

Early English modals

Form, function, and analogy

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Early English modals

Form, function, and analogy

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Figure 4.1 ‘English dialects in the tenth century’, reproduced from Emerson (1901: 28). Public domain.

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Symbols and abbreviations

Grammatical glosses

()	inherent category (e.g. nominal gender)
[]	unmarked category (e.g. zero-marked plurals)
-	affix boundary
=	clitic boundary
+	boundary in compound
~	boundary in reduplication
Ø	zero
1/2/3	1st/2nd/3rd person
ABL	ablative
ACC	accusative
ADV	adverb(ial)
ANIM	animate
C	common gender
COMP	complementizer
COP	copula
COPB	future-habitual copula (Old English <i>beon</i>)
DAT	dative
DEF	definite
DEM	demonstrative
DEO	deontic-moral
DU	dual
DYN	dynamic
DYN-IMP	participant-imposed dynamic
DYN-INH	participant-inherent dynamic
DYN-SIT	situational dynamic
EMPH	emphatic
EPI	epistemic
EVI	evidential

EVT	eventuality
EXCL	exclusive
EXP	experiencer
F	feminine
FUT	future
GEN	genitive
HAB	habitual
HORT	hortative
IMP	imperative
INANIM	inanimate
IND	indicative
INDF	indefinite
INF	infinitive
INFL	Old English ‘long’ (inflected) infinitive
INS	instrumental
INT	intensifier
LOC	locative
MAND	mandative
M	masculine
NEG	negation
N	neuter
NOM	nominative
OBL	oblique
OBLIG	obligation
OPT	optative
PASS	passive
PERM	permission
PFV	perfective
PL	plural
PLUR	pluractional
PM	predicate marker (Tok Pisin <i>i</i>)
PN	proper noun
POSS	possessive
PRF	perfect
PROG	progressive participle
PRS	present
PST	past
PTCP	perfect participle
REFL	reflexive
REL	relative
SBJV	subjunctive
SG	singular
SUPR	superlative
TR	transitive

Symbols in transcriptions

()	expanded abbreviation
[]	emendation or conjecture
{}	editorial deletion
˘	scribal addition above line
	line or verse break

Languages

EME	Early Middle English
EModE	Early Modern English
LME	Late Middle English
LModE	Late Modern English
MDa	Middle Danish
ME	Middle English
OE	Old English
OHG	Old High German
ON	Old Norse
PDE	Present-Day English
PGmc	Proto-Germanic
PIE	Proto-Indo-European
WS	West Saxon

Miscellaneous

¬	negation
◇	possibility
□	necessity
←	‘derives from’
→	‘changes into’
↗	‘influences’
<i>a.</i>	<i>ante</i> (before)
BL	British Library
<i>c.</i>	century
<i>c.</i>	<i>circa</i> (around)
EETS	Early English Text Society
f.	folio
LP	linguistic profile (eLALME)
MS(S)	manuscript(s)
n.	note
p(p).	page(s)
SOV	subject–object–verb order

xx

SVO	subject–verb–object order
TMA	tense, modality, and aspect
v.r.	variant reading

Woord vooraf

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Be noȝt so gryndel god man bot go forth þy wayes
Be preue & be pacient i(n) payne & i(n) Ioye
For he þat is to rakel to renden his cloþeȝ
Mot efte sitte w^t more vnsou(n)de to sewe he(m) togeder
— *Patience*, late 14th c. (Cotton MS Nero A. x, f. 94^r)

Nichts setzt dem Fortgang der Wissenschaft mehr Hindernis entgegen als wenn man zu wissen glaubt, was man noch nicht weiß.
— G. Chr. Lichtenberg, *Sudelbücher*, J 1438

Part I

Background

CHAPTER 1

Preliminaries

‘Ne swa þeah treowde þeah þu teala
eode,’ cwæþ se þe geseah hægtessan
æfter heafde geo[ngan]
— Old English proverb [DurProv, 11]

1.1 The English modals in a nutshell

The English modals are a continuing source of fascination—and frustration—to linguists and language learners alike. Most student grammars include detailed information on the syntax and semantics of the modals, and on the internet one can find a plethora of websites and videos attempting to explain their proper use to learners.¹ The ‘core’ members of the group of modals are CAN, MAY, MUST, SHALL, and WILL; OUGHT is often included as well. DARE and NEED are usually seen as less central members. This dissertation is about the ancestors of these modals in Old and Middle English, most importantly MUST, CAN, MAY, and DARE.

In standard Present-Day English, the modals along with *be*, *have*, and *do* constitute a small group of auxiliaries, which are distinguished from ‘full’ verbs by a number of morphosyntactic properties. Huddleston (1976) coined the mnemonic NICE to refer to these properties, which has been used in many works since then (e.g. Palmer 1990: 4–5, 201–203; Warner 1993: 82; Huddleston & Pullum 2002: 93): Negation, Inversion,

¹ One can easily verify this by entering the query ‘English modals’ into the Google search engine. For detailed treatments of the Present-Day English modals see, among many others, Quirk et al. (1985: Ch. 3), Palmer (1990), Biber et al. (1999: Ch. 6), and Huddleston & Pullum (2002: Ch. 3).

‘Code’ (contextual ellipsis), and Emphasis.² As the examples in (1) show, an auxiliary can occur with a postposed negation (1b), in interrogative inversion (1c), with contextual ellipsis (1d), and with emphasis to stress the truth value of the proposition (1e):

- (1) a. *She can speak French.*
- b. *She cannot speak French.*
- c. *Can she speak French?*
- d. *She can speak French, and so can he.*
- e. *She CAN speak French.*

(adapted from Huddleston & Pullum 2002: 94)

By contrast, a ‘full’ verb like *speak* cannot occur by itself in any of these constructions. In all four contexts the ‘dummy’ auxiliary *do* is required (e.g. *She does not speak French*). Compare the well-formed examples in (1) with the unavailability of (2b)–(2e).

- (2) a. *She speaks French.*
- b. * *She speaks not French.*
- c. * *Speaks she French?*
- d. * *She speaks French and so speaks he.*
- e. * *She SPEAKS French.*³

However, within the group of auxiliaries there are also certain differences. Notably, unlike *do*, *have*, and *be*, the core modals do not have any third-person singular inflection in the present tense (**cans*, **shalls*, but *does*, *has*, *is*). In this respect the modals stand apart. By another criterion, the availability of an infinitive, the core modals and ‘dummy’ *do* form a subgroup: the auxiliaries *have* and *be* have infinitive forms (*to have spoken French*, *to be speaking French*), whereas the core modals and *do* do not (**to can speak French*, **to do speak French*). The ‘marginal’ modals *DARE* and *NEED* are a special case: for some speakers they can occur in (some of) the *NICE* constructions and without the 3SG.PRS inflection, for others such uses are obsolete.⁴ The applicability of the *NICE* properties and the availability of the 3SG.PRS inflection and an infinitive form are summarized in Table 1.1.

An observant student of Old English will notice that some of these auxiliary properties do not apply to this stage of the language. For instance, while interrogative inversion certainly occurs in Old English, it is not a property exclusively of auxiliaries, but of verbs in general. Compare the use of the modal *wilt* ‘will’ in inversion in (3) with the use of *cweðað* ‘say’ in the same construction in (4).

² More recently, Sag et al. (2020) have suggested the acronym *NICER* (Negation, Inversion, Contraction, Ellipsis, Rebuttal) as a more fitting label for the relevant properties. ‘Ellipsis’ corresponds to ‘Code’ in the older terminology, ‘Rebuttal’ more or less to ‘Emphasis’ (but see Sag et al. 2020: 140–143 for details).

³ Note that (2e) is grammatical if the emphasis is on the verb only: *She SPEAKS French, but she doesn’t read it*. If the truth value of the proposition as a whole is at issue (‘verum focus’), the auxiliary *do* is required: *She DOES speak French, I am sure of it*.

⁴ On *DARE* and *NEED* see e.g. Huddleston & Pullum (2002: 109–111) and Biber et al. (1999: 163–164, 217–218, 735). I will discuss the morphosyntactic properties and status of *DARE* at greater length in Chapter 6; see also Section 1.3.4 below.

Table 1.1: Auxiliary properties in standard PDE

	NICE	3SG.PRS -s	Infinitive
Core modals	✓	—	—
<i>do</i>	✓	✓	—
<i>have, be</i>	✓	✓	✓
DARE, NEED	(✓)	(✓)	✓
Full verbs	—	✓	✓

- (3) *Wilt þu forgægan godes æ nu and mid þinum riccetera*
 WILL:2SG 2SG transgress:INF God:GEN law now and with your:DAT power:DAT
wendan ongean god?
 turn:INF against God
 ‘Will you now break the law of God and turn against him with your
 [worldly] power?’ [ÆHom 27, 109]
- (4) *Cweðað ge þæt ge þus fela scencea þær ne gedruncon?*
 say:PL 2PL COMP 2PL thus many draught:PL.GEN there NEG drink:PST:PL
 ‘Are you saying [*lit.* Say you] that you did not drink all those draughts
 there?’ [GD 2 (H), 12.127.11]

In other words, the syntactic criterion of interrogative inversion cannot be used to identify a set of auxiliaries in Old English. There are several other differences between the present-day auxiliaries and their Old English ancestors. For instance, the ancestor of Present-Day English CAN is frequently encountered as a transitive verb ‘know’ in Old English, as in (5), translating a form of Latin *cognosco*;⁵ and the ancestor of MUST does not mean ‘must’ in Old English, but ‘may, be allowed’, as in (6):

- (5) *Ic can ealle heofones fugelas, and eall eorþan wlite is mid me*
 I CAN all:PL heaven:GEN bird:PL and all earth:GEN bounty COP.3SG with me
 ‘I know all the birds of heaven, and all the bounty of the earth is mine’ [PPs
 (prose), 49.12]
- (6) *Ealra þæra þinga þe on neorxnawange syndon þu*
 all:PL.GEN DEM.PL.GEN thing:PL.GEN REL in Paradise:DAT COP.PL 2SG
 most *brucan*
 MOT:2SG use:INF
 ‘All the things that are in Paradise you may use [*sc.* eat]’ [ÆCHom I, 1, 181.70]

What happened between the Old English period and the present day has been the object of much debate, both concerning the facts of the changes themselves and how they are best accounted for. Some have viewed the development of the modals as an example of syntactic reanalysis, others as a case of grammaticalization, and yet

⁵ *Cognoui omnia volatilia caeli: & pulchritudo agri mecum est* ‘I know all the fowls of the air: and with me is the beauty of the field’ (Psalm 49: 11; trans. D–R).

others have noted aspects of their history which do not seem to fit comfortably under either of these labels. This dissertation deals with the last type, i.e. changes which are not easily explained in terms of syntactic reanalysis or grammaticalization. Some of these are semantic in nature, others are morphosyntactic.

1.2 Structure of this book

The dissertation consists of two main parts. Part I, which includes the present chapter and Chapters 2–4, covers earlier work and the method and material of my own investigation. Part II, consisting of four main chapters (Chapters 5–8) and a conclusion (Chapter 9), presents the empirical investigation itself.

