emphatic focus*, are annotated in [CFocus].

Contrastive focus evokes alternatives to the utterance as it limits the part for which the utterance holds, enables choice, corrects an alternative, or simply establishes some connection to the context, e.g., via comparative or superlative. Verum focus reinforces an utterance's truth, e.g., if it is denied in the preceding context. This often goes along with stress of the verb or auxiliary (e.g., "He **DOES** snore"). Emphatic focus can be caused by rhetorical devices such as *hyperbaton* and *accumulation*.

	81	82	83	84	85	86	87	88	89	90
[text]	þeir	γæiða	at	ser	ross	oc	naut	oc	annat	bu
[trans]	this	hunt	for	oneself	horse	and	cattle	and	other	beast
[lem]	þá	veiða	at	sik	ross	ok	naut	ok	annarr	bú
[glos/morph]	NOM.M.PL	PRS.IND.ACT.3PL		DAT	ACC(N).SG		ACC(N).SG		ACC.N.SG	ACC(N).SG
[pos]	prdem	v.fin	prep	prpers	noun.prop	conj	noun	conj	det.quan	noun
[v-sem]		#								
[saliency]	pr3.dem	pr3			animate/collective		animate/collective			animate/collective
[givenness]	access-sit				new		new			new
[definitness]	def				indef		indef		specindef	
[gramm_def]										indef
[context]	ana.ref					connect		connect		
[frame]	scheme:black bear									
[Comment]		cm								
[NFocus]					Nf					
[CFocus]										
[position-F]					final					

FIGURE 30 Screenshot annotation (11^v, col.b:11–12), Focus domain

3.7 Discourse and Style

The definition of discourse relations may be useful for the delimitation of elements relevant in the context of information structure. For example, the relation *background* can never be focused. These relations, as well as speech acts, are annotated, e.g., as explicit performance, directive, etc., in the tier [discourse]. The more content the following event description has in common with the previous one, the more clearly the narrative structure is shown.

Additionally, the stylistic devices of classical rhetoric may have great influence on the sentence structure, as seen in examples of prolepsis, hyperbaton, ellipsis, parallelism, chiasmus, etc., as well as other peculiarities as constructions of light verbs. These are therefore annotated in [style], following literary analyses that have been already carried out for the text of Kgs.

	30	31	32	33	34	35	36	37
[text]	Iafnan	skaltu	guð	atmatkan	oc	hina	hælgu	Mariu
[trans]	always	should you	God	almighty	and	the	holy	Mary
[lem]	jafnan	skultu	guð	almáttigr	ok	hinn	heilagr	María
[glos-morph]	pos	PRS.ACT.IND.2SG	ACC(M).SG	ACC.M.SG.pos		ACC(F).SG	ACC(F).SG.pos	ACC(F).UNSPEC
[style]				assonance (-mat-, Mar-), two times two syllables				

FIGURE 31 Screenshot annotation (3^v, col.b:13–16), Style

3.8 MC-Layer and Sublayers

The annotation done on these levels does not cover the entire sentence level but examines the layers that are distinguished into the *matrix clause* and perhaps one or more *sublayers*. The criteria for the different layers' tiers are the same for both matrix clause and subclauses (ME- (matrix layer) and SE1- (sub-

	175	176	177	178	179	180	181	182	183	184	185	186	
[text]	En	þau	lonnd	sæm	kold	ero	sþa	sæm	lonnd	þar	þa	liggja	
[trans]	but	this	country	as	cold	be	so	as	country	our		lie	
[lem]	en	sá	land	sem	kaldr	vera	svá	sem	land	várr	þá	liggja	
[MEclause-st]	main.decl												
[MFgrfunct]	subj			relative_clause							prsimpl		
[SE1clause-st]				sub.free_relat									
[SE1grfunct]				pred		v.copul		adv.comp					
[SE2clause-st]				sub.comparatio									
[SE2grfunct]						comp		subj		v.copul			

FIGURE 32 Screenshot annotation (12^v, col.b:25–26), Sentence layers

layer), SE2- etc.). Nevertheless, they have to undergo this separation, as an embedded clause may take the role of a subject or object of a sentence.

First, in [clause-st], the domain of the matrix clause or the subordinated element is indicated. The clause status and type, such as declarative, exclamative, imperative, etc., are also mentioned here. It is important to know how an element is integrated or adjoined, since adjunction of embedded clauses may show different subject positions that are structurally important according to information-structural terms.

In a next tier, [grfunct], the function of the single elements is annotated. Note, however, that ‘single element’ does not mean a word-by-word annotation, bearing in mind, e.g., attributes that can be linked directly to the unit they belong to. This annotation provides grammatical assignments of information structuring devices. Additionally, the semantics of adverbs and adjuncts are annotated here. This is also relevant for determining the unmarked structure in all-focused sentences.

3.9 Additional Annotations

A number of additional annotations have been added to the corpus compiled for this project, presented here consecutively. First, the number of syllables of a discourse unit (= prosodic features) may influence the order in which various elements occur. The *heaviness* (cf. Behaghel’s ‘Gesetz der wachsenden Glieder’) is annotated through a number in [syl_no]. Note that the syllable number is given for the syntactic roles, i.e., subject, attribute, adverbial, etc., within the clause they appear in and collated for subordinated clauses within the subordinated clauses (cf. Figure 16).

Furthermore, an additional layer was added for the position of central elements that indicate the sentence structure, accounted in [word_order], i.e., the verbal position as well as object position. For a better understanding of the often extended Old Norwegian clauses, SE-layers show an additional trans-

	1	2	3	4	5	6	7	8	9	10	11
[text]	Mæð	þvi	at	þu	ert	æinka	son	minn	þa	licar	mer
[trans]	with	this	that	you	be	only.son	mine	then	like	I	
[lem]	með	sá	at	þú	vera	einkasonr	minn	þá	líka	ek	
[sentence_order]	caus_initial										
[MEclause-st]	main:decl										
[MEgrfunct]	adv:caus								prsimpl	dat-o	
[MEsyl_no]	10								1	2	1
[MEword_order]	Adv-fronting								V2	post-V	
[SE1sentence_order]	caus_initial										
[SE1clause-st]	sub:caus										
[SE1grfunct]	adv:caus			subj	v.copul		pred/subj				
[SE1syl_no]	3			1	1	4		1			
[SE1word_order]				Vmiddle							

FIGURE 33 Screenshot annotation (1^r, col.b:18–19), Additional annotations

lation tier—both into German next to English, as some structures are better represented through a language with an active case system. Thus, the reader may be better oriented within the textual and grammatical context.

A further advantage of adding translation also to SE-layers is the possibility to present an interpretation that is closer to the original text in cases where such an interpretation would create confusion within the translation.

The last addition to the annotation in this corpus is made in [Comm], where the punctuation marks given in [text] are divided into three groups: *pmain* for the marking of graphically highlighted main clause divisions, *psub* for the marking of graphically highlighted subordinate division, and *punc* for punctuation marks that are used to put emphasis on specific entities, not for the primary division of the clause structure.

	219	220	221	222	223	224	225	226	227	228	229	230
[text]	<p>	oc	þær	allðri	um	haustum	længe	i	haf	<p>	æf	þu
[trans]		and	be	never	about	autumun	long	in	ocean		f	you
[lem]		ok	vera	aldri	um	haust	lengi	i	haf		f	þú
[MEclause-st]	main:imper											
[MEgrfunct]			v.copul	adv:temp		prep-o/adv:temp		adv:temp	prep-o			adv:cond
[Comm]	pmain									psub		

FIGURE 34 Screenshot annotation (3^r, col.b:25–26), Additional annotations

As the annotation within the corpus material is carefully planned and includes many details of the language structure, the data collected will also help to understand the grammatical profile of Old Norwegian to a larger degree. This will be useful for scholars working within different fields—from morphology, syntax, and semantics to pragmatics.

4 The Database

In this section, I provide the information about the database itself (see Table 19–21 in the appendix for a compiled overview of all files). Files are collected in three larger parts in accordance with the division of the text of *Kgs*—merchant, court, and king—and individual chapters are divided into several xml-files. The file-numbers are a combination of the leaf-page, as given in Menota, and the paragraph on the side, as e.g., ‘1r_div2’, referring to 1 recto, paragraph 2; ‘1v_div2-2’, refers to 1 verso, paragraph 2, part 2, etc. Paragraphs are defined by speaker change, or longer passages on one leaf are divided into smaller units due to the program’s advantages of handling smaller parts of text. The files have a length of approximately 150–200 words. After consulting the annotators of the two DFG-projects, this length was mentioned to me as the best size for an EXMARaLDA-xml-file that ensures the annotation work is not interrupted by the program’s processing time.

Part 1 (merchant) has a complete annotation and consists of 15 chapters and 94 files. Lacunas within this part spread over chapters 1, 7, 8, 9, 12, 13, 14, and 15. The annotation from consecutive files, including a lacuna between them, follows the logic of the sentence structure, resulting in incomplete sentences/sentence interruptions. For larger lacunas, the assumptions about topic- and focus-candidates within interrupted sentences were set aside in this annotation, as these are not recoverable from defective sentences. The information status of entities can be recovered later through comparison with other manuscripts of this text, completing the missing parts.

Part 2 (court) has not been completely annotated within this project and consists so far of 16 annotated chapters and 109 files. Lacunas within this part are found in chapter 30 and consists of one leaf. Chapter 39–41 were not annotated within this part, as I decided to review my own annotations with the sentence interpretations of the annotators in the PROIEL project. At the time when I reached these sections of the text, there were no annotations for dependencies available in PROIEL. Thus, I decided to continue with chapter 42, which was already annotated in PROIEL, to ensure a review of my work within the project time.

Finally, only a small section of part 3 (king) was annotated for this research, as there have been discussions about several passages of biblical paraphrases and translations for larger parts of this section within *Kgs*. Additionally, rhetorically highly marked passages are found in this part of the text, which might entail differences in information-structural strategies, especially the king’s prayer and the speech of wisdom (cf. Schnall 2000). Part 3 is not used for the analysis in Study 1 as the studies follow a constantly growing corpus. The anno-

tation within part 3 consists of 6 chapters and 56 files. There is a lacuna of seventeen lines in chapter 48. The rest of the text, i.e., chapters 49–62, may be included into the database at a later time.

5 Potential Sources of Errors

As there do not (yet) exist fully automated annotations for Old Norwegian, the annotation done during this research project has been performed manually. With this, we do not only calculate on a significantly smaller corpus size but also face the risk of human errors in the annotation, which naturally comes along with every manually annotated corpus. Leech (2004) mentions three major points that are to be considered here: *quality*, *realism*, and *accuracy*. He (2004: 29) points out that the quality of an annotation is a crucial, albeit somewhat ambiguous, criterion to aim for. He elaborates on two distinct concepts of quality: One is connected to the realism of defining categories within the annotation in such a way that tags could be applied with 100% accuracy. The other idea is connected to the actual implementation of the tagset by the user, particularly the degree of precision and uniformity in its application.

Accuracy is measured by word tokens that have been annotated correctly within a corpus, following a defined tagset (cf. also van Halteren 1999). Leech (2004) notes that a ‘correct’ annotation is defined by what the annotation scheme allows and disallows, which is why the guidelines describing the tagset for a corpus have to be specific in detail, and—in the best-case scenario—were already tested out in a trial annotation. Leech (2004: 30) also points out that many would doubt this possibility, given the irregularities found in natural language data and the fact that even comprehensive annotation guidelines fall short of accounting for every possible case. When working manually with an annotation, it is thus considered a fair question if it is even possible to achieve 100% accuracy.

Additionally, to these more technical issues, human work is by nature error-prone, where the performance may vary from one day to another or where the annotation work has not been performed consistently. To test how systematic annotations have been assigned manually, two human annotators might post-edit a chosen piece of text to determine if they agree in their annotation in all cases and/or where they disagree with one another. According to Leech, a high percentage of agreement then equals a high quality of the annotation and, with this, of the tagset applied.

However, the corpus work done within this project was only performed by one annotator. This has both advantages and disadvantages. An advantage is

that there will be no continuous inconsistency in the annotations of the corpus due to different judgements, which may be the case if several annotators are working on the same text, as they might understand tags and structures differently, even though the tagset should be as unambiguous as possible. On the other hand, disagreement would result in a chance to discuss different ideas about the structures encountered in the corpus material, something that is missing in this project.

To compensate for the missing input of discussions about the annotations, the annotation work in KoNoKs was completely checked with the independent annotation done in PROIEL. However, as the PROIEL-annotations are based on a dependency analysis and not a phrase-structural one, disagreement on the understanding of structures between the annotation will still occur on occasion. And with these two annotations too, no direct discussion exchange has been performed. However, this check is of help to ensure a common understanding of sentence interpretations. PROIEL, however, does not provide an information-structural annotation, and this annotation too can bear some sources of errors as not all categories are always clearly and easily assignable within historical corpus languages.

The annotations within this research project were done carefully and in two temporally separated steps—first annotation and a second revisited annotation/review/check. This two-step annotation could eliminate some error-prone tag assignments already at the start phase of this project and helped define information-structural categories for the corpus annotation in more detail. To give an example, in the first annotations (= trial run), every personal pronoun was considered and annotated as a topic-candidate due to the anaphoric prominence, subjecthood, and givenness status. These then often stood in competition with another candidate and were—as a result of this—annotated as *discourse topics*, as shown in the following example (14) with *ec*.

(14) Competing topic-candidates

S-Topic						D-Topic	Comment				
Flæstra	allra	luta	þeira	ætla	ec	at	ver	hafim	nu	getit	
the.most	all	things	those	think	I	that	we	have	now	come	

Background

 Comment

er	hællzt	ero	nauðsynleger	at	geta	or	þæsson	lannde.
which	most	are	necessary	to	mention	of	this	land
Background	C-Focus							

'I believe we have now mentioned just about all the features of this country that are most necessary to discuss.' (AM 243 b α fol. 9^r, col.a:5–7)

That is, however, an annotation circle that leads to wrongly assigned notions. It became clear that these elements would, in many cases, most probably just be part of the background. This meant that the distinction between topic and background was too fuzzy at the beginning of the work and needed adjustments. These adjustments were necessary to generate analyses, as in example (15)—a revised version of example (14).

(15) Competing topic-candidates—revised

Topic				Comment						
Flæstra	allra	luta	þeira	ætla	ec	at	ver	hafim	nu	getit
the.most	all	things	those	think	I	that	we	have	now	come

 Background

 Comment

er	hællzt	ero	nauðsynleger	at	geta	or	þæsson	lannde.
which	most	are	necessary	to	mention	of	this	land
Background	Focus			Background				

Another source of errors that must be considered here is part of the second step of a corpus-based study: the actual search for examples. Searches within the ANNIS SQL-system might be too wide or too narrow, potentially including or excluding elements that do not represent the intended search results. These errors, due to inaccurate search parameters, are a valid risk of many corpus studies. I tried to prevent this type of error in the four studies by carefully examining the listed results of the searches after extraction. When I discovered that some of the presented elements do not answer the set-out question, I performed a new search, excluding/including these cases.

This section provided an extended description of the annotation work within this project, presenting examples for the various annotation levels within the corpus. The tagset has been tested for historical languages in previous international projects. However, the annotation guidelines given in this book volume, as well as a more detailed set given in the appendix, are adjusted Old Norwegian, presenting e.g., a specific set on the pos-niveau. As the later analysis builds both on the annotation and underlying theoretical assumptions, basic critical views, such as the application of the Universal Base Hypothesis over the Double Base Hypothesis within this research, have been discussed within this section as well.

Building the examination of syntactic variation on pragmatic and prosodic features, the analysis and assignment of information status, following the discussions in Section 2, have been taken up again in the discussion of data preparation and used method. The information status is in the four studies collated in a binary given–new distinction, where given includes instances of anchoring, and new includes instances of bridging. Prosodic weight has been measured by syllable count and, where applicable, constituent type.

As the annotation work for Old Norwegian was carried out manually, human-based errors cannot fully be excluded. However, due to an additional syntactic annotation that partly overlapped with the time of this project, the annotation within KoNoKs was fully checked against the judgments for structural understandings made by other annotators. Even though all annotations of Kgs in PROIEL lack a review, the annotations made there could ensure at the very least a common shared understanding of structures presented in KoNoKs.

Main Findings

The final section of this book presents the role of information structure for Old Norwegian syntax, analyzed within four studies in more detail than in Section 1.1. As this research has largely already been published in independent articles, these will not be presented in their entirety here. In-depth discussions of the source materials, method, and theoretical grounds will also be left out in the sections summarizing the four studies, as these are covered extensively in the earlier sections of this book. Examples, tables, and figures presented in this section are sourced from the individual articles.

The four studies are driven by individual research questions. These will be addressed by presenting the key findings of the studies in light of the overarching research objective, which these questions seek to answer, presented in Section 1.1 and repeated here:

How and to what extent is syntactic variation and textual division in Old Norwegian governed by information-structural constraints, and to what extent is the factor of prosodic weight an interacting factor (where applicable)?

At the end of this section, I will present a more collective view of the main findings based on this question and will also pay attention to the main theoretical and main methodological contributions of the studies to the research field. The four studies all have KoNoKs as the main source in common, but in accordance with the individual research questions, various other manuscripts from both West and East Nordic were consulted (cf. Section 4).

1 Study 1: The Object Position in Old Norwegian: An Interplay between Syntax, Prosody, and Information Structure

The first study examines how and to what extent the object position in Old Norwegian subordinate clauses is influenced by information-structural constraints and prosodic weight. The analysis is based on the annotated material in KoNoKs, with a dataset of 16,310 words at the time of this study, and is compared to the results of a similar study by Hróarsdóttir (2009) on OV/VO alternations in the Old Icelandic VP.

Hróarsdóttir's (2009) findings show that the variation in Old Icelandic is strongly influenced by prosodic weight, a factor that can override information-structural constraints. This suggests a general tendency for old information to appear before new information. However, light DPs, regardless of their information status, occurred more frequently in preverbal positions than heavy DPs, which are typically placed after the verb. Hróarsdóttir measures prosodic weight in her study by the number of words: one word, two words, three+ words; and by object type: light pronouns versus heavy full NPs and DPs.

In the first study of the research presented in this book volume, the prosodic weight of the object was also measured in two independent analyses and described for their overall tendencies. Prosodic weight was analyzed by syllable count: 1–2 syllables for light objects versus 3–6 syllables for heavy objects; and by the type of the object, from light to heavy elements: light DPs (pronoun < demonstrative) < bare NPs < full DPs < PPs (cf. Section 4.2.2, ex. 12).

The information status of the object was analyzed within a binary *given–new* distinction (see Gundel, Hedberg & Zacharski 1993; Birner 2006), as described in Section 4.2. Of the four studies within this project, the examination of the first study follows the most prominent case of syntactic variation within older Germanic languages—the OV/VO variation—which has been discussed in numerous publications over the last decades. However, even though this kind of variation has been studied extensively, Old Norwegian has, until this project, not been part of the discussions with a dataset that builds purely on Old Norwegian material, with Old Icelandic as a language of comparison.

The research questions of the first study are:

1. In what way and to what extent is the object position in Old Norwegian governed by information-structural constraints and prosodic factors, respectively?
2. How does the distribution differ from or resemble what we find in Old Icelandic corpora?
3. What can we say about the interplay between information-structural constraints and prosodic weight for this kind of variation in Old Norwegian?

To study this variation, relational and referential structures in subordinated clauses with two or more verbs (a non-finite lexical verb and a finite auxiliary verb) were extracted from the corpus. This ensures that the finite verb has moved to T, which in turn makes it possible to identify the position of the object more reliably (cf. also Hróarsdóttir 2000: 63). The object in these structures is a complement required by the lexical verb.

The positional variation of the object was analyzed in relation to the non-finite lexical verb of the clause. In total, 243 subordinated clauses were used for this study, matching the requirements set within the examination. Negated

and quantified objects were left out of the analysis due to their non-referential nature (cf. Struik & van Kemenade 2018).

Variation in the order of finite auxiliary and modal verbs, and the non-finite lexical verb, could be grouped into five possible surface patterns in Old Norwegian with an AuxVO-base: OVAux, OAuxV, AuxOV, AuxVO, and VAuxO—the same possible word order patterns on the surface as found in Old Icelandic. However, for the later analysis within this study, the differences between VAux and AuxV were not studied further in much detail and the examination collated the patterns into ov/vo word orders.

An example of the variation in Old Norwegian is given in (16). The lexical verb in these examples is marked in bold, while the object is marked in red text.

(16) a. ov order in Old Norwegian

at faer manu um [slica luti] fleira spurt hafa en þu.
 that few may about such things more asked have than you
 ‘as few may have asked more about these things than you’ (15^r, col.a:27–28)

b. vo order in Old Norwegian

at þeir munu (eigi) hafa heyrtr [slica lute] fyr
 that they may (not) have heard such things before
 that they may (not) have heard such things before.’ (7^r, col.a:20–21)

Following previous research on the ov/vo variation in Germanic languages, particularly Old Icelandic (see Hróarsdóttir 2009), the null-hypothesis for this study posits that ov surface order reflects object movement driven by an information-structural trigger. This means that these objects convey given information. In contrast, the vo order is expected to be more varied in terms of the information status of the object, as not all objects that are subject to the trigger necessarily react to it and undergo movement. This prediction aligns with the observations of Struik & van Kemenade (2018: 4) for Old English. These tendencies can be seen in Figure 35 for Old Norwegian.

The results for the distribution of objects in correlation to their information status mirror what has been stated for Old Icelandic by Hróarsdóttir (2009), showing the same general tendencies for the two languages. However, a direct comparison of the data for Old Icelandic and Old Norwegian reveals an observable syntactic difference between these two languages relatively early in their history. That is, that the probability of ov-orders due to an information-structural trigger is already weakened to a larger degree in Old Norwegian compared to Old Icelandic. If an object is given, it appears in 46.4% of the studied

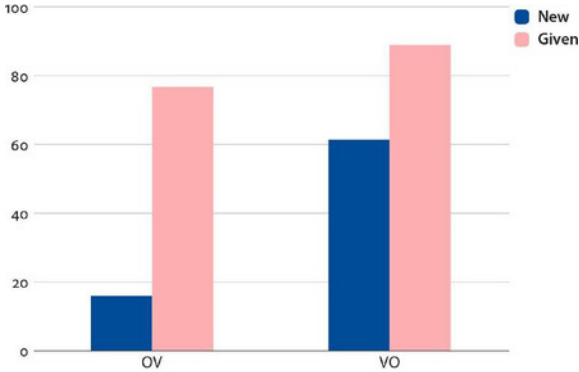


FIGURE 35
Overall order distribution
OV/VO with regard to infor-
mation status
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cases within an OV order in 13th century material from Old Norwegian, while it appears in OV order in 81.3% of the cases studied by Hróarsdóttir (2009) for 14th century material from Old Icelandic, as shown in Table 8.

TABLE 8 Percentage OV order in Old Norwegian and Old Icelandic

		OV-new	OV-given
Old Norwegian	13th c.	20.8% (16/77)	46.4% (77/166)
Old Icelandic	14th c.	26.9% (75/279)	81.3% (156/192)
Old Icelandic	18th c.	16.9% (20/118)	47.6% (39/82)

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While the object position in both Old Icelandic and Old Norwegian is greatly influenced by the information status of the object, these numbers imply a syntactic divergence between the two languages early in their development. In Old Norwegian, the impact of information status as a structuring principle is weakened relatively early, whereas in Old Icelandic, it remained a stronger factor for a longer period. This syntactic contrast is evident at an early stage, with Icelandic retaining the possibility for OV word order longer than Norwegian.

As prosodic weight overrides information-structural constraints in Old Icelandic, the same has generally been assumed for Old Norwegian. Heavy objects are generally preferred with VO order, and light objects generally preferred with OV order. Table 9 shows the distribution of light and heavy objects, indicating a tendency for lighter elements to be in preverbal position and heavy objects to be in postverbal position.

TABLE 9 Order distribution in *ov/vo* with regard to weight (object type division) in Old Norwegian

Light DPs (pronouns and demonstratives)			Bare NPs			Heavy DPs (full DPs and PPs)		
OV	VO	%OV	OV	VO	%OV	OV	VO	%OV
45	18	71.43%	25	42	37.31%	23	90	20.35%
63			67			113		

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The results of the analysis of prosodic weight show that prosodic weight is indeed a significant factor, resulting in a postverbal position for heavy constituents in Old Norwegian. This mirrors what Hróarsdóttir (2009) has found for Old Icelandic. Hróarsdóttir further found that prosodic weight is the decisive factor in all contexts, leading to a strict division between light objects in a preverbal position and heavy objects in a postverbal position (overriding condition).

Similarly, the same results were expected for the Old Norwegian material. However, the examination of the correlation between these two factors shows a distribution of (relatively) light objects according to their information status. Given light objects tend to appear in preverbal positions, while new light objects are found in postverbal positions, as shown in Table 10.

With light objects distributed over *ov/vo* according to their information status (given in *ov*, new in *vo*), and heavy objects, which react to the factor of weight, generally appearing in *vo* order, prosodic weight as an influential factor for word order seems to work one-way in Old Norwegian. The two languages show clear differences in the preverbal position. The data provided for Old Norwegian thus aligns with the generalization made by Struik & van Kemenade (2018: 19) for Old English, namely that while preverbal objects convey given information, not all given objects necessarily occur in the preverbal position.

However, it is important to keep in mind that the present study only considers one Old Norwegian text. Nevertheless, Kgs is a promising candidate for analyzing these structures, both in terms of the richness of examples and the formation of the language used (cf. Section 3.2).

Considering the language history of Norwegian, it seems that Old Norwegian, or more precisely, the text of Kgs in the manuscript 243 b α fol., already shows strong tendencies for development towards the modern language state.

TABLE 10 Order distribution in OV order: Correlation information status and weight (object type division) in Old Norwegian

	Light DPs (pronouns and demonstratives)			Bare NPs			Heavy DPs (full DPs and PPs)		
	OV	VO	%OV	OV	VO	%OV	OV	VO	%OV
given	45	18	71.43%	14	14	50.00%	18	57	24.00%
new	0	0	0.00%	11	28	28.21%	5	33	13.16%

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This means, that a fixed word order is established, and VO is already the dominant word order pattern. Information-structural as well as prosodic features are less important within the syntactic structuring of the discourse, and other strategies are put into place. As in all modern languages, intonation becomes the most important feature to mark highlighted elements, ensuring a clear division of the discourse into given and new information mainly through the use of *stress*. Modern Norwegian then shows just little possibility for syntactic alternations to be the pragmatic marker for these categories.

2 Study II: Historical Punctuation in Old Norse: Visual Reflexes of Information Structure

This study sheds light on a longstanding debate on punctuation practices in medieval manuscripts (see e.g., Arn 1994; Reimer 1998), focusing first and foremost on Nordic manuscripts. By combining manuscript studies with an information-structural approach, accounts of punctuation practices in the Scandinavian Middle Ages are systematized.