Chapter 2 gives a general overview of the existing literature on the development of the English modals and grammaticalization. The first part of the chapter focusses on English and discusses three traditions or perspectives in the literature on the modals: the ‘descriptive–lexicographical’, the ‘formal–syntactic’, and the ‘grammaticalization’ perspective. Because of the great influence of the grammaticalization perspective—both on work on modal expressions and on historical linguistic research more broadly—the second part of the chapter surveys the theoretical and cross-linguistic literature on grammaticalization and modality. I pay particular attention to how the modals in English and other Germanic languages have been used to argue both for and against universal ‘pathways’ of grammaticalization.

Chapter 3 surveys some of the most influential works on modality in language, beginning with the various attempts at defining the notion of modality, and continuing with some of the most important works on the analysis and classification of modal meanings from the last decades. At the end, I present the classification of modal meanings used for my own investigation. Chapter 4 then introduces the early English material and search methods used for the investigation and discusses a number of issues relating to the selection and comparability of the corpus data.

The empirical investigation is presented in Chapters 5 to 8. The first of these concerns the morphosyntactic changes observed in a number of modals in the Middle English period. These include the apparent development of new non-finite forms, the introduction of weak (i.e. regular) inflections in some of the modals, and the development of modals with oblique subjects. I argue that none of these changes can be described comfortably in terms of grammaticalization or degrammaticalization, but that they are easily accounted for with reference to analogy or as corollaries of other changes in the linguistic system. The morphosyntactic changes are surveyed using the material in the PPCME2, a syntactically annotated corpus, and the LAEME and eLALME, two atlases of Middle English dialects.

Chapter 6 focusses on a single verb, *DARE*, and its development in Middle and Early Modern English. Because the morphosyntactic behaviour of *DARE* both in earlier and Present-Day English has been described in several earlier studies, I decided not to carry out a structured corpus investigation, but instead focus on the interpretation of the known facts. I suggest that the history of *DARE*, despite a number of morphosyntactic changes, is essentially one of stability, and that the functions of

DARE in Old and Present-Day English are in fact remarkably similar. I also propose an alternative etymology of the transitive use of DARE (as in *I dare you*), which I suggest is a ‘multiple-source’ construction in the sense of Van de Velde et al. (2013).

Chapters 7 and 8 primarily concern semantic changes to the ‘core’ modals CAN, MAY, and MOT (MUST). Chapter 7 investigates the history of CAN and MAY from Old through Early and Late Middle English, with particular attention to their semantic development in Middle English. I also discuss a possible habitual sense of CAN in Old English, the loss of ‘full-verb’ uses, and the sporadic attestation of an ‘autonomous’ modal use of MAY. Chapter 8 then turns to the history of MOT. Because of the many unresolved issues and earlier works devoted to this modal, I begin with a relatively detailed overview of the existing literature on the meaning of MOT in Old and Middle English. My own analysis is then presented. I argue that the development from possibility to necessity meaning (‘may’ → ‘must’) was not a reinterpretation from permission to obligation, but happened first in expressions of dynamic (‘circumstantial’) necessity. I then suggest that a very close parallel can be observed several centuries later in the Late Middle Danish modal MÅ, the cognate of English MAY. A small selection of sixteenth-century texts is used to investigate the possible contexts of the change in Late Middle Danish.

Finally, Chapter 9 summarizes the findings of the dissertation and discusses their broader implications and how they supplement the existing literature. I also point out a number of new questions that have been brought up and suggest how these may be dealt with in future work.

1.3 Guidelines for the reader

1.3.1 Periodization

The history of English is conventionally divided into three main periods: Old, Middle, and Modern English. An overview of the periodization used in my investigation is given in Table 1.2. The choice of material is explained in more detail in Chapter 4.

‘Old English’ (‘Anglo-Saxon’ in older scholarship) is the earliest attested stage of the language. The most famous Old English text is undoubtedly the epic poem known as *Beowulf*, but the bulk (c. 2 million words) of the surviving material consists of prose texts on a variety of subjects, including medicine, natural science, history, and (especially) theology. Many of these texts are translations or adaptations of Latin originals. Parts of the Latin Bible were also translated into Old English.

‘Middle English’ is used for the late medieval period, sometimes symbolically delineated by the Norman conquest (AD 1066) at one end and the introduction of the printing press (AD 1476) at the other (e.g. Blake 1992). As the dating of texts from the period is often uncertain anyway, I will simply use the round dates c. 1100–1500. Middle English is usually divided into an Early and a Late period. I set the boundary between these at AD 1350. The textual record is quite different between Early and Late Middle English, both in terms of genre and dialect areas. I discuss this issue at greater length in Chapter 4.

‘Modern English’ is used for the last of the three stages, running from c.1500 to the twentieth century. A division is usually made around 1700 between Early and Late Modern English. For the contemporary language, I use the established term ‘Present-Day English’. Note that ‘Modern English’ thus strictly speaking excludes Present-Day English, although most generalizations about Modern English of course apply to Present-Day English as well.

Table 1.2: Periodization in this study

Period		Abbr.	Dates
Old English		OE	c. 800–1100
Middle English	Early	EME	c. 1100–1350
	Late	LME	c. 1350–1500
Modern English	Early	EModE	c. 1500–1700
	Late	LModE	c. 1700–1950
Present-Day English		PDE	1950–present

1.3.2 References to the material

For the sake of transparency I distinguish between two types of textual references. Old and Middle English texts in my own custom corpus (see Chapter 4) are referred to with an identifier between square brackets. All other textual material is referred to in the usual way: examples excerpted from dictionaries or corpora, such as EEBOCorp (Early Modern English), BNC (Present-Day British English), or KorpusDK (Present-Day Danish), are cited with a short text identifier, usually year plus title or genre.⁶ Examples from other sources, e.g. editions or websites, are cited in full with a separate entry in the bibliography.

Because all my Old English material comes from a single corpus, the *Dictionary of Old English Corpus in Electronic Form* (DOEC), I refer to the Old English examples with the system used in the corpus. This is based on the one used in the *Dictionary of Old English* (DOE). These references consist of a short title followed by an in-text reference, usually to the page or line number (or both) in the edition used, as explained in the corpus documentation. For instance, [ÆGram, 43.6] refers to Ælfric’s *Grammar*, page 43, line 6.

For the Early and Late Middle English texts in my custom corpus I use a simple identifier consisting of one of the period prefixes in Table 1.3 and an abbreviated title. (In other words, all references between square brackets without any of the three prefixes in Table 1.3 are to the Old English corpus.) For verse texts with running line numbers, references are to the lines; for other texts the folio or page number in the edition is used. For instance, [eme.genexod, 2580] refers to the Early Middle

⁶ The genre labels in the BNC consist of one of the letters S (spoken) or W (written) followed by one or more abbreviations, e.g. ‘acad’ for academic texts. For further details about the sources I refer to the corpus documentation.

English *Genesis and Exodus*, line 2580. Appendix A lists all the Middle English text identifiers, source corpora, and editions, as well as the Old English texts included in the investigation in Chapters 7 and 8. The same lists with additional metadata (e.g. manuscript, dialect area, and text type) can be downloaded with the corpus data from the project repository at <https://doi.org/10.21942/uva.12568559> (Gregersen 2020a).

Table 1.3: Middle English period prefixes

Prefix	Period
eme.	Early Middle English
lme.	Late Middle English (non-Northern texts)
nme.	Late Middle English (Northern texts)

The examples are generally cited as they appear in the source corpora. Latin words in the Old English texts are given in small capitals. For the sake of clarity I have occasionally added or, more commonly, removed punctuation in example sentences.⁷ Some corpora use various substitutes for special characters like thorn ⟨þ⟩, yogh ⟨ȝ⟩, and tironian *et* ⟨⁊⟩ ‘and’. These characters have been restored in the examples cited in the text. The Old and Middle English abbreviated *pæt*/*pat* ‘that’ may take various shapes both in the manuscripts (e.g. ⟨ḟ⟩, ⟨ḡ⟩, ⟨ḡʰ⟩) and in editions and corpora; most often it is expanded silently in the corpora, but note the use of ⟨+tt⟩ in the PPCME2. Whenever the corpus makes clear that the text uses an abbreviated form, I render this as ⟨ḡʰ⟩ in the examples.

In references to the historical dictionaries, such as *OED*, *DOE*, *MED*, and Bosworth–Toller, I follow general practice and ignore length marks and other diacritics indicating pronunciation. Other symbols and punctuation not necessary to identify the lemma, such as the *OED* ‘obsolete’ symbol ⟨†⟩ or superfluous brackets, are also ignored. Hence, for instance, the *MED* lemma ‘*mōten* v.(2)’ is cited ‘*moten* v.2’.

I have occasionally decided to check examples in digitized manuscript facsimiles. The transcriptions of these are as faithful as possible. Expanded abbreviations are indicated with round brackets (), emendations or conjectures with square brackets [], and letters which are assumed to be superfluous (‘editorial deletions’) between curly brackets { }. Primes ` ´ indicate text added above the line in the manuscript. In Old English examples for analysis, curly brackets are occasionally used around (unglossed) passages quoted for additional context.

The Vulgate is quoted from the edition by Hetzenauer (1906). Unless otherwise indicated, English Bible passages are quoted from the Douay–Rheims version (D–R).

⁷ Punctuation in scholarly editions of manuscript texts is almost without exception editorial and does not reflect actual scribal practice. The current editorial guidelines of the Early English Text Society (EETS), for instance, state that ‘[e]ditors should supply modern punctuation and capitalization in editions based both on manuscripts and on early printed books’ (Early English Text Society 2020: 12). For a discussion of the problems this practice may cause for linguistic investigations, see Lass (2004) and LAEME (Introduction, Ch. 3) and references there.

1.3.3 Glosses and symbols

Interlinear glosses follow the Leipzig Glossing Rules (Comrie et al. 2008).⁸ With the exception of some of the passages from Ælfric's *Grammar* discussed in Chapter 5, I have provided an interlinear gloss of all linguistic examples from Old English. Examples from languages other than English are also glossed, except some of the Present-Day Dutch examples in Chapter 3, which are only given to illustrate the various semantic categories. For these—as well as for all Middle English examples—I provide a Present-Day English translation.

The English modals are referred to throughout with small capitals, i.e. CAN for Present-Day English *can* and its Old and Middle English ancestor, DARE for *dare* and its ancestor, and so on. This is both to ensure clarity and to avoid referring with conjectural infinitives in the earlier periods, which are unattested for many of the modals. For their cognates in the other Germanic languages I will generally use the infinitives, e.g. German *können* and Dutch *kunnen* for the cognates of CAN. For the ancestor of Present-Day English *must*, I use the original present-tense form MOT for the Old and Middle English periods and MUST from Early Modern English onwards.