The examination focuses on an overall description and analysis of punctuation setting, showing that varying punctuation in manuscripts may be collectively described as visual devices of information structure. The following linguistic phenomena are considered through this visual mark-up: 1) clause division, 2) highlighting/emphasis, and 3) a combination of these two; seeking to address the following research questions:





1. Are discourses structured visual on the manuscript page according to the information flow given in the text?
2. What evidence do we find supporting an information-structural usage of medieval punctuation?

3. How can the framework of information structure help to analyze punctuation practices?
4. Is it possible to define an overall practice of punctuation setting within Old Nordic manuscripts?

The data material in this study consists of the corpus material in KoNoKs and data collected from three additional manuscripts of West- and East Nordic: *Gutalagen* in B64, *Äldre Västgötalagen* in Holm B59, and *Landslov* in Holm Perg 34 4to. Most of the examined manuscript texts are law texts, covering a different scribal tradition and varying levels of textual structuring on the manuscript page. The educational text of Kgs serves as a comparison point for making general statements about the practice of punctuation settings.

In total, four punctuation signs were identified in the material of the study: the *punctus*, the *punctus elevatus*, the *paragraph mark*, and the *colon*, as shown in Table 11.

TABLE 11 Punctuation marks

Punctus	Punctus elevatus	Paragraph mark	Colon
			

CF. TABLE 1 IN TIEMANN 2022B: 80 FOR MORE DETAILS

Unsurprisingly, the *punctus* is used in all manuscripts and is the most frequent punctuation mark, with usage ranging from 89.39% in *Gutalagen* to 99.93% in *Äldre Västgötalagen* (cf. Table 12). The *paragraph mark* is used in the three law texts—although to varying degrees—but is not found in the text of Kgs. The *punctus elevatus*, usually marking a new paragraph or a regular period, and the *colon*, used to coordinate contrasting information (cf. Table 11 for their visual realization), are the least frequently used signs in the manuscript material.

Traditional scholarly views on medieval punctuation often depict its setting as ad-hoc, arbitrary, and performance-driven, with its underlying function assumed to be prosodic (cf. e.g., Reimer 1998). Variations in punctuation setting across manuscripts and genres is then attributed to interpretive hermeneutics rather than a standardized and formalized system (see, e.g., Parkes 1997: 47; De la Cruz Cabanillas 2016: 18).

Yet, while acknowledging the seemingly pointless task of describing a unified system, similarities in punctuation setting across diverse medieval texts

TABLE 12 Frequency of the punctuation marks used in the manuscripts

	Punctus	Punctus elevatus	Paragraph mark	Colon
<i>Konungs skuggsjá</i> , AM 243b α fol.	99.77 %	0.23 %	–	–
<i>Landslov</i> , Holm Perg 34 4to	96.75 %	2.29 %	0.97 %	–
<i>Äldre Västgötalagen</i> , Holm B59	99.93 %	–	0.07 %	–
<i>Gutalagen</i> , Holm B64	89.39 %	–	10.55 %	0.06 %

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have been observed and described based on i) prosodic and rhetorical principles, signifying an elocutionary usage, or on ii) grammatical principles signifying an expository usage (see Lucas 1971; cf. also Parkes 1992).

The functional division of punctuation marks into elocutionary usage and expository usage describes marking of sense-units rather than the modern grammatical rules used in punctuation setting. This division reflects visual guidance for how texts were meant to be read aloud, or how the textual structure is to be understood.

However, rather than treating the principles as separate strategies, I argue that with an information-structural approach, punctuation in medieval Nordic manuscripts can be described within a unified system following logical functions of (con)text and discourse organization. Including an information-structural approach to the analysis of punctuation marks in medieval manuscripts emphasizes how both linguistic variation and the visual structuring of the text then jointly contribute to replicating the flexibility inherent in spoken language. Thus, these markers promote visually more clearly what is expressed through tonic stress in spoken language: they put focus on positions that provide locations for newsworthy and emphasized units (cf. e.g., Rayner 1998; Rayner et al. 2000; Pynte & Kennedy 2007; Moore 2016).

The differences in punctuation settings seen across manuscripts are then not necessarily evidence of fundamentally different systems; rather, they represent different surface realizations of a shared underlying structure and the same overall discourse function—marking the boundaries and divisions of topic-related units, and thus highlighting new or focused units of information. Punctuation signs can in this sense be understood as visual indicators that reflect how a proposition is pragmatically structured within a discourse (= visual pragmatics/material pragmatics; see Machan 2011; cf. also Lambrecht 1998).

Varying visual representations of punctuation marks (cf. Table 11) and varying frequency in applying these to the manuscript page can be explained through genre effects (e.g., the usage of the paragraph sign), or the availability of other structuring means in the language. In Nordic written sources of the 13th and 14th centuries, punctuation as a tool for marking topic and focus was still used to provide additional—but not strictly necessary—support to the meaning expressed by variation in language. In the older Nordic language, syntactic variation seems to be a main mechanism for dividing discourse information into segments of given and new information as the utterance/text unfolds.

For example, conjunctives introducing subordinate units are considered strong linguistic markers within discourse progression. Therefore, the setting of additional visual markers to signal the introduction of a subordinate unit is not always followed, as shown in (17) and Figure 36.

(17) a. *þvi at* with a punctus

oc vil ec ænn giarnsamlega biðia at yðr leiðez eigi at leysa þæssa spurning firir **mer. þvi at** mer virðez at bæraz mætti sva at at þoetti æitt hvært sinn nauðsynlect at vita (KS, 15^r col.b: 19–23)

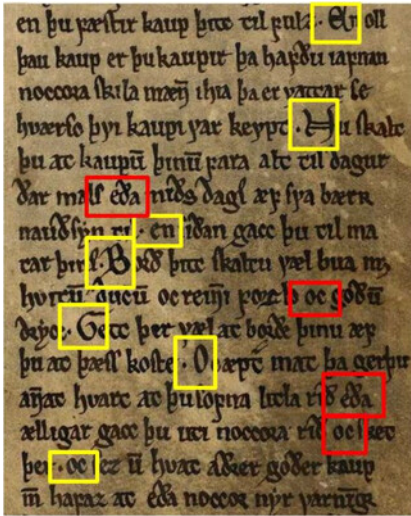
‘Therefore, I would [willingly] ask you again to answer this question for me, even if it does annoy you, for I think that a time may come when it will seem both needful to know this and instructive to understand it.’

b. *þvi at* without a punctus

Ðæsse sæla kyn er nu hafum ver um roett þa ero fiskar **kallaðer þvi at** þeir foeðaz í sio oc lifa við aðra fiska (KS, 11^r col.a: 12–15)

‘[This kind of seal] that we have just discussed are called fish because they find their food in the sea and subsist upon other fish.’

This might point to the aforementioned ad-hoc and arbitrary system for the setting of punctuation marks. However, I argue that whether or not additional markers are present, the possible positions for placing them remain the same, steered by information-structural constraints. The information-structural principles create specific slots where visual markers can appear, but these positions do not always have to be occupied.



“(en þu fæstir kaup þitt til fulz.) En oll þau kaup er þu kaupir þa hafðu iafnan noccora skila mæn ihia þa er vattar se hværso þvi kaupir var keypt. Nu skalt þu at kaupnum þinum fara alt til dagur. Þar mals edaa miðs dags æf spa bærr nauðsyn til. en sidan gacc þu til ma tar þins. Borð þitt skaltu væl bua mæð hvitum ducum oc reinni fæzlo oc goðum drycc. Gett þer væl at borðe þinu æf þu at þæss koste. Oc æptir mat þa gerþu annat hvart at þu sofna litla rið eda ælligar gacc þu uti noccora rið oc ske[m]t þer. oc sez um hvat aðrer goder kaup mænn hafaz at eda noccor nyr varningr (...)”

FIGURE 36 The punctus, Konungs skuggsjá, AM 243bα fol., 2r

Note: The following translation is based on Larson (1917), with some minor changes indicated with square brackets. “(...) And [with all purchase you make], call in a few trusty men to serve as witnesses as to how the bargain was made. You should keep occupied with your business till breakfast or, if necessity demands it, till midday; after that you should eat your meal. Keep your table well provided with a white cloth, and clean victuals, and good drinks. Serve enjoyable meals, if you can afford it. After the meal you may either take a nap or stroll about a little while for pastime and to see what other good merchants are employed with, or whether any new wares (...)”
CF TIEMANN 2022B: 84

Instances that lack supplementary marking of structural divisions with a punctuation mark are highlighted with red boxes in Figure 36. Cases marked with yellow boxes indicate where a punctus was set, either to support the macro-textual division or to support the separation of sense-units.

By guiding the readers through the insertion of graphical marks, drawing attention to the position prior to the mark and putting emphasis on the element that follows (cf. also studies on silent reading such as Rayner 1998), punctuations break text into visually manageable and meaningful units.

As such punctuation setting is a tool for the scribe to put visual focus on a specific element of the sentence and to call attention towards what follows. Halliday’s (1979; adopted by Moore 2016) wave-like pattern illustrates this information division, as shown in Figure 37. An image of the manuscript presenting the first example of the wave-like pattern is given in Figure 38.

The example in Figure 38 also illustrates that the application of several punctuation marks in short distance can channel the attention of the reader on

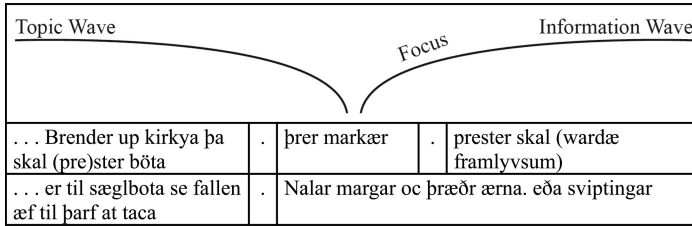
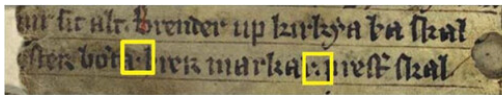


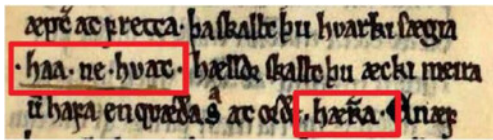
FIGURE 37 Scheme for the focusing of elements via punctuation
CF. TIEMANN 2022B: 101



“(...) Brender up kirky þa skal (pre)ster böta. þrer markær. Prester skal (...)”

FIGURE 38 Focusing of elements. Äldre Västgötalagen, Holm B59, 2^v
Note: “(...) (If) the church burns down, so shall the priests fine three mark. The priests shall (...)”
TIEMANN 2022B: 100

the element(s) surrounded by these visual markers, highlighting focused elements in this way. Another example of this emphasizing function is presented in Figure 39, where punctuation marks function in the same way as modern quotation marks (Heinz 2019: 205 f.).



“(...) þa skalt þu hvarki sægja . haa . ne . hvat . hældr skalt þu æcki meira um hafa en qvæða sva at orðe . hærra . (...)”

FIGURE 39 The punctus around emphasized words, Konungs skuggsjá, AM 243b α fol., 22^v, (col.a:col.a:13–15)
Note: “(...) do not say [either] “Eh?” [nor] “What?” or make a fuss about it, but use only the word “Sire” (...)”
TIEMANN 2022B: 89

The analysis presented in Study II provides a theoretically grounded perspective on medieval punctuation, considering punctuation as devices for marking topic and focus within a text. From an information-structural point of view, all punctuation aims to structure the text into units of new and given information as the discourse progresses. Thus, I argue that scribal practices concerning punctuation setting can be summarized under one system. Despite variations in graphical expressions, they follow one overall discourse function: that of information structure.

Observed variation is attributed to differences in frequency rather than placement, as genre and linguistic devices like syntactic variation or other visual units such as initials influence the frequency of punctuation marks in manuscript texts. Within the analyzed period, punctuation served as providing additional markers for the discourse structure rather than as introducing new structural information already indicated by other devices.

3 Study III: Modifying Variation: Adjective Position in Old Norwegian

In the third study, the focus shifts from broader textual structures of the manuscript page and from structuring within the clause to an analysis at a phrasal level and the modified extended nominal phrase. In this study, I expanded on the data material of KoNoKs with four Old Norwegian texts in five manuscripts: *Old Norwegian homily book* in AM 619 4to, *Óláfs saga ins helga* in Upps DG 8 11, *Landslög Magnúss Hákonarsonar* in HolmPerg 34 4to and in Upps DG 8 1, and *Strengleikar* in Upps DG 4–7to.

However, the additional texts employed in this study only fulfil the function of verifying observed patterns of nominal phrases, including adnominal attributive adjectives expressing inherent or enduring properties that were found in the main corpus. They also helped investigate other Old Norwegian texts for patterns that were mentioned in the literature (cf. Bech 2017) but were not found in KoNoKs, which had a size of 36,861 words at the time of the study. The data were compared to the findings from studies on Old Icelandic, mainly focusing on the results of Pfaff's (2017, 2019) studies.

For the analysis of the Old Norwegian modified nominal phrase, I adopt the *split DP-Hypothesis*, encoding discourse-related properties within a left periphery on a par with the CP (cf. e.g., Haegeman 2004; Giusti 1996, 2012). The research questions of this study are:

1. Can the variation observed at a phrasal level be explained through information-structural constraints, resembling the phenomena found on clausal level?
2. How do different factors, such as overt (in)definiteness marking, morphological form of the adjective, and information-structural notions interact with each other?
3. Can we formulate an efficient method to determine the information status of an adjective?

Several parameters are considered and discussed within this study, as shown in Table 13, comprising morphology, syntax, information structure, and prosodic weight.

TABLE 13 Parameters for adjectives directly modifying the head noun

Morphology	Syntax	Information Structure	Prosodic weight
Weak vs strong	Pre- vs postnominal	Non-essential vs essential (emphasized)	Light vs heavy
Positive, superlative	Co-occurrence with ART, DEF, DEM, INDEF		

CF. TIEMANN 2024: 275

Compared to the other three studies, Study III takes up an extended discussion of how to determine information status for the word class of adjectives. This topic has been mentioned as challenging by several scholars (see Section 4.2.1; see also e.g., van Gelderen & Lohndal 2008: 13; Allen 2012: 257, esp. 259 f.).

The Old Norwegian corpus material allows for attributive adjectives to appear before or after the noun they modify, as well as in flanking position when two adjectives modify the same noun. Even though Norwegian already shows a strong tendency towards a fixed word order at this language stage, a total of eight possible word order patterns for adjectival modified nominal phrases connected to overt definiteness are identified, and three possible word order patterns connected to overt indefiniteness, as shown in Table 14 and 15.¹ Pre- and post-articular refers to the adjectival position relative to DEF, ART, or INDEF. Examples of the three patterns including INDEF are given separately in the discussion of the study.

The predominant order observed within the corpus material is adjective + noun, with 88.5% of all instances found in KoNoKs. This finding is contrary to some previous assertions about Old Norwegian in the literature (cf. e.g., Faarlund 2004: 68; Mørck 2016: 394). I assume that this order represents the base order at this stage of the language, aligned with early Germanic languages (cf. however, van Gelderen & Lohndal 2008 for an opposing account).

A contrast to Old Icelandic can especially be made in connection to the divergent development of the (in)definite articles. In Icelandic, the element ART is retained in the syntax (cf. e.g., Pfaff 2019), while in Norwegian, it is replaced by the distal demonstrative *sá*, as shown in (18)—although initially with a supportive additional definiteness marker (cf. pattern VII).

¹ The examples in Table 15 show *einn* in its non-numerical function, i.e., introducing a new referent, marking indefiniteness by these means (cf. Tiemann 2024: 283, fn. 20 for examples of *einn* as a numeral).

TABLE 14 Possible word order patterns connected to overt definiteness

(II)	ART	WK	prenom.	post-articular	<i>hina bæztu menn</i> (2 ^v , col.b:20–21) 'the best men'	40
(III)	DEF > ART	WK	postnom.	post-articular	<i>haf-et mykla</i> (13 ^r , col.a:17) 'the great ocean'	1
(IV)	DEF	STR	prenom.	pre-articular	<i>visan mæistar-ann</i> (41, col.b:1) 'the wise master'	2
(DD-a)	ART + DEF	WK	prenom.	pre- and post-articular	<i>hinum heita væg-inum</i> (14 ^v , col.b:1) 'the hot way/zone'	5
(DD-b)	sá + DEF	WK	prenom.	pre- and post-articular	<i>þeim heita væg-inum</i> (14 ^v , col.b:9) 'the hot way/zone'	2
(V)	DEF	STR	postnom.	post-articular	<i>lannd-et þitt</i> (12 ^r , col.a:1) 'the defrosted soil'	4
(VI)	sá	STR	prenom.	post-articular	<i>þeim hægum manne</i> (8 ^r , col.b:15) 'this holy man'	6
(VII)	sá + ART	WK	postnom.	post-articular	<i>Tre þat hit fagra</i> (40 ^r , col.b:6) 'This beautiful tree'	3

TABLE 15 Possible word order patterns connected to overt indefiniteness

(I-b)	INDEF	STR	prenom.	pre-articular	heilagr maðr einn (7 ^r , col.b:25) 'a holy man'	2
(II-b)	INDEF	STR	prenom.	post-articular	æinn heilagr maðr (7 ^r , col.b:14) 'a holy man'	13
(III-b)	INDEF	STR	postnom.	post-articular	holme æinn litell (6 ^r , col.b:19–20) 'a small islet'	8

CF. TIEMANN 2024: 282

(18) The definite article ART

a. Old Norwegian

hinn hælgi Patricius

ART holy Patricius

'the holy Patricius' (8^r, col.b:9–10)

b. Modern Icelandic

hinn heilagi Patricius

ART holy Patricius

'the holy Patricius'

c. Modern Norwegian

den hellige Patricius

DET holy Patricius

'the holy Patricius'

Definiteness constitutes a paradigmatic contrast, reflected in the weak and strong inflections in adjectives, which compensated for the absence of definite and indefinite articles in older language stages. Weakly inflected adjectives typically accompany semantically definite NPs, while strongly inflected adjectives are associated with semantically indefinite NPs. This contrast reflects informational features, with strong adjectival inflections suggesting novelty in the context, while weak inflections, supported by overt definiteness markers, indicate familiarity within the context.

However, adjectives conveying given information found in the corpus material are not exclusively weak, challenging the notion that the adjective form

determines *givenness*. Furthermore, while the distinction between weak and strong adjectival inflections and semantically definite and indefinite NPs is often linked to a distinction in position for prenominal attributive versus postnominal predicative adjective use (cf. e.g., Fischer 2000, 2001), I do not analyze strong adjectives solely as predicative in this study (see also Bech 2017: 8). Prenominal strong adjectives thus align with prenominal weak adjective readings in terms of their semantic and functional properties, as exemplified in (19).

(19) Prenominal attributive strong adjective

engan visan mæistar-ann
 no wise.STR master-DEF
 ‘no wise master’ (4^r, col.b:1)

Furthermore, the postnominal position does not seem to be reserved only for predicative adjectives, as shown in (20).

(20) Postnominal attributive adjective

a. *Nalar margar oc þræðr oerna eða sviptingar*
 needles many.STR and thread strong.STR or cords
 ‘many needles, and strong thread or cords’ (3^v, col.a:10–11)

b. *hia havi hinu mykla*
 at ocean ART great.WK
 ‘at the great ocean’ (Streng 7,3)

The study also shows that adjectives can introduce new information within the given context and are not strictly limited to elements already established in the discourse. Among the observations made from analyzing morphological and syntactical issues, this study emphasizes that both weak and strong adjectives can appear in pre- and postnominal positions relative to the noun they modify. Neither the form of the adjective nor additional markers of definiteness seem to dictate adjective ordering within the modified NP in Old Norwegian. The optionality of word order reflects a complex interplay between multiple factors (cf. Tiemann 2024: 283f.).

For the discussion of parameters connected to information structure, I adopt the split-DP hypothesis for the Old Norwegian NP and discuss the possibility of moving adjectives to designated positions for focus, topic, and contrast within the left periphery of the phrase (cf. e.g., Ihsane & Puskás 2001; Giusti 2005, 2012; cf. also Harries 2014 for Old Norse). To determine the information status of adjectives, I introduce the concept of *essentiality*, operating on the relevance to

the discourse and subsequent development of informational flow, to account for focused and unfocused adjectives (cf. Section 4.2.1).

An adjective is classified as *non-essential* (= unfocused) if the feature presented by the adjective is given in the preceding discourse, and the adjective itself is thus not a needed element to identify the noun's referent. With respect to the progression of the discourse, the adjectival feature does not present the core information that the following sequence is building on. *Essential* adjectives (= focused) are those which bring a new property into the discourse and carry the key information for the developing discourse (*essential by context*), or those which are needed for the correct encoding of the current referent (*essential by contrast*).

In the case of Old Norwegian, assuming an underlying base structure of A—N, two generalizations based on the discussion of emphasis in adjectives may be made:

- i) If an adjective is the focus-candidate of the phrase, the form of the adjective correlates with one of the two types of essentiality. If the weak form of the adjective is emphasized, it expresses essentiality by contrast, while strong adjectives can be described as essential by context when emphasized.
- ii) The positional distribution of the adjective is a cue for the analysis of these being focused—if an adjective appears in postnominal position, it is focused (*essential by context*); if it appears in prenominal position, it may be focused (*essential by contrast*) or have a neutral, unfocused reading.

However, as Old Norwegian had already started to grammaticalize the prenominal position for all adjectives, generalization (ii) and the exploitation of syntactic variation is already weakened. The examination of essentiality, however, still enables us to more easily determine whether the adjective is focused or not. With this, Study III contributes not only with new data on Old Norwegian within discussions of the extended NP in Old Norse, but also to the development of the determination of information status for adjectives, on the basis of discourse progression and information flow.

As established in Sections 1 and 4, prosodic weight is a factor often considered in studies of syntactic variation, linked to element length and the complexity of structures (see also Study I in Section 5.1). While this factor has not been the primary focus of studies on NP-internal syntax in Old Norse, its influence has been observed, e.g., in structures where an adjective is followed by a complement (cf. Faarlund 2004: 71; see also Börjars et al. 2016: e13f).

The analysis of prosodic weight carried out in Study III suggests that there are no weight effects on adjectives in positional variation of these elements,

TABLE 16 Order distribution of adjectives with regard to weight

Light APs (1–3 syllables)		Heavy APs (4–6 syllables)		Total AN	Total NA
AN	NA	AN	NA		
712 (92.11%)	61 (7.89%)	65 (97.01%)	2 (2.99%)	777 (92.5%)	63 (7.5%)
Total: 773		Total: 67		Total: 840	

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or at least that syllable count may not play a significant role in determining the positioning of adjectives within noun phrases in Old Norwegian. According to the weight analysis done within this study, prenominal position is already clearly preferred in Old Norwegian, as shown in Table 16.

A weight effect can, however, be derived in complex structures with more than one adjective attributed to the same referent. In these cases, the usage of parallel structures—as shown in (21)—is preferred rather than that of *stacking* constructions—as shown in (22). Stacking is still dispreferred in Old Norwegian (cf. also Bech 2017). Note that square brackets used in examples illustrating a split construction do not refer to an underlying syntactic structure. In these instances, they are used simply to clarify that the adjectives refer to one common referent.

(21) a. Stacked weak adjectives

Sa hinn riki gamle maðr
 DET ART rich.WK old.WK man
 ‘the rich, old man’ (Streng 2,282)

b. Stacked strong adjectives

kallað margha goða hufðingia
 call many.STR good.STR leaders
 ‘invited many good leaders’ (36^r, col.b:3)

(22) Parallel split construction in Old Norwegian

sæm byriar [lyðnum syni oc litillatom] at finna
 which behave obedient.STR son and humble.STR to find
 [astsamlegan foður oc gofgan]
 loving.STR father and renowned.STR
 ‘as it behooves a obedient and humble son to approach a loving and renowned father’ (1^r, col.a.:22–26)

Surface patterns with one adjective in prenominal and another one in post-nominal position are referred to as split constructions in Study III, of which I describe two types: type I without a coordinator, as shown in (23a), and type II with a coordinator, as shown in (23b).

(23) a. Type I split construction

mæð [*longu* *hafi*
with wide.DAT.SG.STR ocean.DAT.SG
rasta fullu]
full.of.strong.currents.DAT.SG.STR
'with the wide sea full of strong currents' (15^v, col.a:12)

b. Type II split construction

en aðr hirti hann [*gott* *korn* *oc*
but before gathered he good.ACC.SG.STR grain.ACC.SG and
reinnt]
clean.ACC.SG.STR
'but before he gathered good and clean grain' (24^v, col.a:25–26)

For both types, adjectives are assumed to be prenominal in the underlying structure. While the type I split construction is the result of phrasal NP movement with a stranded adjective ([[A-N]_i—[A-t_i]]), the type II split construction is an elliptic construction with a phonologically empty element *pro* as the co-referential nominal in the second conjunct ([A—N—*and*—A—nonDP *pro*]).

The results of this study show that while morphological restrictions, information-structural constraints, and prosodic weight traditionally played significant roles in word order and movement, the grammaticalization of fixed word order in the nominal domain reduced their influence in certain contexts. The information status, here analyzed through essentiality, is already weakened as a factor in the reordering of adjectives in Old Norwegian, although it is still observable.

Prosodic weight only comes into play for complex structures containing more than one adjective, which, however, does not seem to play a role for the distribution of adjectives otherwise. For complex structures, split constructions might be used to avoid both stacked adjectives and a heavy prenominal constituent.

Further research exploring factors influencing the internal order of elements within the NP in the history of Norwegian is needed to strengthen the generalizations made here with more evidence for the proposed approach.

4 Study IV: My Kind of Variation! Possessives in Old Norwegian

The last study in this research project continues with a focus on the nominal domain and offers a comparison not only to Old Icelandic but also to East Nordic, situating the syntactic behaviour of Old Norwegian possessive construction within a wider Nordic context. Possessive constructions and their complex semantic dynamics have been vividly discussed in examinations of the Scandinavian NP/DP (see e.g., Delsing 2003a/2003b; Julien 2005a/2005b; Toft 2009; Norde 2012; Piotrowska 2021). In this study, the term *possession* is used in a wider sense and refers to relations beyond mere ownership, i.e., possession in a narrow sense.

The analysis is centred around possessive constructions that allow for variation in their positional distribution relative to the head noun, focusing on those containing either a nominal possessor marked with genitive case or a possessive pronoun.

Positional variation is discussed in correlation with several factors: (in)definiteness, prosodic weight, and information status of the possessor and possessum. The investigation builds on the structural analysis provided in Study III (see Section 5.3) and follows the methodological fundamentals concerning information status and prosodic weight that have been provided in Study I (see Section 5.1).