For space considerations, nominative and singular are generally left unmarked in glosses of nominal forms. Old English pronouns are glossed with the Present-Day English form, with the exception of *þu* and *ge*, which are glossed 2SG and 2PL for clarity, and the demonstrative pronoun *se* (*seo*, *þæt*, etc.), which is glossed DEM. A special problem is posed by the Old English form *man*, which in the nominative singular may be either a noun 'person, human being' or an indefinite pronoun 'one'.⁹ It is not always certain whether the form is more appropriately considered a noun or a pronoun. I have opted for the gloss 'person' throughout, which also avoids confusion with the numeral 'one'.

For verbal forms, present tense and indicative mood are treated as the default categories and are usually not indicated; person is glossed if the form is unambiguous. For instance, the Old English second-person singular past indicative form *wyscetest* is glossed 'wish:PST:2SG' or, with affix boundaries, *wysc-te-st* 'wish-PST-2SG'. I have added affix boundaries to some of the Old English examples for clarity; glossed examples from other languages generally appear as in the source. The Old English 'long' or 'inflected' infinitive is glossed INFL (which conveniently may be read as either 'INF-long' or 'INFlected'). The 'future-habitual' copula *beon* is glossed COPB. The early English past (or passive) participle is glossed PTCP for the sake of brevity. For the present participle in *-and* or *-ing* I will use the less usual term 'progressive' participle and the gloss PROG. The Present-Day English progressive aspect plays no role in this book, so there is no risk of confusion with this phenomenon.

⁸ The only point of divergence is that I use a plus sign (+) for boundaries in compounds. The Leipzig Glossing Rules do not specify any special treatment of compounds. For the glossing abbreviations used, see the list on p. xvii.

⁹ Compare German *man*, Dutch *men*, and similar forms in other Germanic languages. The noun 'man' (i.e. 'male human being') in OE is usually *wer* or *wæpman*.

For the sake of readability I have tried to keep the number of abbreviations and symbols in the running text as low as possible. In footnotes and tables a number of frequent terms are abbreviated; see the list of abbreviations on p. xvii. Note the use of the symbols \neg for ‘negation’, \Diamond for ‘possibility’, and \Box for ‘necessity’ in the theoretical discussion in Chapter 3 and the investigation of MOT in Chapter 8. \emptyset is ‘zero’ (as in the \emptyset -infinitive, i.e. the infinitive without *to*).

1.3.4 Notes on terminology

A profusion of terms is found in the literature on modality and grammaticalization: sometimes the same term is used to describe several different phenomena, at other times the same phenomenon is referred to by numerous different terms. I have tried to be as consistent as possible in this work. Since the bulk of it deals with the histories of individual lexical items, the risk of confusion may be less acute, but a few terminological points will still be made explicit here.

Modality, mood, and modals

I use ‘modality’ in a general sense to refer to a cluster of meanings which all concern the factuality of situations. The various definitions and extensions of this term will be the subject of Chapter 3. The term ‘mood’ is sometimes used in a double sense where it refers both to a type of verbal inflection (e.g. indicative, subjunctive, imperative) and to illocutionary types (‘sentence mood’); hence, a clause can be said to be in the ‘interrogative mood’ (see e.g. Kehayov 2017: 45–46). I will restrict ‘mood’ to the former sense and use ‘illocutionary type’ for the latter.

The term ‘modals’ is ubiquitous in the literature on English grammar. As is well known, it is misleading in two ways: not all of the meanings of the modals are universally agreed to be truly ‘modal’—in the sense of belonging to the semantic domain of modality—and, conversely, the modals are not the only means of expressing modal meanings in English. Since it is almost universally used, however, it would be impossible to avoid completely, at least when reviewing the existing literature. When used without any qualifications, I take it to refer to the ‘core’ group consisting of CAN, MAY, MUST (MOT in earlier English), SHALL, and WILL, but note that some authors use it in a wider sense (though not always consistently). Where necessary I will specify exactly which linguistic items are included.

Auxiliaries and secondary verbs

‘Auxiliary’ is a particularly confusing term as its use varies greatly between languages and linguistic traditions. In English it is commonly (e.g. by Huddleston & Pullum 2002: 103) defined formally as a group of items which exhibit the NICE properties described in Section 1.1. Outside of the English linguistic tradition it has been used for a much larger range of phenomena. The entry ‘auxiliary’ in Trask’s dictionary of grammatical terms attests to this difference:

1. In English, one of a small set of lexical items having certain properties in common with verbs but also exhibiting a number of other distinct properties. [...]
2. More generally, any item in a language, whether verbal or not, which serves as a locus of expression for such categories as tense, aspect, mood or agreement. (Trask 1993: 24–25)

One of the problems with the definition in purely formal terms in English is that it leaves out a large number of items which would otherwise be regarded as auxiliaries from a cross-linguistic point of view (i.e. following Trask's second description). This has led to the adoption of terms such as 'marginal auxiliary' (Quirk et al. 1985: 236–237), 'quasi-auxiliary' (Hopper & Traugott 2003: 111), 'quasimodal' (Coates 1983), and 'semimodal' (Palmer 1990), none of them with exactly the same extension. Another potential problem is that the distinction between auxiliaries and ('full' or 'lexical') verbs occasionally leads to odd generalizations from a functional point of view. This is quite clear in the case of DARE. According to a definition of auxiliaries in terms of the NICE properties, DARE is an auxiliary in (7) and a 'full' verb in (8) and (9):

- (7) *so this means you daren't give him anything now*
(BNC, 1993 S_meeting)
- (8) *Many landlords, it was clear, did not dare to let their properties any more.*
(BNC, 1991 W_misc)
- (9) *To see Edward again, she would have dared the Devil himself!*
(BNC, 1990 W_fict_prose)

From a functional perspective, the most important division would rather seem to be between (7)–(8) on the one hand and (9) on the other. DARE in (7) and (8) has the meaning 'have enough courage (to do something)', whereas in (9) it means 'challenge (someone)'. To describe this difference I will adopt Dixon's (2005) distinction between PRIMARY and SECONDARY verbs. Primary verbs are those which by themselves describe an activity or a state, including canonical transitive and intransitive verbs. Secondary verbs are those which modify another verb. This includes not just those traditionally classified as auxiliaries, but also verbs such as *try*, *fail*, *like*, and *hope* when used with a complement *to*-infinitive or gerund (*-ing* form). The same verb may be both primary and secondary—DARE is a secondary verb in (7) and (8), but a primary verb in (9). This difference is of course most important in Chapter 6 on DARE, but the distinction between primary and secondary verbs will also be of use in other contexts.

1.4 Authorship of chapters

The dissertation was written as part of the collaborative research project *Herautonomiseren in de Nederlandse en Engelse modale hulpwerkwoorden: Een comparatieve diachrone corpusstudie*, which was carried out at the University of Amsterdam and

the University of Antwerp in the period 2015–2019. Earlier versions of a number of sections in the introductory chapters were co-written with Wim Caers (University of Antwerp), specifically Chapter 2, Section 2.3 and Chapter 3, Sections 3.3 and 3.4. The authors contributed equally to the preliminary versions. The dissertation as a whole has benefitted from generous feedback from Olga Fischer and careful proofreading by Hannah Kousbroek. All remaining mistakes are entirely my own responsibility.

Parts of Chapter 6 on DARE were published as Gregersen (2017a) (Sections 6.3 and 6.4.2) and Gregersen (2017b) (Section 6.4.3). An earlier version of the study of Middle Danish *mā* in Chapter 8 (Section 8.4) appeared as a working paper in Gregersen (2019).

CHAPTER 2

Grammaticalization and the English modals

When it comes to great controversies in the field of English historical linguistics, the development of the modals is hard to beat.

(Fischer et al. 2017: 111)

2.1 Introduction

The English modals and their history have been studied by a significant number of scholars and from several different perspectives, and anyone wishing to pursue this area of research faces a rather daunting task in having to acquaint themselves with a very substantial body of literature. The *status quaestionis* presented in this chapter by no means pretends to be an exhaustive overview of all relevant works, nor does it attempt to account for all of the insights, hypotheses, and controversies in the ones that are discussed. My main goal is to provide a foundation for the remainder of the dissertation and point out some of the issues which still warrant further research.

The chapter is structured as follows. In the first part (Section 2.2) I survey the literature devoted specifically to the history of the English modals, divided into three main traditions or perspectives. Because the last of these, the grammaticalization tradition, has a strong focus on discovering universal ‘pathways’ of language change and has had much to say about the development of modality, I will discuss this tradition at greater length in the second part (Section 2.3), also noting some of the major controversies in this literature. The final section of the chapter (Section 2.4) briefly

addresses a number of issues which I believe have received insufficient attention in earlier studies—or not yet been answered satisfactorily—and which will come under closer scrutiny in this work.

2.2 Work on early English modals

The existing literature on the history of the English modals may be divided roughly into three scholarly traditions or perspectives, which I will refer to as the ‘descriptive–lexicographical’, the ‘formal–syntactic’, and the ‘grammaticalization’ perspectives. Each is represented by a number of scholars who have sometimes disagreed among themselves on important issues, and I do not mean to imply that they are monolithic ‘schools’ or ‘frameworks’ with no internal differences. Still, the rough subdivision may be helpful in outlining the general contours of the field. In the following, I present each of the most important representatives of the three perspectives in their rough order of appearance in the history of scholarship.

2.2.1 Descriptive–lexicographical perspective

Under the descriptive–lexicographical perspective, the English modals are treated first and foremost as individual lexical items, and the main task of the historical linguist is to document the different forms and senses of them as found in the historical record. The most obvious representatives of this perspective are the historical dictionaries, most importantly the *OED*, the *MED*, Bosworth–Toller, and the *DOE*. These all catalogue the attested forms and meanings from different periods of the language or, in the case of the *OED*, from the whole history from early Old English to the present day. The implicit aim is full coverage of all relevant senses and subsenses. For instance, the *MED* entry for MOT (s.v. *moten* v.2) distinguishes twelve different senses, some of which have several different subsenses. Some of these are purely semantically defined (e.g. sense 2a, ‘To be compelled (to do sth.) by forces which control or overrule the will’), while others are distinguished by a combination of formal and functional criteria (e.g. sense 6b, ‘Present forms with past meaning’). A more recent example is the *DOE* entry for CAN (s.v. *cunnan*), which distinguishes nine different senses with a total of more than a hundred subsenses between them. The result is a ‘maximalist’ description where as many different senses are distinguished as necessary. With the occasional exception of the *OED* the historical dictionaries also do not speculate about how the different senses are related diachronically.

The historical dictionaries are not the only representatives of this approach. Another example is the habilitation thesis by Standop (1957), who also distinguishes ‘maximally’ between different senses of the Old English modals and provides numerous examples and detailed discussions of individual attestations. For instance, five different senses are counted for Old English MAY, seven for MOT, and six for SHALL. Standop also tabulates the occurrence of the individual modals in different types of clauses and, in the case of complement clauses, which matrix verbs they occur with. The focus is on Old English, but Standop also makes a few diachronic

remarks. Noting that MAY meant ‘can’ (possibility) rather than ‘may’ (permission) in Old English, he points out that MAY and CAN have shifted their meanings in a similar way, with CAN taking up some of MAY’s earlier functions, as shown in Figure 2.1. I will return to Standop (1957) in later chapters, in particular his analysis of MOT in Chapter 8.