The main source of the analyzed data material is provided by the corpus KoNoKs, counting by the time of the analysis 40,199 words. A total of 1,000 possessive constructions were extracted from the corpus, including 360 phrases containing a genitive used in a possessive function, and 640 phrases containing a possessive pronoun. The research questions of this study are:

1. How can we explain the positional variation of both nominal and pronoun possessors within a uniform analysis?
2. Does the structural analysis of Study III, including a nominal left periphery, account for the observed variation of other elements within the extended NP?
3. Can we situate Old Norwegian in a broader Nordic context, considering similarities to Old Icelandic and differences to East Nordic?

For Old Norwegian and Old Icelandic, we find examples of both pre- and post-nominal possessors, as shown in (24) and (25). However, an order with a post-nominal possessor attribute is regarded as the most common one (see e.g., Nygaard 1905: 368; Faarlund 2004: 59; see also Toft 2009: 138). In the East Nordic dialects, Old Danish and Old Swedish, on the other hand, the development toward a fixed prenominal possessor position had already become apparent (Piotrowska 2021: 112; cf. also Norde 1997: 189).

TABLE 17 Position of possessors relative to their head noun within possessive constructions

Possessor type	Preposed	Postposed	Total
Nouns (genitive)	35 % (126/360)	65 % (234/360)	360
Pronouns	48.28 % (309/640)	51.72 % (331/640)	640

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(24) Positional variation for the noun possessor in genitive case/genitive NPs

a. Preposed genitive

þat er mannz-ens natura
 this is man.GEN-the.GEN nature
 'it is the nature of man' (11^r, col.b:20)

b. Postposed genitive

þræfollð natura mannz-ens
 threefold nature man.GEN-the.GEN
 'man's three-fold nature' (11^r, col.b:18–19)

(25) Old Norwegian pre- and postnominal possessive pronoun

a. Preposed possessive pronoun

Ec em sva kominn til yðars funndar
 I am so come to 2SG.POSS.GEN meeting
 'I have come to your meeting' (1^r, col.a:20–22)

b. Postposed possessive pronoun

at retr sun minn skyli æptir mec niota
 that right son 1SG.POSS should after me make-use-of
 'that my rightful son should make use of (it) after me' (1^v, col.a:17–18)

While a fixed preposed position of nominal possessors has become established in Modern Norwegian, the older material still shows positional surface variation including these elements. The data extracted from the corpus material reflects the general observations made for Old Norse: a preference for postposed possessive genitive NPs, as can be seen in Table 17.

Possessive pronouns, in contrast, show positional variation throughout the history of Norwegian and are almost evenly distributed over pre- and postposed position in the material from KoNoKs.

Several scholars have assumed an unmarked order of possessum first, possessor second for possessive construction in Old Norse (cf. Allen 2008, Stroh-Wollin 2009, Börjars et al. 2016). Here, I follow these assumptions and describe a postposed unstressed position of the possessor with evidence, e.g., from structures including proper nouns in a possessor function, referring to known entities within the discourse, as illustrated by the example in (26). The possessum in the following examples is marked in bold, while the possessor is marked in red text.

(26) Proper noun (known entity) as possessors

þu toct or hænni Evvo
 you took from hand Eve.GEN
 'you took from Eve's hand' (44^v, col.b:3)

A pragmatically neutral postposed position can also be observed in constructions with direct repetition of the possessor, as in (27a), or clear reference assignment without contrastive readings, as in (27b), where the possessor *þinum* is co-referent/shares referential identity with the addressed person *þu*.

(27) a. Repetitive possessor (no emphasis)

Get þu vanndliga tungu þinnar oc vit at þat er
 guard you carefully tongue 2SG.POSS.GEN and know that this is
virtarað. þvi at tunga þin ma soema þec oc
 excellent.advice for at tongue 2POSS.NOM may honor you and
tunga. þin ma doema þec
 tongue 2SG.POSS.NOM may judge you
 'Guard your tongue carefully; this is good counsel, for your tongue may honor you, but your tongue may also condemn you.' (2^v, col.b: 21–24)

b. Clear reference assignment

Nu skalt þu at kaupum þinum fara alt til dagurðar
 now should you to trades 2PL.POSS.DAT go all to breakfast
mals eða miðs dags æf sva bærr nauðsyn til
 meals or mid- day if so carry necessity to
 'Now, you should proceed with your trades till breakfast or till midday if necessity demands it' (2^r, col.b:14–17)

Assuming a left periphery within the extended NP (cf. Section 5.3) and various functional categories, including projections related to informational prominence, the fronting of the possessor can be described as pragmatically moti-

vated. It serves to signal an important or especially salient referent, or to suggest a contrast between the anchored referent and another established referent within the clause (see Sigurðsson 1993; 2006, Thráinsson 2007; Lødrup 2011; Harries 2014; see also Julien 2005a for Modern Norwegian), as shown in (28).

(28) a. Contrast with a nominal possessor marked with genitive case

Þa ero þeir ænn æiner **huscarlar konongs** er hafa fe af konongi í væizlur sumir tolf aura en sumir tvær mærcr. en sumir. [...] *Þæsser konongs huscarlar* ero slict skyllder konongi at þiona sæm þeir er fyrr var um roett. (19^r, col.b:11–22)

‘Then there is yet a [class of] of [royal] **houscarles of the king** who have received payment from the king, some twelve pennies (øre), and some two marks [...] *These housecarles of the king* owe to serve the king as those that have been mentioned before.’

b. Contrast with a possessive pronoun

En at locnum tiðum gacc þu ut oc skygn um **kaup þin**. En æf ukunn eru þer kaup i boe þa skygn þu vandlega at hværsu þeir fara mæð **sinum kaupum** er mæster oc bæztir kaupmænn ero kallaðer. (2^r, col.b:4–8)

‘And at the end of the services, go out and look after **your trades** [(*kaup þin*)]. But if you are unacquainted with the trading in the town, then observe carefully how they go on with **their trades** [(*sinum kaupum*)], who are called the most (important) and best merchants.’

Both examples in (28) show that the second contrasted possessive moves to a position above TopP (see e.g., Molnár 2006: 226) due to the feature [CONTRAST]. This results in the surface pattern possessive + head noun and a contrasted topic reading.

In (28a), *huscarlar konongs* ‘**houscarles of the king**’ introduces a new group of housecarls and does not stand in any direct contrast to previously mentioned groups within the discourse. *Þæsser konongs huscarlar* ‘**These housecarles of the king**’, however, stands in direct contrast to the previously addressed group of housecarls, taken up again by the subsequent subclause *þeir er fyrr var um roett* ‘those that have been mentioned before’.

Possessive pronouns are assumed to always be given and unstressed entities unless they are used in contrastive relations, such as in (28b), where **kaup þin**

‘your trade’ (= the son in the dialogue) stands in opposition to **sinum kaupum** ‘their trades’ (= the most important and best merchants). Pronoun possessors signal an opposition between co-reference and contrastive readings through positional variation. Contrastivity is an influential factor for an unambiguous identification of the head noun and a successful anchoring of the referent within the given discourse.

Additionally, other elements at a clausal level might be part of the encoding of identifiability and the activation status referred to by the possessor within the NP. Negation and other sentence adverbs have been discussed in several papers, taking information-structural constraints into account (cf. e.g., Delsing 1999; Alexiadou 2004; van Kemenade & Milicev 2012; see also Hróarsdóttir 2000: 170f.), mainly in connection with OV/VO variation.

Following discussions of the influence of sentence adverbs on a clausal level, the examples in (29) below show prenominal appearance of the possessive anchor in cases where the sentence adverb *æcki/æigi* takes scope over the extended NP. This means that the syntactic material within the extended NP, which is partitioned informationally in a topic-like and a focus-like part with designated positions within the phrase, is further exploited by the left periphery of the clause through these adverbs. An in-depth discussion of clause-level influence on NP-internal variation is outside of the scope of this study, although it offers an interesting research perspective.

(29) Sentence adverbs and NP-internal variation

- a. *lat þu æcki [þitt barn] iðrotta laust up foeðaz*
 let you NEG 2SG.POSS.ACC child skill free up grow
 ‘do not let your child grow up unskilled’ (3^r, col.a:6–7)
- b. *En þo tyn þu æigi at hældr [þinni tungu]*
 but yet lose you NEG to rather 2SG.POSS.DAT tongue
 ‘and yet, do not lose your own language’ (2^v, col.a:30–31)

As in Study III, also Study IV includes a wider discussion of definiteness phenomena and their impact on phrase-internal variation. Possessive constructions are generally held to be (semantically) definite by default (see e.g., Lyons 1999; Rosenbach 2002). Structurally, however, possessives in Old Norwegian seem to function only as anchoring devices (see e.g., Norde 1997; Heltoft 2010), while definiteness might be expressed elsewhere in the structure (cf. Roehrs 2005; Julien 2005a; Lander & Haegeman 2014). This anchoring function refers to the concept of givenness, which is closely related to and to a certain degree overlap with the concept of definiteness (cf. Section 2.1).

While a detailed semantic analysis has not been part of this study, the factor of prosodic weight as a potential trigger for positional variation of possessors has been examined, in accordance with the other close examinations done within this project and following the same analytical grounds as within the studies described in 5.1 and 5.3.

As with adjectives, the influence of prosodic weight within the nominal domain could not be described as decisive for positional variation including possessors. A possible indicator of the influence of prosodic weight could only be observed in elliptic flanking constructions, displaying several possessor reference points related to a repeating head noun, i.e., in constructions in which the first head noun is spelled out while the repetition of the referent is a phonologically empty copy (cf. van Urk 2018). An example of this construction is presented in (30).

- (30) *nema þu gerðer firi [drambś sacar] oc [yfir girndar ∅]*
 unless you did for pride.GEN sake and over greed.GEN *pro*
 ‘unless you did (it) for the sake of pride and (the sake of) avarice’ (45^r, col.b:4–5)

The observable default surface pattern in these complex constructions is one of [POSS—N & POSS] or [N—POSS & POSS], avoiding heavy clusters of elements in a fronted position, i.e., avoiding the pattern [POSS & POSS—N]. The assumed nonDP *pro* in possessive constructions is licensed through syntactic–semantic relations, rather than through number and gender agreement as with adjectives (cf. Haumann 2003: 66; Tiemann 2024). The simplified structure is illustrated in (31). The relation between nonDP *pro* and its lexical antecedent (the head noun in the first conjunct) is given by co-indexation.

- (31) Elliptic structure displaying nonDP *pro*
 a. [[NP_j PossNP₁] [& [*pro*_j PossNP₂]]]
 b. [[*grimleiks*]₁ *sacar*_j t₁] [& [*rettynnda*]₂ *pro*_j t₂]]

The context of the example given in (31b) is *hann ræfsi mæir firi grimleiks sacar en rettynnda* (40^r, col.a:4–5, ‘he may punish more for cruelty’s sake than justice’s’), presenting a contrastive reading of the two possessive anchors, which are moved in a position above TopP.

The analysis presented here places Norwegian possessive constructions in a broader Nordic context, positioning Norwegian between Icelandic on the one hand, and Danish and Swedish, on the other. While possessors in Old Icelandic and Old Norwegian still show considerable positional variation in relation to

TABLE 18 The development of positional variation of possessors across the Nordic dialects

Language/Period	Possessor Noun Pre-/Postposed	Possessive Pronouns Pre-/Postposed
Old Icelandic/Old Norwegian	Both	Both
Old Swedish/Old Danish	Preposed	Both
Modern Icelandic	Both	Both
Modern Norwegian	Preposed	Both
Modern Swedish/Danish	Preposed	Preposed

their head noun, the position of possessor nouns in genitive case is already relatively stable in a fixed preposed position in Old Swedish and Old Danish, with only a few exceptions as noted in Piotrowka's (2021) material.

For possessive pronouns, in contrast, both the West Nordic and the East Nordic branch allow for pre- and postposed positioning of the possessor. In their modern counterparts, Norwegian has established a fixed preposed position of possessor nouns, similar to Swedish and Danish, although it has retained the possibility of a postposed position of possessive pronouns, similar to Icelandic (cf. Vangsnes 2014: 5; see also Thráinsson 2007 for Icelandic; and Lødrup 2011; Julien 2005a for Norwegian). These overall generalizations—not accounting for possible variation in dialects—are presented in Table 18.

The empirical analysis of the three factors considered in this study shows that variation within the Old Norwegian noun phrase is mainly the result of pragmatic factors, with an emphasis on a fronted position for these elements, and interacting with related concepts such as definiteness. The theoretical assumption and the inclusion of a left periphery within the nominal phrase of Old Norwegian seems to hold also for possessive constructions and can generally explain syntactic variation at a phrasal level, in line with assumptions made for the CP.

Study IV, which places Norwegian within a broader Nordic context, demonstrates that the differences between West and East Nordic are visible, with Norwegian, as expected, occupying an intermediate position.

Summary and Conclusion

Having presented the four studies within this research project, I will now conclude this monograph with a brief summary of the framing discussion for the studies, as presented in Sections 1–4. Following that, I will provide some concluding remarks based on the main findings presented in Section 5.

1 Research Framework and Context

Examining syntactic variation and the role of information structure in shaping word order in the written records of early Germanic languages aligns with a growing body of studies on languages such as Old English, Old High German, and Old Icelandic. Within the Nordic context, Old Norwegian and Old Icelandic have traditionally been treated as a single linguistic entity in syntactic research. However, the decision to examine Old Norwegian separately in this monograph enables a comparative perspective between the two languages. This approach can thus highlight syntactic differences and reveal divergent developments from an early stage in their histories.

Information structure is a dynamic and evolving field, marked by both theoretical and empirical gaps—particularly in less studied languages and in the analysis of historical corpora. This monograph contributes to the field by offering data-driven insights into how linguistic elements reflect discourse-level phenomena, and how both linguistic and visual strategies in the source material of Old Norwegian interact. By integrating methods from corpus linguistics, historical linguistics, and philology, this research opens promising avenues for further investigations.

In Section 1, I outline three major challenges in analyzing information structure in historical corpora: theoretical diversity, the absence of prosodic features, and concerns about data reliability.

Information structure is a multifaceted concept that intersects with various areas of linguistics, including pragmatics, semantics, morphosyntax, and phonology. While multiple approaches have been developed, the diversity of theoretical frameworks complicates the development of a unified framework, especially for historical language analysis. Section 2.2 therefore, defines key terms and concepts as they are used in the information-structural studies presented in this book, grounding the analysis in a consistent framework.

In the case of historical languages like Old Norwegian, which are preserved only in written form, prosodic features such as pitch accent, crucial for signaling focus, cannot be observed directly. This necessitates reliance on syntactic constructions, such as ellipses, and visual markers in the manuscripts that reflect information-structural properties. Furthermore, structured texts that follow a clear QUD structure, such as Kgs, make the analysis of topic changes easier to follow, providing useful grounds for a comprehensive understanding of information structure in this text.

The reliability and representativeness of the data pose methodological concerns that unfortunately cannot be changed. Written sources may not fully reflect the language system they represent, and written language in general tends to be more stylistically marked than oral language. Furthermore, the examinations presented here largely are based on a single Old Norwegian text, meaning that the findings must be understood as indicative rather than conclusive. Additional corpus material is needed to verify the generalizations made for Old Norwegian based on the analysis of Kgs.

In Section 3, I discuss the selection criteria for the textual material used in the examinations within the project on syntactic variation and information structure in Old Norwegian. Four key factors guided the choice: (i) the text must be in Old Norwegian, (ii) it must be written by a Norwegian scribe (not an Icelandic scribe), (iii) it must be of sufficient length to allow for systematic analysis of discourse development to determine information-structural patterns, and (iv) it must be of a genre that does not restrict the language used to formulaic expressions (e.g., law texts). These criteria led to the selection of Kgs, preserved in the manuscript AM 243 b α fol., as the primary source.

Although Kgs may not mirror all properties of the spoken language of 13th century Norway, it is composed in a dialogic format that attempts to imitate spoken discourse. The text is structured as a didactic exchange with a clear question-answer-repetition pattern (QUD), making it easier to determine topic continuations and changes, as well as highlighted material within the discourse. This makes it particularly suitable for analyzing information structure.

Section 4 presents the corpus used for the study, developed within KoNoKs, and describes the annotation tags. The corpus was annotated following adapted guidelines from established Indo-European information structure projects (cf. Section 1). This annotated material forms the empirical foundation for all the quantitative analyses presented in the studies.

The section also addresses potential sources of error in the annotation process. It emphasizes the need for critical reflection on methodological limitations and highlights the benefits of parallel annotations of the same material to verify structural understandings.

The discussions and theoretical foundations laid out in the sections 1–4 provide the framework for analyzing information structure and syntactic variation, as well as for the studies presented in Section 5.

2 Concluding Remarks

The findings of the present research show, first and foremost, that there are significant syntactic differences between Old Icelandic and Old Norwegian early in their language histories. These differences mark the starting point for the divergent syntactic development of these two languages at both the phrasal and clausal levels (cf. especially the studies presented in the sections 5.1 and 5.3).

While word order in Old Icelandic is still greatly affected by information-structural constraints, making it appear freer, Norwegian began to show a weakening influence of these (still active) constraints relatively early. The Old Norwegian corpus material from the 13th century already exhibits strong tendencies towards the fixed word order found in Modern Norwegian, particularly in the positioning of complements relative to the head of the phrase/clause. The data thus demonstrates that Old Norwegian already shows considerably more VO structures than Old Icelandic in material from a similar time.

In cases of syntactic variation, however, the factor of prosodic weight also triggers a less strict division of elements into pre- or postposed position than in Old Icelandic. In Old Icelandic, this factor has been described as the decisive factor in word order alternations, capable of overriding information-structural constraints (cf. Hróarsdóttir 2000, 2009).

In Old Norwegian, the effects of prosodic weight can be observed at the clausal level, where heavy objects are more often found in later positions (VO) regardless of their information status. However, light objects were not consistently found in prenominal position, as it is the case for Old Icelandic. This difference clearly distinguishes the two languages.

At a phrasal level too, heavy entities are not preferred in early positions, confirming that complex elements, such as two adjectival elements, are avoided in stacked fronted positions. Instead, a (coordinated) elliptic structure is preferred. Nevertheless, prosodic weight could not be identified as a decisive factor in the observed variation at a phrasal level—neither in the study presented in Section 5.3 nor in Section 5.4.

The development towards a fixed word order in Old Norwegian already started and is part of this weakened influence. The overall findings from the four studies contribute not only to data analyses, resulting in generalizations

for Old Norwegian, but also to theoretical approaches and the development of information-structural concepts and notions, e.g., by discussing the information status of adjectives.

Beyond the purely linguistic structuring of information at the phrasal and clausal level, this research also demonstrates the influence of general principles of information structure as visual reflexes on the manuscript page. As stated above, I consider it important to examine the manuscripts themselves and their composition when analyzing variation and discourse structuring.

Medieval writing did not yet follow a common standard, whether in orthography or punctuation. Visual cues for structuring thoughts and marking important words or passages were frequently used and can be tracked as means of emphasis. These visual markers can also be combined with purely linguistic strategies, as in the case of appositions, exemplified in (32a), or clefting, exemplified in (32b).

- (32) a. Ennda heyri ec oc at sva væri þa er þer varuð mæð konongum at í yðrum munne þotte væra **oll lanndrað**. sva **logmal** oc **sættar gerðer** oc **alzskonar spæki**. (1^r–1^v, col. b/a:30–3)

‘And I have also heard that (it) it was like this when you were with the king, that all government was constructed after your mouth/opinion: as lawmaking, and treaty making, and every kind of wisdom.’

- b. þa skaltu þat vist vita. **at þat** er litill lutr a lanndino er þitt er en allt annat þa er isum þact (11^v, col.b:19–21)

‘so should you well know this, that it is a small part of the land that is thawed, while all other (parts) are covered by ice.’

Additionally, small initials, as well as colored letters and words, may emphasize specific entities in the manuscript text. These visual tools used in the production of written texts in the Middle Ages are often overlooked in linguistic studies.

At the beginning of this book, in Section 1.2, I stated that the purpose of this research is to provide annotated and analyzed data for Old Norwegian. I also aimed to break with the tradition of viewing Old Norwegian syntax as identical to that of Old Icelandic. While I have not focused solely on the differences between these two languages in all four studies, I have also considered other older Nordic languages (e.g., Old Swedish and Old Danish) in the discussions.

In comparisons between West and East Nordic too, Old Norwegian is often not considered separate from Old Icelandic. This might result in generalizations that do not accurately reflect the language of Old Norwegian. After all, Norwegian followed the same developmental lines seen early in Old Danish and Old Swedish, while Icelandic became distinct from the Mainland Scandinavian languages at all linguistic levels.

Within this research project, I could not make any quantitative statements concerning larger amounts of data than those annotated and analyzed within KoNoKs. Other Old Norwegian texts were consulted within the studies to verify the general findings from the corpus material, especially since the main database for the four studies relies on a close-up analysis of only one Old Norwegian text from the 1270s. This text is not representative of the entire period of Old Norwegian nor all text genres. Therefore, interference of genre-specific features must be considered.

Additionally, the text of Kgs has been described as an elaborately constructed work, which might influence the results as well. However, it is still possible to argue for the findings presented here, as Kgs discusses the spoken language of the time and represents a genuine Old Norwegian text (cf. Section 3.2; see Johansson & Kleivane 2018), with the possible word order patterns still available in the language.

Now that some general tendencies and generalizations have been established about syntactic variation and information structure in Old Norwegian, it also becomes possible to analyze deviations in terms of influence from another source language. In some cases, these comparisons might help distinguish a genuine Norwegian passage from doubtful cases of possible translations.

Based on the studies already provided for Old Icelandic, this monograph presents a missing part of the thus far incomplete picture in the analysis of West Norse. It supports earlier research on syntactic variation in older Germanic languages, such as Old English (Biberauer & van Kemenade 2011; Taylor & Pintzuk 2012a, 2012b; Struik & van Kemenade 2018) and Old High German (Petrova 2009; Hinterhölzl & Petrova 2018), and their research results respectively (see also Dewey 2006).

As mentioned in the overview in Section 2, the decisive factor in Old High German was information structure, which could override prosodic factors. This language developed into an OV language, while other Germanic languages, such as Old English and Old Icelandic developed into VO languages. In these languages, prosodic weight could override information-structural constraints at the clausal level.

For Old Norwegian, prosodic weight seems to play an important role within the clause structure, albeit with a clearly weakened influence of this factor,

as well as the factor of information status, compared to Old Icelandic. Thus, Old Norwegian already shows VO as the dominant word order pattern, where objects no longer necessarily responded to a movement trigger. Generally, we observe already relatively early tendencies towards the fixed word order established in Modern Norwegian.

I believe that the new insights captured within this research may be useful for broader studies comparing older Germanic languages. They might even serve as a starting point for more fine-grained analyses of the syntactic differences between Old Icelandic and Old Norwegian, breaking the tradition of treating these two languages under the same umbrella term (Old Norse).

By providing corpus material from Old Norwegian, this research provides a promising contribution for understanding the development towards fixed word order and some still observable alternations in Modern Norwegian, such as the position of possessive pronouns. This monograph thus offers detailed insights into a comparative analysis that should be followed up with further research, including other Old Norwegian texts and also corpus material from Middle Norwegian, which is still largely missing.

The results of the four studies presented in Section 5 highlight the importance of investigating these issues in comparisons of closely related languages. This contributes to the study of Old Norse, historical linguistics, information structure, and manuscript studies. As the corpus material follows the annotation scheme used for other older languages in ANNIS, the main findings in the studies of Old Norwegian can additionally be directly compared with the data included in that database. This makes Old Norwegian an important part of a potential larger language comparison project.

As written in Kgs, *æf þu villt værðaða fullkomenn í froðleic. þa næmðu allar mal-lyzkur ... En þo tyn þu æigi at hældr þinni tungo* [if you want to be perfect in knowledge, then learn all languages ... And yet do not lose your (own) language.]: to understand the linguistic developments of Norwegian, it is important to compare the relevant patterns not only to other languages in general but also to the languages closest to Norwegian, including within its own grammatical system. After all, the results of such studies also shed light on specific linguistic traits of the language of comparison—Icelandic.

Appendix

The guidelines written for and used in this project are based on Schnaus & Schneider (unpublished).

[text]	- <i>diplomatic level (expansion of abbreviations): punctuation simply marked as <p>: pro-forms #</i>														
[lem]	- <i>lemma as is given in ONP-conventions, pro-forms #</i>														
[glos/morph] (=glossing)	<table border="1"> <tr> <td>nouns (appellative and propria)</td> <td>Genus (M, F, N, C[ommune], UNSPEC) Numerus (SG, PL, UNSPEC) Case (NOM, GEN, DAT, ACC, OBL[ique], UNSPEC) Definiteness (Ind, Def)</td> </tr> <tr> <td>adjectives (Haugen 2001:229-230)</td> <td>in nominal use: +genus (M, F, N), +numerus (SG, PL), (attributive/predicative) in adverbial use: +grade Degree (pos, com, sup, UNSPEC)</td> </tr> <tr> <td>determinativa</td> <td>Genus (M, F, N) Numerus (SG, PL) Case (NOM, GEN, DAT, ACC) Person (1, 2, 3) (possessive pronoun)</td> </tr> <tr> <td>personal pronouns</td> <td>Numerus (SG, PL, DU) Case (NOM, GEN, DAT, ACC) Person (1, 2, 3)</td> </tr> <tr> <td>interrogative pronouns/ indefinite pronouns</td> <td>Case (NOM, GEN, DAT, ACC)</td> </tr> <tr> <td>adverbials/particles</td> <td></td> </tr> <tr> <td>verbs (Haugen 2001: 222-229)</td> <td>Finiteness (fin[ite], inf[inite], PRT (participle)*) Tense (PRS, IPF (imperfect=preterite)) Modus (IND[ikative], IMP[erative], OPT[ative], UNSPEC) Diathesis (ACT, MED (reflexive), UNSPEC) Person (1, 2, 3) Numerus (SG, PL UNSPEC)</td> </tr> </table> <p>*plus annotation of tense (PRT=PF, PRT=PRS)</p> <p><i>Examples:</i> noun: hirðar: court(F);GEN.SG adjective: gamallar: old-GEN.F.SG,pos verb: skal: PRS.IND.ACT.ISG</p>	nouns (appellative and propria)	Genus (M, F, N, C[ommune], UNSPEC) Numerus (SG, PL, UNSPEC) Case (NOM, GEN, DAT, ACC, OBL[ique], UNSPEC) Definiteness (Ind, Def)	adjectives (Haugen 2001:229-230)	in nominal use: +genus (M, F, N), +numerus (SG, PL), (attributive/predicative) in adverbial use: +grade Degree (pos, com, sup, UNSPEC)	determinativa	Genus (M, F, N) Numerus (SG, PL) Case (NOM, GEN, DAT, ACC) Person (1, 2, 3) (possessive pronoun)	personal pronouns	Numerus (SG, PL, DU) Case (NOM, GEN, DAT, ACC) Person (1, 2, 3)	interrogative pronouns/ indefinite pronouns	Case (NOM, GEN, DAT, ACC)	adverbials/particles		verbs (Haugen 2001: 222-229)	Finiteness (fin[ite], inf[inite], PRT (participle)*) Tense (PRS, IPF (imperfect=preterite)) Modus (IND[ikative], IMP[erative], OPT[ative], UNSPEC) Diathesis (ACT, MED (reflexive), UNSPEC) Person (1, 2, 3) Numerus (SG, PL UNSPEC)
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verbs (Haugen 2001: 222-229)	Finiteness (fin[ite], inf[inite], PRT (participle)*) Tense (PRS, IPF (imperfect=preterite)) Modus (IND[ikative], IMP[erative], OPT[ative], UNSPEC) Diathesis (ACT, MED (reflexive), UNSPEC) Person (1, 2, 3) Numerus (SG, PL UNSPEC)														

¹ When a form is synthetic and in non-nominative case (here: genitive, dative, accusative).