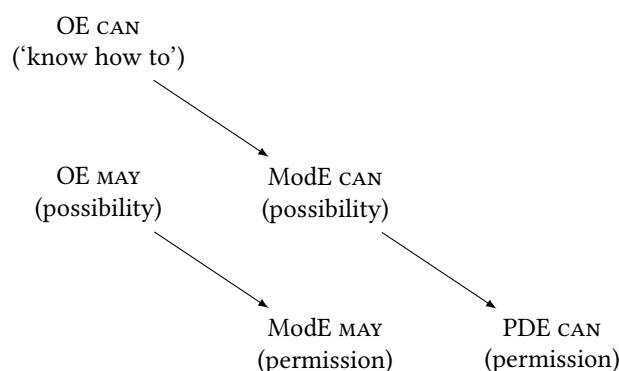


Figure 2.1: History of CAN and MAY (after Standop 1957: 18)

Similar to Standop’s work, but with even more detailed example material from all historical periods, is Visser’s *An historical syntax of the English language* (1963), which in spite of the title is mainly a descriptive syntax of the verb phrase—the structure of the noun phrase or complex clauses receive little attention. The history of the modals, on the other hand, is treated in detail. For instance, the sections on SHALL (i.e. on the two forms *shall* and *should*, which Visser treats separately) run to almost a hundred pages (Visser 1963: §§ 1483–1561). Visser’s work is deservedly considered a standard reference work and was a tremendous achievement for its time, being compiled without the use of any electronic text corpora or dictionaries, but as scholars are well aware (e.g. Allen 1995: 7), the extensive coverage comes at a cost: some examples are analysed only superficially or not at all, and omitted passages are not consistently indicated. (I discuss one such omission briefly on p. 37, n. 23, and another in Chapter 6.)

More philological accuracy, but a much less detailed description, is found in the *Old English syntax* by Mitchell (1985), where the modals are dealt with in only about twelve pages (Mitchell 1985: §§ 990–1024). Mitchell writes explicitly that he considers the description of the modals in Old English primarily a lexicographic task, meaning that his own syntactic description can be kept brief: ‘For my part, I feel justified in passing to the lexicographers the complex semantic problems involved in determining the various functions of the six verbs [sc. the modals]’ (Mitchell 1985: §1009).

Another representative of the descriptive–lexicographical perspective, albeit with a somewhat different emphasis, is the dissertation by Tellier (1962). Tellier describes the semantic system of the modals and the other preterite-presents at successive stages in the history of English: early and later Old English, early and later Middle

English, and the language of the Renaissance represented by Bacon and Shakespeare. The book is clearly much indebted to the structuralist work of Bech (1949, 1951) on the High German modal verbs, and unlike his contemporaries Standop and Visser, Tellier is primarily interested in the changing paradigmatic oppositions between the forms, not the histories of the individual lexemes in isolation. In other words, his perspective is mainly semasiological rather than onomasiological, as evidenced by the structure of the book: for each diachronic stage the description is organized according to semantic values ('Les signifiants de la zone sémantique du "pouvoir"', etc.), not individual lexemes. To briefly illustrate Tellier's approach I reproduce in Table 2.1—in somewhat simplified form—one of the tables summarizing his findings. Here three basic semantic values are distinguished: 'know' ('savoir'), possibility ('pouvoir'), and obligation ('devoir'). Possibility is further divided into 'intra-subjective' and 'extra-subjective', a distinction similar to the notions 'participant-internal' and 'participant-external' in the later literature (see Section 2.3 below and Chapter 3, Section 3.3). For each of the five periods the main expressions of these semantic values are recorded; the expressions between brackets are considered marginal.

Table 2.1: Early English modals (after Tellier 1962: 279)

	'know'	Possibility		Obligation
		Intra-subj.	Extra-subj.	
8th c.	WIT/CAN	MAY	MOT	SHALL
9th–11th c.	WIT (CAN)	CAN/MAY	MOT	SHALL
12th–13th c.	WIT	CAN/MAY	MOT	MOT (SHALL)
14th–15th c.	KNOW (WIT)	CAN/MAY	MAY (MOT)	MOT (SHALL)
Renaissance	KNOW	CAN	MAY	MUST

Finally, in spite of its claim to be a 'syntactical' study, I also consider Ogawa's (1989) monograph to belong firmly in the descriptive–lexicographical tradition. One of Ogawa's main objectives is to question what he terms the 'substitution theory', according to which periphrastic constructions with modal verbs gradually took over the functions of the Old English subjunctive.¹ This is done through a careful tabulation of the occurrence of modals vs. subjunctive forms in various clause types in a corpus of early and late Old English texts, which do not appear to exhibit a diachronic increase in the frequency of modals. This leads Ogawa to the conclusion that the subjunctive was not 'substituted' by modals. An unfortunate methodological choice in this connection—already pointed out by Fulk (1991) in his review of the book—is that Ogawa does not distinguish between full-verb and auxiliary uses of

¹ See e.g. Mustanoja (1960: 453): 'In the course of the OE period the subjunctive mood begins to be indicated periphrastically by means of modal auxiliaries [...] The use of these auxiliaries, originally verbs with full meaning, as subjunctive equivalents becomes increasingly common towards the end of the OE period and in ME'. Plank (1984: 345–347) makes essentially the same point, though in slightly more cautious terms. This still seems to be the general consensus, and statements to the same effect may easily be found in the relevant handbooks (see e.g. Fischer & van der Wurff 2006: 129–130; Smith 2017: 83).

the modals. This means that, for instance, transitive uses of *CAN* (in the sense ‘know, recognize’) and *WILL* (‘want, desire’) are included in the count as well, while the suggestion traditionally made is that the subjunctive was gradually replaced by modals in particular auxiliary functions, not by the lexical class wholesale (see n. 1). While it is certainly a worthwhile endeavour to test the traditional ‘substitution’ analysis empirically, Ogawa’s study attests to the need for careful syntactic and semantic analysis. However, even if its main thesis is not convincing as it stands, the book still contains useful comments on individual Old English passages and will be referred to where relevant in Chapters 7 and 8.

2.2.2 Formal–syntactic perspective

What I will call the formal–syntactic perspective is primarily interested in the morphosyntactic behaviour of the modals, not the semantics of the individual lexemes. In other words, the modals are viewed more as a syntactic phenomenon than a lexicological one. A central issue in the formal–syntactic literature has been the category status of the modals at different stages of the language and how to describe and account for changes syntactically. In parallel with this discussion on earlier English, there has also been a lively debate among syntacticians, in particular in the 1970s and 1980s, on the grammatical status of the Present-Day English modals and other auxiliaries.² In the literature on the early English modals from the same period many works were inspired—or provoked—by Lightfoot’s controversial proposal about a ‘sudden, cataclysmic, wholesale re-structuring’ (1979: 122) of the verbal system in Early Modern English, first presented in Lightfoot (1974) and later elaborated in Lightfoot (1979). A concise survey of the formal–syntactic literature is provided by Denison (1993: 325–337). Since so much of this literature is written against the backdrop of Lightfoot’s analysis, I will follow Denison in taking Lightfoot as my starting point for the overview in the following paragraphs.

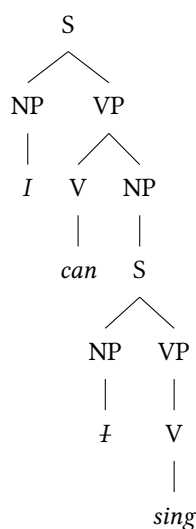
According to Lightfoot (1974, 1979), the English modals are a paradigm case of catastrophic re-analysis of a syntactic category. Lightfoot terms the cause of this re-analysis the ‘Transparency Principle’. The principle says that the speakers of a language can only tolerate a certain degree of opacity between underlying and surface syntactic structures. Under his analysis the Old English ‘modals’—or ‘premodals’, as he prefers to call them—were not really modals at all, but regular verbs without any distinguishing properties.³ Just like other verbs, they showed person and number

² See, for instance, Ross (1969), Huddleston (1974), McCawley (1975), Edmondson & Plank (1976), Pullum & Wilson (1977), Palmer (1979), Gazdar et al. (1982), and Falk (1984). The recent paper by Sag et al. (2020), which proposes an analysis of the English auxiliary system grounded in Sign-Based Construction Grammar, also gives a brief historical overview of earlier work on this system and its ‘pivotal role in shaping linguistic theory’ (Sag et al. 2020: 89).

³ The term ‘premodal’ has been widely adopted in the literature, also by linguists who otherwise reject Lightfoot’s analysis (see e.g. Goossens 1987b; Allan 1987; Traugott 1989; Hopper & Traugott 2003; Ringe & Taylor 2014). I will not use this term unless referring specifically to Lightfoot’s work, as I consider it misleading. Aside from its unfortunate teleological ring it implicitly accepts Lightfoot’s suggestion that the verbs in question did not yet have any distinguishing properties in OE, but as later research has made clear, this is incorrect (see below). Warner (1993: 94) rejects the term for the same reason.

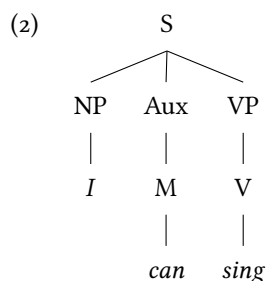
agreement with the subject; they did not yet have any special rules for negative placement and inversion; they could occur together, as infinitives, and as gerunds; they could occur in sentence-final position like other verbs; and some of them could take direct objects. In other words, they 'behave exactly like ordinary, complement-taking verbs in OE' (Lightfoot 1979: 99), as in the structure in (1), adapted from Lightfoot (1979) and Warner (1983: 195). Here the infinitival phrase is analysed as an object clause with Equi-NP ('same-subject') deletion:

(1) *I can sing.*



An analysis similar to Lightfoot's in (1) was suggested around the same time for Old English by Allen (1975), as Lightfoot (1979: 99 n.) acknowledges. Allen argues that there is 'no justification for including the category "modal" in the grammar of Old English unless it can be demonstrated that modal verbs behave differently from other verbs' (Allen 1975: 92). Based on the word-order properties of the modals in a selection of Ælfric's homilies, she concludes that they do indeed behave like other verbs and hence must be transitive verbs with an infinitival object clause, as in (1), not a separate syntactic class of auxiliaries.

The 'main-verb' analysis in (1) assumed by Lightfoot and Allen stands in contrast to Lightfoot's analysis of the Present-Day English modals, shown in (2). Here the modals belong to a separate auxiliary node 'Aux' (corresponding to 'INFL' or 'AGR' and 'T' in later generative terminology) in a monoclausal structure:



What happened in the intervening period, according to Lightfoot, was that a number of apparently isolated changes to the ‘premodals’ in Middle English gradually increased the distance between the surface structure and the underlying or ‘initial’ structure, in which the modals were still verbs (STAGE 1). When the distance had become too great, a radical re-analysis of the initial structure followed in the first half of the sixteenth century, which created the new category ‘modal’ (STAGE 2). Finally, a number of minor changes occurred as a result of the restructuring (STAGE 3). The independent changes of stage 1, which ‘seem to have taken effect by the end of the fifteenth century’ (Lightfoot 1979: 109), were:⁴

1. Loss of the ability to take direct objects.
2. Loss of non-modal preterite-presents, such as **unnan* ‘grant’ and **munan* ‘think, consider’.
3. Increased opacity of the present–past distinction in the modals (e.g. *might* is no longer the past-tense form of *may*).
4. Generalization of *to*-infinitives except after the modals.