FIGURE 40 Annotation guidelines, part 1

[glos/morph] (=glossing)	complexe verbal forms: <i>em ... kominn</i> Ec em sva kominn ek vera svá koma glos/morph I.NOM.SG PRS.IND.ACT.1SG PRT=PF.M.SG pos píperts vfin vadj gfunct subj precompl-i precompl-i					
	- separate between demonstratives (<i>þat, sá > þ/s</i>) and relatives (<i>hverssu, etc. > hv/v</i>) - null-subjects/-objects are marked with #					
[pos] (=parts of speech)	nouns	noun noun=vfin	noun.num gerund (verbal noun)	comp/adj gerundive (verbal adjective) ²	comp/adv (compound) supinum vnominal	
	adjectives	adj	adj.compar adj.gerundiv	adj.num adj.superlat		
	verbs	vfin vadj	vinf comp/vfin	prt (particle; prt.prs.act ... prt.pf.med ...)		
	adverbs	adv	adv.compar advrel.correlat	adv.correlat adv.dir adv.indef	advdem.correlat adv.interrog adv.superlat	
	pronouns	prident personal pronoun)	printerrog prrefl	ppers prposs	papercraft (reflexive pronoun that is used as a	
	determinatives	detdem	detdem.correlat detposs	detquan[tor] detcard[inal]		
	others	part[icle] (also negation) inf.m[arker]	refl.part posp[osition]	conj[unction] interject[ion]	subjunction subjunction/re	
	pro	pronoun deletion with simple verbs, after first finite main verb				
	<i>Example:</i> auk næfni: comp/noun					
	[v-sem] (=verbal semantics)	desiderative performative	feeling phasal	impersonal propositional attitude	knowledge manipulative utterance	modal perception

² Gerundive: Especially in translations from Latin text; forms are similar to the pres.part. *Ekki er kristnum manni meir fljúanda en ofmetnaðr*, from *Nihil magis Christiano vitandum est quam superbia*. This form is identical to the pres.part.; the difference lies in the semantics. Pres.part. is active and factual while the gerundive is passive and deontic. The gerundive in a typical construction is used as a predicative with the copula *ísta kynning [...i er nemandi]*.

FIGURE 41 Annotation guidelines, part 2

<p>[saliency] (=semantic saliency)</p>	<p>nouns</p> <p>nominal abstract denoting human animate inanimate human proper pr1 pr2 pr3</p> <p>pronouns</p>	<p>/animate /collective /unique (sól), concrete (can be touched), abstract /relative, collective /animal, country, date, folk, human, lake, mountain, opus, place, plant, river pr1, poss pr2 /deict, dem, refl, poss, interrog, indef, rel (/human, animate, inanimate) /refl</p>
<p>[givenness]</p>	<p>- link to [frame]: [giv]</p> <p>new giv (active) (giv) inactive]</p> <p>access-gen[er]al] access-sif[unctional] anchoring bridging part-whole set-relation</p>	<p>(common ground – year, day etc.) (situational knowledge) (refers to given information, up-following features) (information that can be expected in the context) (subset, superset, part of the same set)</p>
<p>[definiteness]</p>	<p>- pronouns/determinatives and a related noun are marked with the index <i>def-i</i></p> <p>def – indef – spec.indef (in case of numeral, f.ex. <i>bat saem, noccora úvini</i>)</p>	
<p>[context]</p>	<p>pronouns/determinatives</p> <p>ana.ref, kata.ref, deict.ref, demon/deict, personal.deict, sit.deict</p> <p>nouns</p> <p>identity.ana, identity.ref</p> <p>particles and adverbials</p> <p>caus[al], comparative, concessive, conclusive, cond, connect, consecutive, contrast, contrastive/junctive, disjunct, fin, general[izing], iterative, junctive, junctive/corrective, junctive/neg, preterite, topic change</p> <p>conjunctions</p> <p>connect (combines two constituents), junctive (combines two sentences)</p>	
<p>[frame]</p>	<p>- main concept for topic (<i>content</i>)</p> <p>scheme: X Example: lýsi – scheme sun/light/warmth</p>	

FIGURE 42 Annotation guidelines, part 3

<p>[topic]</p>	<p>Con-T Continuing topic S-T Shifting topic (perspective to a new referent) C-T Contrastive topic (or I-Topic, answers a question; stressed “also”)</p> <p>- multiple use possible</p>																																								
<p>[position-F/-T] (=focus position)</p>	<table border="1"> <tr> <td>initial</td> <td>2P</td> <td>post-2P</td> <td>middle</td> <td>final</td> <td>all-focused clause</td> <td>focus split</td> <td>cov (with proforms)</td> </tr> <tr> <td>sub-initial</td> <td>sub-2P</td> <td>sub-post2P</td> <td>/XP-middle</td> <td>sub-final</td> <td>sub-all-focused clause</td> <td></td> <td></td> </tr> <tr> <td>/XP-initial</td> <td></td> <td></td> <td>/XP-final</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>/post/pre:</td> <td>-conj[unction]</td> <td>-demon</td> <td>-interrog</td> <td>-part</td> <td>-rel</td> <td>verbal</td> <td></td> </tr> <tr> <td></td> <td>-compound</td> <td>sentence</td> <td>-parataxis</td> <td>-sub</td> <td>[ordinated structure]</td> <td></td> <td></td> </tr> </table>	initial	2P	post-2P	middle	final	all-focused clause	focus split	cov (with proforms)	sub-initial	sub-2P	sub-post2P	/XP-middle	sub-final	sub-all-focused clause			/XP-initial			/XP-final					/post/pre:	-conj[unction]	-demon	-interrog	-part	-rel	verbal			-compound	sentence	-parataxis	-sub	[ordinated structure]		
initial	2P	post-2P	middle	final	all-focused clause	focus split	cov (with proforms)																																		
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/XP-initial			/XP-final																																						
/post/pre:	-conj[unction]	-demon	-interrog	-part	-rel	verbal																																			
	-compound	sentence	-parataxis	-sub	[ordinated structure]																																				
<p>[comment] (=focus domain)</p>	<p>- includes New Information Focus, Contrastive Focus and non-focal elements - this is marked with cm</p>																																								
<p>[NFocus] (=new information focus)</p>	<p>Nf (new, normal focus) – nfsol (respond to a question)</p>																																								
<p>[CFocus] (=contrastive focus)</p>	<p>- note focus-particles, give indication of the position of C-Focus - contr: every element with new/own annotation - contrast paires: get indexation - (can include topic – contrastive topic: not to be annotated in the comment-domain)</p>																																								
	<table border="1"> <tr> <td>contr (=Contrastive Focus)</td> <td> <p>contr-additive (“as well”) -neg/additive (“neither-nor”) -neg (“not; instead”) -scalar (“even”) -sel (“(either)-or”) -corr (“but”) -ident (“just”) -impl (f. ex. with comparatives/superlatives/intensifier) truth value of a sentence</p> </td> </tr> <tr> <td>verum (=Verum Focus)</td> <td></td> </tr> <tr> <td>emph (=Emphatic Focus)</td> <td></td> </tr> </table>	contr (=Contrastive Focus)	<p>contr-additive (“as well”) -neg/additive (“neither-nor”) -neg (“not; instead”) -scalar (“even”) -sel (“(either)-or”) -corr (“but”) -ident (“just”) -impl (f. ex. with comparatives/superlatives/intensifier) truth value of a sentence</p>	verum (=Verum Focus)		emph (=Emphatic Focus)																																			
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verum (=Verum Focus)																																									
emph (=Emphatic Focus)																																									

FIGURE 43 Annotation guidelines, part 4

<p>[discourse]</p>	<ul style="list-style-type: none"> - summarize: speaker + explanation - introduction/comment <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">superordinate</td> <td>introduction, commentary (personal opinion), direct speech, narration, reported speech</td> </tr> <tr> <td>subordinate</td> <td>answer, background, commentator, consequence, continue speaker, contrast, correction, elaboration, explanation, introduction, narrative, narrator, precondition, question, quotation, request, result, source, stereotypical, expression, turn speaker1/speaker2/...</td> </tr> </table>	superordinate	introduction, commentary (personal opinion), direct speech, narration, reported speech	subordinate	answer, background, commentator, consequence, continue speaker, contrast, correction, elaboration, explanation, introduction, narrative, narrator, precondition, question, quotation, request, result, source, stereotypical, expression, turn speaker1/speaker2/...																																																				
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<p>[style]</p>	<p><i>Example:</i> direct speech/turn speaker2/answer</p> <ul style="list-style-type: none"> - might be connected to [frame] (f. ex. comparison) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>accumulatio</td> <td>allegory</td> <td>alliteration</td> <td>anaphora</td> <td>anakoluthon</td> <td>antithesis</td> <td>antonym</td> </tr> <tr> <td>asyndeton</td> <td>chiasmus</td> <td>case form incongruent</td> <td></td> <td>climax</td> <td>constructio ad sensum</td> <td>contractio</td> </tr> <tr> <td>ellipsis</td> <td>epitheton</td> <td>figura etymologica</td> <td></td> <td>formulaic expression</td> <td>hyperbaton</td> <td>idiomatic expression</td> </tr> <tr> <td>impersonal construction</td> <td>increasing terms</td> <td>increasing terms</td> <td></td> <td>indecl</td> <td>inf.hist</td> <td>inversion</td> </tr> <tr> <td>isocolon</td> <td>metaphora</td> <td>light verb construction</td> <td></td> <td>nominal clause</td> <td>onomatopoeia</td> <td>parallelism</td> </tr> <tr> <td>parenthesis</td> <td>pejorative</td> <td>personification</td> <td></td> <td>polar expression</td> <td>polychronon</td> <td>polyptoton</td> </tr> <tr> <td>prolepsis</td> <td>rel.sentence</td> <td>repetitio</td> <td></td> <td>rhetorical question</td> <td>safigé</td> <td></td> </tr> <tr> <td>similitude</td> <td>tnesis</td> <td>tricolon</td> <td></td> <td>zeugma</td> <td>...</td> <td></td> </tr> </table>	accumulatio	allegory	alliteration	anaphora	anakoluthon	antithesis	antonym	asyndeton	chiasmus	case form incongruent		climax	constructio ad sensum	contractio	ellipsis	epitheton	figura etymologica		formulaic expression	hyperbaton	idiomatic expression	impersonal construction	increasing terms	increasing terms		indecl	inf.hist	inversion	isocolon	metaphora	light verb construction		nominal clause	onomatopoeia	parallelism	parenthesis	pejorative	personification		polar expression	polychronon	polyptoton	prolepsis	rel.sentence	repetitio		rhetorical question	safigé		similitude	tnesis	tricolon		zeugma	...	
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<p>[orig]</p>	<p>- original sentence (diplomatic level) with punctuation, copy of [text] for a better overview on a vertical level</p>																																																								
<p>[transl]</p>	<p>- translation to English, copy of [trans] for a better overview on a vertical level</p>																																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">[sentence_order] (ME/SE)</td> <td>utterance/desiderative... obj/subj postverbal/preverbal/circumverbal/dislocated</td> </tr> <tr> <td>relative clauses and prt.conj.</td> <td>rel/prt.conj circum-/pre-/postnominal/dilocated nucleus cov (if nucleus latent)</td> </tr> <tr> <td>adverbial subclauses</td> <td>order is annotated f. ex. temp initial/pre_loc; loc final/post mod</td> </tr> <tr> <td>generell</td> <td>split/initial/middle/final/cov/post/pre-parataxis f. ex. caus initial</td> </tr> </table>	[sentence_order] (ME/SE)	utterance/desiderative... obj/subj postverbal/preverbal/circumverbal/dislocated	relative clauses and prt.conj.	rel/prt.conj circum-/pre-/postnominal/dilocated nucleus cov (if nucleus latent)	adverbial subclauses	order is annotated f. ex. temp initial/pre_loc; loc final/post mod	generell	split/initial/middle/final/cov/post/pre-parataxis f. ex. caus initial																																																	
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FIGURE 44 Annotation guidelines, part 5

<p>[syl_no] (= syllable-number) (ME/SE)</p>	<ul style="list-style-type: none"> - Phrases are summarized, combine columns or indexing -i - Phrases are: attributes + nucleus; subordinated sentences 																																																														
<p>[word-order] (ME/SE)</p>	<p><i>Verb position:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">V1</td> <td style="width: 25%;">V2</td> <td style="width: 25%;">Vmiddle</td> <td style="width: 25%;">Vend</td> </tr> <tr> <td colspan="4">/V split</td> </tr> <tr> <td colspan="4">/post-2P</td> </tr> <tr> <td colspan="4">/pre-sub[ordinated structure]</td> </tr> <tr> <td colspan="4">/post-sub</td> </tr> <tr> <td colspan="4">/post-conj[unction]</td> </tr> <tr> <td colspan="4">/post-adv</td> </tr> <tr> <td colspan="4">/pre-parataxis...</td> </tr> <tr> <td colspan="4">enclitic</td> </tr> <tr> <td colspan="4">cov (supplementary forms): for subjects that do not appear overtly</td> </tr> </table> <p><i>Object position:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">pre-</td> <td style="width: 50%;">post-</td> </tr> <tr> <td colspan="2">/V</td> </tr> <tr> <td colspan="2">/XV</td> </tr> </table> <p><i>Specifics in word order (derivates at the end):</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">AdvP-fronting</td> <td style="width: 25%;">AP-fronting</td> <td style="width: 25%;">DP-fronting</td> <td style="width: 25%;">PP-fronting</td> </tr> <tr> <td>cleft</td> <td>pseudo-clefts</td> <td>incomplete VP-fronting</td> <td>left dislocation</td> </tr> <tr> <td>right dislocation</td> <td>right periphery</td> <td></td> <td></td> </tr> <tr> <td>topic split</td> <td>true topicalization</td> <td></td> <td></td> </tr> </table> <p><i>Example:</i> V1/post-subj; V2/V split – Vend/V split</p>	V1	V2	Vmiddle	Vend	/V split				/post-2P				/pre-sub[ordinated structure]				/post-sub				/post-conj[unction]				/post-adv				/pre-parataxis...				enclitic				cov (supplementary forms): for subjects that do not appear overtly				pre-	post-	/V		/XV		AdvP-fronting	AP-fronting	DP-fronting	PP-fronting	cleft	pseudo-clefts	incomplete VP-fronting	left dislocation	right dislocation	right periphery			topic split	true topicalization		
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AdvP-fronting	AP-fronting	DP-fronting	PP-fronting																																																												
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topic split	true topicalization																																																														

FIGURE 46 Annotation guidelines, part 7

<p>[Comm]</p>	<p><i>Commentary for various types of additional information or further constraints</i></p> <ul style="list-style-type: none"> - <i>Used for remarks on periphrastic forms (PRS=PRT, PERIPHRAST.PF, FUT)</i> - <i>Used for punctuation marks</i> <table border="1"> <tr> <td>pmain</td> <td>division of main clauses</td> </tr> <tr> <td>psub</td> <td>division of subclauses</td> </tr> <tr> <td>punc</td> <td>not for the primary division of the clause structure; e.g. graphical emphasis</td> </tr> </table> <p>NB: All descriptions made in [Comm] (other than comments of the annotator) should follow a consistent pattern/usage.</p>	pmain	division of main clauses	psub	division of subclauses	punc	not for the primary division of the clause structure; e.g. graphical emphasis
pmain	division of main clauses						
psub	division of subclauses						
punc	not for the primary division of the clause structure; e.g. graphical emphasis						

FIGURE 47 Annotation guidelines, part 8

TABLE 19 Part 1—Merchant

Chapter and chapter title ¹	Leaves	Files
Chapter 2, The fear of the Lord is the beginning of wisdom	1 ^r –1 ^v	1 ^r _div2, 1 ^r _div2, 1 ^r _div3 1 ^v _div1, 1 ^v _div2-1, 1 ^v _div2-2, 1 ^v _div3, 1 ^v _div4
Chapter 3, The activities and habits of a merchant	1 ^v –2 ^v	1 ^v _div5 2 ^r _div1, 2 ^r _div2, 2 ^r _div3-1, 2 ^r _div3-2 2 ^v _div1
Chapter 4, The same subject continues	2 ^v –4 ^r	2 ^v _div2, 2 ^v _div3 3 ^r _div1-1, 3 ^r _div1-2 3 ^v _div1-1 4 ^r _div1
Chapter 5, The sun and the winds	4 ^r –5 ^v	4 ^r _div2, 4 ^r _div3 4 ^v _div1-1, 4 ^v _div1-2 5 ^r _div1-1, 5 ^r _div1-2 5 ^v _div1-1, 5 ^v _div1-2
Chapter 6, The tides and changes in the course of the sun	5 ^v	5 ^v _div2
Chapter 10, The natural wonders of Ireland	6 ^r –7 ^r	6 ^r _div1-1, 6 ^r _div1-2, 6 ^r _div1-3 6 ^v _div1-1, 6 ^v _div1-2, 6 ^v _div1-3 7 ^r _div1
Chapter 11, Irish marvels of miraculous origins	7 ^r –9 ^r	7 ^r _div2, 7 ^r _div3 7 ^v _div1-1, 7 ^v _div1-2, 7 ^v _div1-3 8 ^r _div1-1, 8 ^r _div1-2, 8 ^r _div1-3 8 ^v _div1-1, 8 ^v _div1-2 9 ^r _div1, 9 ^r _div1-2
Chapter 16, The marvels of the waters about Greenland: on monsters, seals and walrus	9 ^r –11 ^r	9 ^r _div2, 9 ^r _div3 9 ^v _div1-1, 9 ^v _div1-2, 9 ^v _div1-3 10 ^r _div1-1, 10 ^r _1-2 10 ^v _div1-1, 10 ^v _div1-2 11 ^r _div1
Chapter 17, The animal life of Greenland and the character of the land in those regions	11 ^r –12 ^r	11 ^r _div2, 11 ^r _div3 11 ^v _div1-1, 11 ^v _div1-2 11 ^v _div1-3, 11 ^v _div1-4 12 ^r _div1
Chapter 18, The products of Greenland	12 ^r	12 ^r _div2, 12 ^r _div3
Chapter 19, The climate of Greenland and the Northern Lights	12 ^r –13 ^v	12 ^r _div4 12 ^v _div1, 12 ^v _2-1, 12 ^v _div2-2 13 ^r _div1-1, 13 ^r _div1-2, 13 ^r _div1-3 13 ^v _div1-1, 13 ^v _div1-2
Chapter 20, The subject of the Northern Lights continues	13 ^v –14 ^r	13 ^v _div3 14 ^r _div1, 14 ^r _div2-1, 14 ^r _div2-2

¹ The English chapter titles built on Larson (1917) and are also used in the digital edition of Menota.

TABLE 19 Part 1—Merchant (*cont.*)

Chapter and chapter title	Leaves	Files
Chapter 21, The zones of heat and cold	14 ^v –15 ^r	14 ^v _div1, 14 ^v _div2-1, 14 ^v _div2-2 15 ^r _div1
Chapter 22, Navigation, winds and seasons	15 ^r –16 ^r	15 ^r _div2, 15 ^r _div3 15 ^v _div1-1, 15 ^v _div1-2, 15 ^v _div1-3 16 ^r _div1-1, 16 ^r _div1-2
Chapter 23, The proper season for navigation	16 ^v	16 ^v _div1, 16 ^v _div2-1, 16 ^v _div2-2

TABLE 20 Part 2—Court

Chapter and chapter title	Leaves	Files
Chapter 24, Introduction to the second oart (the king and his court)	16 ^v –17 ^v	16 ^v _div3 17 ^r _div1, 17 ^r _div2, 17 ^r _div3, 17 ^r _div4, 17 ^v _div1
Chapter 25, The importance of courtesy in the royal service	17 ^r –18 ^r	17 ^v _div2, 17 ^v _div3 18 ^r _div1
Chapter 26, Advantages from serving in the king's household	18 ^r –18 ^v	18 ^r _div2, 18 ^r _div3, 18 ^r _div4, 18 ^r _div5 18 ^v _div1
Chapter 27, The various classes among the kingsmen	18 ^v –19 ^v	18 ^v _div2, 18 ^v _div3 19 ^r _div1-1, 19 ^r _div1-2, 19 ^r _div1-3 19 ^v _div1
Chapter 28, The honored position of the kingsmen	19 ^v –20 ^r	19 ^v _div2, 19 ^v _div3–v2, 20 ^r _div1-1, 20 ^r _div1-2
Chapter 29, The superior order of kingsmen: on the hird	20 ^r –21 ^r	20 ^r _div2, 20 ^r _div3, 20 ^v _div1-1, 20 ^v _div1-2, 20 ^v _div1-3, 20 ^r _div1-4, 21 ^r _div1-1, 21 ^r _div1-2
Chapter 30, How to approach the king for a post in the hird	21 ^r –21 ^v	21 ^r _div2, 21 ^v _div1, 21 ^v _div2-1, 21 ^v _div2-2
Chapter 31, Why not to wear a mantle in the king's presence	22 ^r	22 ^r _div1
Chapter 32, Rules of speech and conversation in the king's hall	22 ^r –22 ^v	22 ^r _div2, 22 ^r _div3, 22 ^v _div1
Chapter 33, The proper uses of “you” and “thou”	22 ^v –23 ^r	22 ^v _div2, 22 ^v _div3, 23 ^r _div1
Chapter 34, The same subject continues	23 ^r –24 ^r	23 ^r _div2, 23 ^r _div3_1, 23 ^r _div3_2, 23 ^v _div1-1, 23 ^v _div1-2, 23 ^v _div1-3, 24 ^r _div1
Chapter 35, Relation between the quality of crops and the moral standard of government	24 ^r –24 ^v	24 ^r _div2, 24 ^r _div3, 24 ^v _div1-1, 24 ^v _div1-2
Chapter 36, The causes of such periods of dearth and what forms the dearth may take	24 ^v –27 ^r	24 ^v _div2, 24 ^v _div3, 25 ^r _div1-1, 25 ^r _div1-2, 25 ^r _div1-3, 25 ^r _div1-4, 25 ^v _div1-1, 25 ^v _div1-2, 25 ^v _div1-3, 26 ^r _div1-1, 26 ^r _div1-2, 26 ^r _div1-3, 26 ^v _div1-1, 26 ^v _div1-2, 26 ^v _div1-3
Chapter 37, The duties, activities and amusements of the royal guardsmen	27 ^r –30 ^v	27 ^r _div1, 27 ^r _div2, 27 ^v _div1-1, 27 ^v _div1-2, 27 ^v _div1-3, 28 ^r _div1-1, 28 ^r _div1-2, 28 ^r _div1-3, 28 ^v _div1-1, 28 ^v _div1-2, 29 ^r _div1-1, 29 ^r _div1-2, 29 ^r _div1-3, 29 ^v _div1-1, 29 ^v _div1-2, 29 ^v _div1-3, 30 ^r _div1-1, 30 ^r _div1-2, 30 ^r _div1-3, 30 ^v _div1

TABLE 20 Part 2—Court (*cont.*)

Chapter and chapter title	Leaves	Files
Chapter 38, Weapons of offence and defence	30 ^v –31 ^r	30 ^v _div2, 30 ^v _div3-1, 30 ^v _div3-2, 31 ^r _div1
Chapter 39–41	–	–
Chapter 42, God's justice	35 ^r –38 ^r	35 ^r _div2, 35 ^r _div3, 35 ^v _div1-1, 35 ^v _div1-2, 35 ^v _div1-3, 36 ^r _div1-1, 36 ^r _div1-2, 36 ^r _div1-3, 36 ^v _div1-1, 36 ^v _div1-2, 36 ^v _div1-3, 37 ^r _div1, 37 ^v _div1, 38 ^r _div1-1, 38 ^r _div1-2, 38 ^r _div1-3

TABLE 21 Part 3—King

Chapter and chapter title	Leaves	Files
Chapter 43, Responsibilities and position of the king	38 ^v –39 ^r	38 ^v _div1-1, 38 ^v _div1-2, 39 ^r _div1, 39 ^r _div2
Chapter 44, The same subject continues	39 ^r –40 ^r	39 ^r _div3, 39 ^r _div4, 39 ^v _div1-1, 39 ^v _div1-2
Chapter 45, The importance of leniency in the king's judgment	40 ^r –42 ^r	40 ^r _div2, 40 ^r _div3-1, 40 ^r _div3-2, 40 ^v _div1-1, 40 ^v _div1-2, 40 ^v _div1-3, 41 ^r _div1-1, 41 ^r _div1-2, 41 ^r _div1-3, 41 ^v _div1-1, 41 ^v _div1-2, 41 ^v _div1-3, 42 ^r _div1
Chapter 46, The importance of severity in the king's judgment, and the fall of Lucifer	42 ^r	42 ^r _div2, 42 ^r _div3
Chapter 47, The same subject continues	42 ^r –46 ^r	42 ^r _div3, 42 ^v _div2-1, 42 ^v _div2-2, 43 ^r _div1-1, 43 ^r _div1-2, 43 ^r _div1-3, 43 ^v _div1-1, 43 ^v _div1-2, 43 ^v _div1-3, 44 ^r _div1-1, 44 ^r _div1-2, 44 ^r _div1-3, 44 ^v _div1-1, 44 ^v _div1-2, 44 ^v _div1-3, 45 ^r _div1-1, 45 ^r _div1-2, 45 ^r _div1-3, 45 ^v _div1-1, 45 ^v _div1-2, 45 ^v _div1-3, 46 ^r _div1
Chapter 48, A commentary on the story of Lucifer	46 ^r –47 ^v	46 ^r _div2-1, 46 ^r _div2-2, 46 ^v _div1, 46 ^v _div2, 46 ^v _div3, 46 ^v _div4, 46 ^v _div5, 47 ^r _div1-1, 47 ^r _div1-2, 47 ^r _div1-3, 47 ^v _div1

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