Because of the opacity between the initial and surface structures, the grammar had to be restabilized according to the Transparency Principle by creating the new category ‘modal’ out of the abnormal verbs. This meant that they gave up their verbal characteristics: they lost their infinitive and gerund forms (**to may*, **maying*), they could no longer occur together (**shall may*), and they lost the ability to occur in the perfect (**have mayed*). According to Lightfoot, these losses all occurred abruptly around the middle of the sixteenth century, indicating that the new category was introduced at this time. Later, at stage 3, further changes happened as a result of the category shift, such as the introduction of the Negative Placement and Subject-Verb Inversion rules, and the development of the new ‘quasi-modals’ *BE going to*, *HAVE to*, and *BE able to*, which are semantically close to the modals, but differ in that they are ‘true verbs’ and have nonfinite forms (Lightfoot 1979: 112).

⁴ I leave out a fifth proposed change concerning underlying word order in OE and ME, which Lightfoot (1979: 108) himself admits is speculative. It appears to have been universally rejected by later commentators (Aitchison 1980: 141; Fischer & van der Leek 1981: 309 n. 3; Warner 1983: 196; Plank 1984: 313; Fischer 2004: 26; Fischer 2007: 162 n. 3).

Although Lightfoot's book was considered a pioneering work at the time and has often been credited with contributing to a renewed interest in historical syntax (see e.g. Fischer & van der Leek 1981; Fischer 2004; Eythórsson 2013: 366; Viti 2015), his proposal about the modals has been shown to be problematic in a number of ways, both conceptually and empirically. In her review of the book, Aitchison (1980) points out that even in Lightfoot's own scenario the reanalysis of the modals looks more like a piecemeal accumulation of changes than an instantaneous restructuring, similar to the S-curve well known from phonological change: first a slow buildup of innovative forms in the Middle English period (i.e. stage 1), then a quick but not necessarily simultaneous succession of innovations (stage 2), and finally a gradual 'tidying-up' from the sixteenth century onward (stage 3) (Aitchison 1980: 141–142). A similar point is made in Allan's (1987: 139–142) re-examination of the data, where the development is described as an instance of gradual lexical diffusion, proceeding in a stepwise fashion from one modal to the next. (On gradual change, see further Section 2.2.3 on grammaticalization below.) Like Aitchison, Allan envisages the development as an S-curve, as illustrated in Figure 2.2, where the *x*-axis is the time and the *y*-axis the number of changes. Unfortunately Allan does not actually plot the observed changes on the coordinate system, so the purpose of the graph in Figure 2.2 is purely illustrative. Allan's point is that while the increased rate of change in the sixteenth century may look like an instantaneous 'jump' to the observer, it is probably better described by a logistic curve known from many other types of (linguistic and non-linguistic) diachronic developments. In other words, there is no need to assume that syntactic change happens in a more abrupt or 'catastrophic' way than other changes.

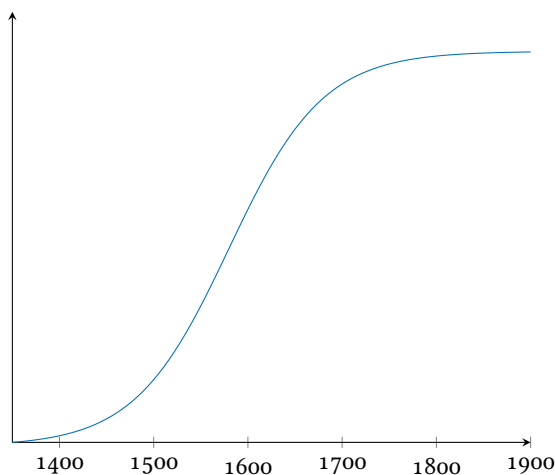


Figure 2.2: Development of modals according to Allan (1987: 142)

As Allan and several others (e.g. Warner 1983; Plank 1984; Goossens 1987b) have pointed out, there are also problems with Lightfoot's timing of the changes. Regarding the loss of transitive uses, for instance, Lightfoot himself notes in passing that CAN 'was a good deal more resistant' (Lightfoot 1979: 101), occurring with direct objects well into the seventeenth century; as Warner (1983: 195–196) observes, however, transitive MAY and WILL are also attested after the restructuring is supposed to have taken place, suggesting that, if anything, the loss of transitive uses was a result rather than a cause of the restructuring (see also Plank 1984: 310; Warner 1993: 201–202). This leaves only three changes in Middle English—the loss of non-modal preterite-presents, the increasing opacity of the present–past distinction, and the generalization of *to*-infinitives except after modals—a state of affairs which according to Warner is unlikely to have required a radical restructuring of the grammatical system:

It seems clear that the level of exceptionality in 'premodals' c. 1500 is lower than Lightfoot claims [...] it is consequently difficult to see that this 'paradigm case' gives Lightfoot a plausible inductive case for his [Transparency Principle]. (Warner 1983: 197)

Warner's own later work (Warner 1990, 1992, 1993) takes up several threads already present in his 1983 review article, especially regarding the category status and morphosyntactic features of modals and other auxiliaries in Old and Middle English. In fact, he devotes five of the nine main chapters of Warner (1993) to this topic, carefully considering the available evidence in an attempt to establish how the modals—along with *be*, *have*, and *do*—differed from 'ordinary' verbs in early English.⁵ Unlike Allen (1975) and Lightfoot (1974, 1979), Warner does not consider the Old English modals ordinary verbs, but rather a more or less clearly delineated subtype of the category 'verb'. While they share a number of properties with the other members of this category, they also have properties setting them apart. The following characteristics of the modals are shared with other verbs, i.e. they are considered 'verblike' by Warner (1993: 98–100):

1. Formal paradigmatic contrasts: Old English modals inflect for tense, mood, person, and number like other verbs.
2. Semantics and subcategorization: Most of the Old English modals occur in 'senses and constructions which align them with full rather than with helping verbs' (Warner 1993: 98), such as CAN 'know, recognize', WILL 'want, desire', and SHALL 'owe'.
3. Syntax: The Old English modals generally have the same word-order properties ('positional syntax') in subordinate, interrogative, and negated clauses as other verbs (as also argued by Allen 1975).

⁵ In principle Warner's account is about the ancestors of all of the PDE auxiliaries, and a number of his 'auxiliary-like' properties are also relevant for these. However, the modals receive by far the most attention in Warner (1993) and are clearly considered the 'core' members of the auxiliary group.

In addition, the Old and Middle English modals have a number of properties which distinguish them from ordinary verbs. Warner (1993: 152–153) identifies at least six such properties:⁶

- a. Occurrence with post-auxiliary ellipsis.
- a'. Occurrence with pseudogapping.
- b. Transparency to impersonal constructions.
- c. Subcategorization for the \emptyset -infinitive.
- d. Preterite-present morphology.
- e. Restrictions of some modals to finite forms.
- f. Use of past-tense forms without clear past-time reference.

The most important of these characteristics for Warner are clearly (a)–(b), which are the main focus of Warner (1990, 1992) and figure prominently in the discussion in Warner (1993). Post-auxiliary ellipsis and pseudogapping are well known from the literature on the Present-Day English modals. They are both manifestations of the NICE property ‘Code’ (‘Ellipsis’ in Sag et al. 2020). Post-auxiliary ellipsis refers to their ability to occur without an overt complement when one can be inferred from the context, such as *could* in (3), with the inferred complement *go out reasonably early*. In the construction known as pseudogapping only part of the complement is to be inferred from the context, whereas another part, known as the ‘remnant’, is explicit. In (4) the infinitive *clutch* is pseudogapped after *would*. The remnant is *her books*.⁷

(3) POST-AUXILIARY ELLIPSIS

We'd like to go out reasonably early if we could.

(BNC, 1991 S_conv)

(4) PSEUDOGAPPING

After all she is clutching her bag like a student would her books.

(BNC, n.d. W_newsp_tabloid)

Warner finds that all of the ancestors of the ‘core’ modals CAN, MAY, MOT, SHALL, and WILL plus DARE may occur with either post-auxiliary ellipsis or pseudogapping in Old and Middle English, although not all of them are securely attested in both constructions.⁸ Because most of the modals also occur intransitively in early English, i.e. with no complement at all, it is not always possible to say with certainty whether an instance is an example of post-auxiliary ellipsis or ‘main-verb’ usage. However, some examples seem clear enough, such as (5), cited by Warner (1993: 112): MOT

⁶ It is left open whether (a) and (a') should be considered two separate properties or aspects of a single one. Warner also mentions an additional property, ‘Negative forms in *n-* in Old and some Middle English’, but as he notes, this only applies to two of the (core and marginal) modals, WILL and OUGHT (Warner 1993: 151).

⁷ For more information on pseudogapping, see the recent study by Miller (2014) and references there.

⁸ Note that Warner uses the term ‘postverbal’ rather than ‘post-auxiliary’ ellipsis for the OE and ME construction, reflecting his analysis of the modals as a subtype of verbs at this stage. However, the two terms otherwise refer to the same phenomenon (see Warner 1993: 113).

is not otherwise found as an intransitive verb in Old English, so the only obvious interpretation of (5) is that the infinitive *ofslean* ‘kill’ is to be inferred after *MOT*, exactly parallel to (3):

- (5) *deofol us wile ofslea-n gif he mot*
 devil us WILL:3SG kill-INF if he MOT
 ‘The devil will [or wants to] kill us if he can’ [ÆCHom I, 19, 331.180]

Pseudogapping is less frequently attested than post-auxiliary ellipsis, and Warner mentions that not all apparent instances are equally compelling. However, in cases like (6), it seems clear that a structural ‘gap’ occurs after *magon* in the second clause: ‘the dative *Gode* [...] has the case of a complement of *bemiðan*, not *magon*, though *bemiðan* is not present in the final conjunct’ (Warner 1993: 115). The example in (6) thus seems to be an Old English parallel to (4).

- (6) *We mag-on monn-um bemið-an ur-ne geðonc 7 ur-ne willa-n,*
 we MAY-PL person-PL.DAT hide-INF our-ACC thought and our-ACC desire-ACC
ac we ne magon God-e
 but we NEG MAY:PL God-DAT
 ‘We can hide our thoughts and desires from other people, but we cannot
 [hide them] from God’ [CP 39.12]

An arguably more reliable characteristic—and a much better attested one—is (b), ‘transparency’ to impersonal constructions, i.e. constructions where the first argument of a verb is non-nominative. Here, the non-finite main verb determines the structure of the clause and the case(s) of the argument(s), and the finite modal thus appears to be ancillary to the main verb. One of the examples cited by Warner (1993: 123–124) is given in (7a). Here the experiencer argument of the one-place predicate *gesceamian* is in the accusative in spite of the finite modal verb *SHALL*, parallel to examples where *gesceamian* is the finite verb, such as (7b).⁹

- (7) a. *hine sceal on domes+dæg gesceam-ian beforan God-e*
 him.ACC SHALL on judgement+day be.ashamed-INF before God-DAT
 ‘On Judgement Day he will have to stand ashamed before God’ [HomU 37, 161]
 b. *þe læs us gesceam-ige beforan þæs cyng-es*
 lest us.OBL be.ashamed-3SG.SBJV before DEM.M.GEN king(M)-GEN
dugoð-e
 majesty-DAT
 ‘... lest we should be ashamed before the king’s majesty’ [ByrM 1, 2.1.152]

⁹ I gloss the 1PL pronoun *us* in (7b) as ‘oblique’ because it is syncretic between accusative and dative. In many cases one can infer which of the two labels is the appropriate one, but in the case of the verb *gesceamian* (Bosworth–Toller, q.v.) the experiencer argument may be either accusative or dative (see also Allen 1995: 136–140; Middeke 2018: 222–226).

In Old English, *MAY* and *SHALL* regularly occur in such clauses, and *THARF* and *WILL* are also attested. In Middle English, *MAY*, *SHALL*, and *WILL* are found. Note, however, that not only the modals show this kind of transparency, but also aspectual verbs like Old English *onginnan* and Middle English *ginnen* ‘begin’ (Warner 1993: 127–131).

The Old English impersonal construction is also discussed by Denison (1990a), whose conclusion is that ‘an auxiliary + impersonal verbal group behaves exactly like a finite impersonal, its argument structure and case assignment being entirely determined by the impersonal verb’ (Denison 1990a: 145). Warner and Denison thus both conclude that there are good syntactic reasons for distinguishing a group of auxiliary verbs in early English, even if this group is less clearly delineated than the Present-Day English auxiliaries.

Two contributions by van Kemenade (1992, 1993) also concern the category status of the early English modals. Van Kemenade (1992) argues that there was no unified syntactic category ‘modal’ in Old English, but rather that the modals could be used in different syntactic structures: in some senses they were main verbs—similar to Lightfoot’s analysis of the Old English situation—whereas when they were used with ‘epistemic submeanings’ (van Kemenade 1992: 304), the structure was more like the auxiliary one which Lightfoot assumes for Present-Day English. In examples of ‘transparency’ to impersonal constructions such as (7a), the auxiliary analysis is the appropriate one. Van Kemenade (1993) revises this view and distinguishes an additional possible structure in Old English: when they had deontic meaning the modals were control verbs which assigned an agentive subject; when used epistemically they were raising verbs without a subject of their own; and when used with future meanings they were, presumably, auxiliaries (although this analysis is uncertain; see van Kemenade 1993: 156–157). While van Kemenade’s approach is laudable for its recognition of the polyfunctionality of the modals and its attempt to characterize the different syntactic structures in explicit terms, the semantic analysis is rather too informal, and central terms like ‘epistemic’, ‘deontic’, and ‘root’ modality are never clearly defined.¹⁰ I return to the issue of terminology and different subtypes of modality in Chapter 3.

A more recent contribution to the formal–syntactic literature is Roberts & Rousou’s (2003) proposal for a minimalist approach to grammaticalization. Drawing on earlier studies in the Principles and Parameters tradition, including work by the first author and Lightfoot (1979), they suggest that grammaticalization consists in the creation of a new functional head in the syntactic structure through reanalysis, either out of lexical or existing functional material. One of their case studies is the development of the English modals, which they interpret as a reanalysis of the modals from V to T, i.e. from verbs to auxiliary elements belonging to the tense phrase. The trigger for this reanalysis, they suggest, was the loss of overt infinitive morphology, which left the language learner without clear evidence for the earlier biclausal struc-

¹⁰ For instance, two examples in van Kemenade (1993: 154) are said to have ‘root’ and ‘epistemic’ meaning, respectively, but on the following page the syntactic structure of both of them is said to be ‘resulting in epistemic meanings’ (1993: 155). It is also unclear if ‘root’ and ‘deontic’ are used synonymously, but the latter term is at least used in a much wider sense than in most of the modality literature, also including meanings like ‘have the power to’ and ‘know’ (van Kemenade 1992: 151).

ture. They argue that this explanation accounts for the special status of the English modals compared to the other Germanic languages: Present-Day English ‘is the only Germanic language with such a syntactically defined class, and it is the only Germanic language lacking an infinitival ending’ (Roberts & Roussou 2003: 42).¹¹ The general spirit of this explanation is thus very much in line with Lightfoot (1979), even if the trigger for the reanalysis differs: for Lightfoot this was a ‘conspiracy’ of syntactic changes in Middle English; for Roberts & Roussou it is a reduction of verbal morphology.

Finally, the discussion of modals in Fischer (2007) is worth mentioning here, although it might fit equally well in the following section: one of Fischer’s stated aims is to bring the formal–syntactic and grammaticalization perspectives together, and one section is even titled ‘The two approaches combined’ (see Fischer 2007: 188). The two approaches are also both put under critical scrutiny, however, and in her comprehensive literature review Fischer points out a number of problems which are shared by the two traditions, such as an unfortunate tendency ‘to see only the macro-story, with the effect of simplifying the actual path followed’ (Fischer 2007: 191). One of Fischer’s central points is that one should be sceptical of such ‘macro-stories’ when they appeal to only a single explanatory principle—e.g. formally triggered reanalysis or functionally motivated grammaticalization—and that a more realistic theory of language change must take the realities of successive generations of speakers into account (see especially Fischer 2007: 192–202). Fischer also discusses (and rejects) the biclausal analysis of the Old English modals found in much of the generative literature (e.g. Allen 1975; Lightfoot 1979; van Kemenade 1992; Roberts & Roussou 2003), arguing that the reasons for assuming such a structure are largely theory-internal and that the historical evidence fits better with a monoclausal analysis (Fischer 2007: 231–232, 235–241).

2.2.3 Grammaticalization perspective

I now turn to the final of the three strands of research, the ‘grammaticalization’ perspectives. Despite diverging opinions about what grammaticalization is—see Section 2.3.3 below for discussion—there seems to be widespread agreement that the English modals are an example of it. They are discussed as such by Bybee et al. (1994), at several points in the *World lexicon of grammaticalization* (Kuteva et al. 2019), and in a separate section in Hopper & Traugott’s (2003: 55–58) textbook on grammaticalization.

¹¹ The latter claim is inaccurate, however. Afrikaans lacks overt infinitival marking just like English, but its modals have non-finite forms like Dutch and German, such as INF *kan*:

(i) *Hy hoef dit nie te kan doen nie.*
 he need it NEG to can.INF do.INF NEG
 ‘He does not need to be able to do it.’ (van Schoor 1983: 154)

It is not clear to me if this poses a problem for Roberts & Roussou’s analysis. It is also unclear how the existence of ‘double modals’ in several varieties, such as Southern US English—which the authors are clearly aware of (see Roberts & Roussou 2003: 36 n.)—would fit in their account. These also seem to run counter to the idea that lack of overt infinitive marking leads to a separate auxiliary category without non-finite forms.

zation. In contrast to the formal–syntactic perspective, work in the grammaticalization tradition has been less concerned with the exact category status and syntactic behaviour of the modals and more with their functional development. Unlike the descriptive–lexicographical tradition, on the other hand, scholars working on grammaticalization have not only tried to document the various uses at earlier historical stages, but also attempted to formulate principles and make predictions about possible ‘pathways’ of change. Whereas the descriptive–lexicographical tradition is historical but not necessarily diachronically oriented, the diachronic dimension is, as it were, built into the notion of grammaticalization itself.

Like the work of Warner discussed in the preceding section, work on the English modals in the grammaticalization tradition also to a certain extent began as a reaction to Lightfoot (1974, 1979). The studies by Plank (1984) and Goossens (1984, 1985, 1987b) are more or less explicit responses to Lightfoot. Both authors stress the gradualness of the development of the modals and the simplistic nature of Lightfoot’s account.¹²

Plank (1984) is perhaps the most clearly stated interpretation of the development of the modals in grammaticalization terms. Plank criticizes Lightfoot for overlooking or ignoring potential counterevidence and presenting a much too simplistic picture of the development. Rather than a radical syntactic restructuring at the beginning of the Modern English period, Plank’s story of the modals happens in a stepwise fashion, with several smaller changes occurring continually throughout the attested history of the language:

The development of the English modals is a paradigm case of grammaticalization, showing in an exemplary manner how more or less ordinary lexical items are appropriated for the grammatical system, with the linguistic forms involved being gradually adjusted to the functions that transparently motivate them (Plank 1984: 308)

Whether intentional or not, it is telling that Plank refers to transparency here in a way entirely different from Lightfoot’s use of the term. Transparency for Lightfoot is a measure of the distance between deep and surface structures and the ease with which the first-language learner may acquire the grammar. The transparency referred to by Plank is the (to functionally oriented linguists) obvious relation between meaning and form.

Graduality is central in Plank’s retelling of the modals story, both in his assessment of Lightfoot’s account and in his own catalogue of additional relevant developments. As for the former, like Warner (1993) and Allan (1987) Plank notes that a number of the changes are not as abrupt as Lightfoot suggests. As for the latter, he adds ‘fifteen or so further changes’ (Plank 1984: 322), some of them pertaining directly to the

¹² Lehmann’s (1982) influential working paper on grammaticalization only mentions the English modals in passing, pointing out that they have been analysed in detail by Lightfoot, ‘though he tries to do without the concept of grammaticalization’ (cited from Lehmann 2015: 30). I return to the work of Lehmann in Section 2.3.1.

modals, others to the verbal system more generally. A few examples will illustrate the kind of changes Plank points out. Their numbers on Plank's list are given between brackets:

- a. Development of 'impersonal' modals (10)
- b. Loss of modal + directional construction (12)
- c. Loss of modal + past participle construction (16)
- d. Several changes pertaining to ellipsis and pro-forms (17a–d)
- e. Creation of new modals by fusion, e.g. *want to* → *wanna*, *got to* → *gotta* (19)

Of these changes, (a) happens in Middle English, (b)–(c) apparently in the seventeenth century, and (d)–(e) more recently, during the Late Modern English period (for a tabular overview see Plank 1984: 349). The precise details are less important here than Plank's main point, which is to illustrate how the modals have been characterized by slow but steady change throughout their whole history. The category of modal auxiliaries has thus taken its present shape gradually, not by a sudden shift in syntactic status.

The history of the modals has also been investigated in several publications by Goossens (1984, 1987a,b, 2000, 2007), some of them focussing on the contexts of semantic change, others on the analysis of modality within Functional Grammar (Dik 1981, 1997). Two contributions deal with questions of grammaticalization. Like Plank, Goossens questions Lightfoot's (1979) interpretation, although in a somewhat less combative style. Goossens (1984) concerns the role of semantics in the development of the modals, pointing out that many of the changes noted by Lightfoot are not exclusively syntactic. The most obvious semantic change is the increasing opacity of the present–past distinction, but Goossens argues that even the loss of transitive uses of the modals is not wholly independent of semantics, as the transitive and 'true' modal uses have distinct meanings. For instance, while *SHALL* followed by an infinitive generally has some type of modal meaning, the meaning of transitive *SHALL* is 'owe', as illustrated by (8) (Goossens 1984: 150):¹³

- (8) *the leeste ferthyng þat y men shal*
 'the last farthing that I owe to anyone' (c.1425 Hoccleve *Min. Poems* xxiii. 695;
OED, s.v. *shall* v.)

In Goossens (1987b), a slightly revised version of Goossens (1985), the functions of *CAN* and *SHALL* in late Old English (represented by Ælfric and Wulfstan) are analysed in Functional Grammar terms. Like Plank (1984), Goossens sees the development as gradual, with the modals having moved along the cline in (9), from 'full predicates' with their own argument structure to 'predicate operators' which are used 'in specific grammatical functions, such as the expression of tense, the marking of certain types

¹³ Also quoted by Lightfoot (1979: 101), apparently directly from the *OED*. Note that *shal* is in rhyming position, so this usage might have been marked or archaic already in Hoccleve's time: 'And thens [sc. from Purgatory] twynne y nat / til maad haue y gree | Of the leeste ferthyng þat y men shal; | In which place y beholde and see | Affliccioun and sorwe ynow at al' (Furnivall 1892: 204).

of subclasses and the like' (Goossens 1987b: 139). Between these two poles is the use of modals in 'predicate formation' where they contribute modal meaning but do not assign argument structure to the clause.¹⁴

(9) full predicates > predicate formation > predicate operators

More important here, however, are the differences which Goossens observes between CAN and SHALL in his Old English material: whereas CAN is most frequently found with a nominal object, in other words clearly as a full predicate, SHALL is almost exclusively attested with an infinitival phrase as its complement. Goossens interprets this as an indication that SHALL in late Old English was more grammaticalized ('auxiliarized') than CAN: 'In a discussion of auxiliarization of the English modals we must consider the different items individually, not globally' (Goossens 1987b: 141).

Many other studies on grammaticalization have appeared since the mid-1980s, several of which use the English modals either just to illustrate the phenomenon or as one among other case studies. For instance, Traugott (1989) suggests that the development of epistemic expressions in English is an instantiation of a universal tendency to 'subjectification' in grammaticalization, and uses the history of MOT, SHALL, and WILL—along with two other phenomena, speech-act verbs and modal adverbs—to illustrate this. A number of studies by Bybee and associates include the English modals in the discussion, such as Bybee & Pagliuca (1985) and Bybee (1988). Much of this was later used in the large cross-linguistic study of tense, aspect, and modality by Bybee et al. (1994), where the English modals are discussed at some length. I will return to the work of these authors in Section 2.3.2. However, because so much of the grammaticalization literature, including the studies by Bybee and colleagues mentioned here, subsumes the study of English under a more general cross-linguistic ('universalistic') research agenda, I think it is pertinent to first discuss some of the theoretical assumptions and issues of this body of research. This will be the topic of Section 2.3.1.¹⁵

2.2.4 Interim summary

The preceding sections have surveyed a number of central works on the history of the English modals, which were grouped into three main strands or perspectives: the descriptive–lexicographical, the formal–syntactic, and the grammaticalization perspective. It is worth stressing that the three perspectives by no means need to exclude each other. It is rather a question of differences in emphasis and, in the case of the

¹⁴ No clear definition of the 'predicate formation' type is offered, and Goossens seems somewhat hesitant about which uses of the modals should be assigned to it; see especially Goossens (1987b: 119). One might also question whether (9) really represents a gradual cline, as it consists of only three discrete steps, but it is clear enough from the discussion that Goossens considers the boundaries between them fuzzy.

¹⁵ Indeed, it is not always possible to make a strict distinction between cross-linguistic and English-centred works, since cross-linguistic studies in the grammaticalization tradition almost without exception refer to English developments, at least in passing, in order to exemplify various pathways of change. According to the index of Kuteva et al. (2019: 624), for instance, developments from the history of English are discussed 154 times in the book, second only to Chinese. This, of course, does not necessarily mean that the English developments referred to are adequately described or explained.

formal–syntactic and grammaticalization perspectives, how one attempts to explain the observed changes. There is widespread agreement that the Present-Day English modals differ from the Old English modals in important ways—in fact, this is one of the few points where Plank (1984: 306) agrees with Lightfoot (1979)—and that they are an example of both grammaticalization and syntactic change. Hence, Hopper & Traugott (2003: 55) state that while the development was ‘[o]riginally conceived as a prime example of syntactic change, it is clearly *also* an instance of grammaticalization’ (emphasis added), and Roberts & Roussou (2003: 36) take the development to be ‘a fairly clear case of grammaticalization’, even if they disagree with most grammaticalization scholars about what caused it. The difference between the approaches of these authors is thus not primarily one of description, but of explanation.

2.3 Grammaticalization and auxiliaries

The following sections briefly introduce some of the ways the notion of grammaticalization has been understood in the literature and how the historical development of modal auxiliaries—in English and in other languages—has been taken to provide both examples and counterexamples of grammaticalization. Section 2.3.1 introduces the notion of grammaticalization and some of the ways it has been defined since it was introduced by Meillet (1912). Section 2.3.2 gives an overview of the treatment of auxiliaries in the grammaticalization literature and some of the pathways of change that have been observed for modal auxiliaries in particular. Section 2.3.3 focusses on two contested issues in the literature, which I will refer to as the ‘unidirectionality’ question and the ‘ontology’ question.

2.3.1 The notion of grammaticalization

The term ‘grammaticalization’ is generally considered to have been introduced by Meillet (1912) in an article titled ‘L’évolution des formes grammaticales’.¹⁶ Meillet identifies two processes which may cause new grammatical forms to come into being: analogy, the creation of a new form on the basis of another, and grammaticalization, ‘le passage d’un mot autonome au rôle d’élément grammatical’ (Meillet 1912: 385). As an example of the latter process Meillet gives the development of French *être* from an existential and copular verb (*je suis chez moi*) to a perfect auxiliary (*je suis parti*) (Meillet 1912: 385).

For several decades after Meillet’s work, the term ‘grammaticalization’ seems to have been used only very rarely. This does not mean that linguists were not aware of developments like those described by Meillet. For instance, Jespersen (1949) describes how the motion expression *be going* with a following *to*-infinitive has developed into ‘an expression for future time’ and points to parallel developments in other languages: ‘*going* loses its meaning as a verb of movement and becomes an

¹⁶ Although Meillet may have been the first to use the term, the phenomenon had been noticed by earlier scholars, e.g. in the work of von Humboldt (1825) and von der Gabelentz (1891). Lehmann (2015: 1–9) provides a survey of the relevant early literature.

empty, grammatical word; cf. French *je vais faire* and similar expressions in other Romanic languages' (Jespersen 1949: IV, 217). Although Jespersen does not use the term 'grammaticalization', his description of the emergence of future BE *going to* is very similar to the way it is described in the later grammaticalization literature, and BE *going to* is one of the textbook examples of the phenomenon (see e.g. Hopper & Traugott 2003: 1).

In a paper on the emergence of grammatical categories in Indo-European languages, Kuryłowicz (1965) gives another example which has become a textbook case, namely the emergence of tense markers out of a verb meaning 'have'. In the same paragraph, almost as an afterthought, he provides what is perhaps the most cited definition of grammaticalization:

The way from Latin *habeo litteras scriptas* to the French past *j'ai écrit la lettre* has been a rather long one. The French form represents an advanced stage of *grammaticalization* of a lexical phrase [...] Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one. (Kuryłowicz 1965: 69; italics in original)

In light of the frequent references to Kuryłowicz's definition (e.g. Heine 1993: 30; Kuteva 2001: 1; Lehmann 2015: 7; Norde 2009: 6), it is somewhat unfortunate that his notion of 'range'—which is part of the definition—is never explained in clear terms. In some places in Kuryłowicz's discussion it seems to be more or less synonymous with 'productivity' (Kuryłowicz 1965: 57), but in other places it appears to refer to frequency (see e.g. p. 59 on the English *have*-perfect). Lehmann (2015: 7) interprets 'increase of the range' to mean 'wider distribution'.

Another influential work is Givón's (1971) paper on the genesis of inflectional and derivational morphology. The paper is perhaps less known for Givón's case studies than for its final motto, 'Today's morphology is yesterday's syntax' (Givón 1971: 413). Givón's central thesis is that the synchronic morphological characteristics of a language, for instance whether it is predominantly prefixing or suffixing, can often be explained by the word order preferences of earlier stages of the language, since such affixes tend to derive from independent words.¹⁷ Like Jespersen, Givón does not use the term 'grammaticalization', but describes the developments in other terms, e.g. as 'the *condensation* of main "modal" verbs into modality prefixes in Bantu' (Givón 1971: 394; emphasis added).

The working paper by Lehmann (1982), which has already been referred to in passing, had a substantial impact on historical linguistics, despite remaining formally unpublished until 1995, when it appeared in book form. It has since been republished in open access by Language Science Press (Lehmann 2015). I will refer to this most recent (and more easily accessible) version in the following. In the book, Lehmann provides both an overview of the relevant literature and a large collection of exam-

¹⁷ On the distinction between predominantly prefixing and suffixing languages, see the *WALS* contribution by Dryer (2013b).

ples—including the English modal auxiliaries (see p. 28, n. 12 above)—but perhaps more importantly, he introduces the notion of syntagmatic and paradigmatic parameters of grammaticalization. According to Lehmann, what characterizes all cases of grammaticalization is that they involve a decrease in autonomy or ‘freedom’ of a linguistic sign, which Lehmann takes to be the defining characteristic of grammaticalization:

[T]he more freedom with which a sign is used, the more autonomous it is. Therefore the autonomy of a sign is converse to its grammaticality, and grammaticalization detracts from its autonomy. Consequently, if we want to measure the degree to which a sign is grammaticalized, we will determine its degree of autonomy. (Lehmann 2015: 130)

Lehmann goes on to suggest a number of parameters which can be used to measure the autonomy (and, conversely, the degree of grammaticalization) of a linguistic item. These are based on the three measures: the WEIGHT, the COHESION, and the VARIABILITY of a sign. These may all vary along two axes, the paradigmatic axis representing the choices the speaker can make between different items, and the syntagmatic axis representing the combination of individual linguistic items into utterances. The combination of the three measures and the two axes results in the six parameters in Table 2.2.

Table 2.2: Parameters of grammaticalization (after Lehmann 2015: 132)

	PARADIGMATIC AXIS	SYNTAGMATIC AXIS
WEIGHT	integrity	structural scope
COHESION	paradigmaticity	bondedness
VARIABILITY	paradigmatic variability	syntagmatic variability

In the case of the weight of an item, grammaticalization may involve a decrease in its INTEGRITY, i.e. its semantic and phonological substance, or in its STRUCTURAL SCOPE over other elements. Lehmann gives English *SHALL* as an example of loss of integrity: in Old English it still had the main-verb meaning ‘owe’, but as it grammaticalized this developed first into a more general meaning of obligation, and later into an even more general meaning of futurity (see Lehmann 2015: 136).¹⁸ Decrease

¹⁸ Lehmann (2015: 135–137) uses the term ‘desemanticization’ to refer to such changes (see also Heine & Reh 1984: 36–39; Norde 2009; Kuteva et al. 2019: 3–5). The term ‘semantic bleaching’ is also commonly used, perhaps more so (e.g. by Heine 1993; Beths 1999; Traugott 2001; Hopper & Traugott 2003: 94–98; Roberts & Roussou 2003). I agree with Fritz (1997: 33–34) that both terms are unfortunate and potentially misleading. As Fritz argues, the changes referred to by these labels (e.g. ‘obligation’ → ‘future’) do not usually involve a loss of meaning, but a change from one meaning to another. In addition, ‘bleaching’ and similar metaphorical terms ‘zeugen von einer gewissen Verlegenheit bei der Beschreibung’ (Fritz 1997: 33–34) and do not help to characterize the changes involved in any accurate way. As I hope Chapters 7 and 8 will attest to, it is possible to describe the development of the modals in ME without recourse to such metaphors.

in structural scope is illustrated with the development of case affixes out of clitics or adpositions: whereas clitics and adpositions generally have scope over the whole noun phrase, case affixes only have scope over the noun itself (Lehmann 2015: 154).

The cohesion of a linguistic item with other elements may be measured in terms of its PARADIGMATIVITY on the paradigmatic axis or its BONDEDNESS on the syntagmatic axis. These parameters correlate positively with grammaticalization: the higher the degree of paradigmaticity, the more constrained the item is within a paradigm, and the more grammaticalized it is. Lehmann mentions the English primary prepositions ‘*in, on, at, from, to* and perhaps some others’ (Lehmann 2015: 141) as an example of a closed (cohesive) paradigm, as opposed to the more open-ended group of secondary prepositions, such as *in front of, at the bottom of*. Likewise, more grammaticalized items tend to have a higher degree of bondedness. To continue with the example from the previous paragraph, case affixes are more tightly bonded to their host noun than clitics and adpositions are to their host noun phrase (Lehmann 2015: 157–158).

Finally, the variability of a linguistic item refers to the degree to which it can be substituted by other members of the paradigm (PARADIGMATIC VARIABILITY) or its flexibility in the utterance (SYNTAGMATIC VARIABILITY). The more grammaticalized an item is, the less paradigmatically and syntagmatically variable it tends to be. Lehmann refers to a well-known dictum popularized by Jakobson (1971)—who in turn attributes it to Franz Boas—that the grammar of a language consist of all the choices which the speaker is forced to make, i.e. the concepts which one has to express in the language. The same concepts can be ‘grammaticalized and consequently obligatory in some languages but lexicalized and merely optional in others’ (Jakobson 1971: 492). A well-known example is number marking on nouns, which is obligatory in most of the world’s languages—including, of course, English—but optional in some languages, most prominently in southeast Asia (see Dryer 2013a).¹⁹

It should be stressed that the parameters as formulated by Lehmann do not correlate with the degree of grammaticalization in the same way. Whereas increased grammaticalization is correlated with *increased* cohesion (i.e. paradigmaticity and bondedness), the weight and variability of a grammaticalizing item is expected to *decrease*.²⁰ It is also worth mentioning that the usefulness of some of the individual parameters have been questioned. For instance, Bisang (2008) argues that a number of grammatical items in Khmer (Austroasiatic), Thai (Tai–Kadai), and other east and southeast Asian languages, such as nominal classifiers and TMA markers, do not form paradigms in the traditional sense and show no signs of increased bondedness or phonetic reduction. He suggests that the criteria for identifying and characterizing

¹⁹ Note that whereas according to Lehmann’s terminology it is the linguistic sign which is said to be grammaticalized, in Jakobson’s it is the concept it expresses. Lehmann also repeatedly stresses the graduality of grammaticalization, i.e. that an item can be more or less grammaticalized, whereas for Jakobson this appears to be a binary opposition: either a concept is grammaticalized or it is not.

²⁰ One way to resolve this apparent discrepancy is to reconceptualize ‘increasing cohesion’ as ‘decreasing degree of independence’: grammaticalization then involves a decrease in the degree of paradigmatic and syntagmatic independence of an item. I owe this observation to Olga Fischer. Compare also Samuels’s characterization of grammaticalization as decrease in ‘information content’ (p. 45, n. 30) and Boye & Harder’s definition of it as a loss of the ability to be discursively primary (Section 2.3.3).

grammatical items may differ between typologically divergent languages, and that Lehmann's parameters do not work well for the east and southeast Asian linguistic area.²¹

In spite of their shortcomings, Lehmann's parameters—as well as his approach to grammaticalization more generally—have been very influential and are cited in most, if not all, relevant studies and textbooks (see, among many others, Diewald 1997: 21–29; Krug 2000: 13–15; Hopper & Traugott 2003: 30–32; Norde 2009: 123–132). Even authors who do not otherwise use the parameters as an analytical tool generally cite (one of the editions of) Lehmann (2015), and whenever a definition of 'grammaticalization' is offered, it is usually fairly close to Lehmann's definition in terms of reduced autonomy.²² Haspelmath (2004: 26), for instance, defines grammaticalization as 'a diachronic change by which the parts of a constructional schema come to have stronger internal dependencies'. Similarly, Hopper & Traugott suggest that,

it is possible to speak of a continuum of *bonding* between forms that has a looser relationship between forms (i.e., independent words) at one end and a tighter relationship (i.e., grammatical affixes attached to stems) at the other. (Hopper & Traugott 2003: 4; italics in original)

They illustrate this continuum with the 'cline of grammaticality' in (10), which shows the hypothesized directionality of change from content or lexical item to inflectional affix. The development from full verb to auxiliary would be an example of the first step, from content item to 'grammatical word':

- (10) content item > grammatical word > clitic > inflectional affix
(Hopper & Traugott 2003: 7)

Hopper & Traugott's textbook and the cline in (10) provide a natural segue to the following section on the development of modal auxiliaries. The authors consider the English modals a clear example of grammaticalization and use them throughout the book to illustrate various aspects of the phenomenon (see e.g. Hopper & Traugott 2003: 55–58, 85–86, 97–98, 127–128, 208, 229). In addition, auxiliaries have been argued to follow unidirectional 'pathways' of their own.

²¹ The study by Bisang (2008) does not present any empirical evidence for the absence of phonetic reduction in Khmer and Thai. However, as Ansaldo & Lim (2004) demonstrate for two Sinitic languages of the same area, Cantonese and Hokkien, phonetic reduction may manifest itself in subtle changes in vowel quality and quantity without any increase in bondedness. The authors attribute this to the 'strongly isolating' and tonal nature of Cantonese and Hokkien and conclude that phonetic reduction by itself is 'a significant diagnostic of grammaticalization available in these languages' (Ansaldo & Lim 2004: 360).

²² A notable exception to the last point is Diewald (2010), who defines 'grammar' in terms of deixis and 'grammaticalization' hence as the development of a special kind of deictic relation. According to Diewald, grammatical items are inherently deictic because they are anchored to an origo either in the context or in the linguistic system; for example, tense and mood marking anchors an event to the speech situation, and anaphoric pronouns provide anchor points within the linguistic message. As Boye & Harder (2012: 5) argue, however, it is unclear how many otherwise uncontroversial examples of grammatical items (e.g. noun classifiers or the English affix *-ing*) can be characterized as 'deictic' in any intuitive way.

2.3.2 Modals and auxiliation

The development of auxiliaries, sometimes referred to as ‘auxiliation’ (or ‘auxiliarization’), has figured prominently in grammaticalization literature. Among the many book-length studies devoted wholly or in part to this topic are Diewald (1999) on grammaticalization in the German modals, Krug (2000) on ‘emerging’ modals in English such as *HAVE to* and *WANT to*, Hansen (2001) on modal auxiliaries in the Slavic languages, and the cross-linguistic studies by Heine (1993), Bybee et al. (1994), Kuteva (2001), and Narrog (2012). Some of these deal with various verbal categories (e.g. tense, aspect, modality, and voice), others primarily or exclusively with modality. I will limit myself to work on the development of modals in the following. The relation between modal and other meanings (and the various ways of defining ‘modality’) will be discussed in Chapter 3.

A recurring theme in the literature on auxiliation is the idea of unidirectional pathways of functional change. Whereas the ‘cline of grammaticality’ discussed in the previous section—see (10) above—illustrates the development of a grammaticalizing item in terms of its loss of autonomy, changes in meaning have also been argued to follow predictable pathways. Within the semantic domain of modality, the best known case is probably that of epistemic meaning, which is almost universally assumed to be secondary to ‘root’ modality (or ‘deontic’ or ‘agent-oriented’ modality; I return to the issue of terminology in Chapter 3). In other words, according to this view root (deontic, agent-oriented) modality may develop into epistemic modality, but not vice versa. The notion of predictable pathways in the development of modal meaning has been around in the historical linguistic literature at least since the early 1980s. In a short study based on data from Antiguan Creole and English child language acquisition, Shepherd (1982) formulates a strong version of the hypothesis:

If a particular modal form changes in meaning (with respect to deonticity or epistemicity) the direction of the change will be from deontic to epistemic, not from epistemic to deontic (Shepherd 1982: 316)

In the same volume, Goossens (1982) investigates the development of epistemic modals in the history of English. While he finds ‘traces’ of epistemic uses of a few modals (*MAY*, *SHALL*, and *WILL*) in Old English, the conclusion is that this semantic field only developed fully after the Old English period, and that the epistemic function is thus historically secondary to other modal meanings. The sources of epistemic meanings were later investigated in Goossens (1987a, 1992, 2000).

Unlike Shepherd’s and Goossens’s studies, Bybee et al. (1994) include data from a larger number of languages from around the world. While they find that modal expressions may develop from many different lexical sources, the semantic pathways within the modal domain are largely predictable. The authors illustrate the observed developments by means of semantic maps like Figure 2.3, which shows one of the observed pathways of possibility modals, such as English *MAY*. As the figure indicates, Bybee et al. observe a change from ability meaning to the more general ‘root’ possibility, which may in turn develop into the permission and epistemic possibility meanings. The reverse developments are not attested in the data.

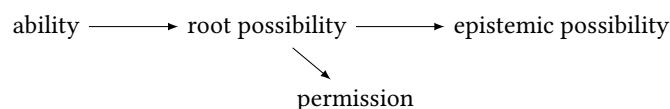


Figure 2.3: Pathway of possibility meanings (after Bybee et al. 1994: 199)

The supposedly unidirectional pathway to epistemic meaning has been linked to a more general tendency to increased subjectivity by Traugott (1986, 1989) and Hanson (1987). In addition, these authors suggest that a development from less to more subjective may also be observed *within* the epistemic domain. While Hanson (1987) primarily deals with English epistemic adverbs, Traugott (1989) also includes modals and speech-act verbs in her analysis. She characterizes the universal tendency towards subjectification in this way: ‘Meanings tend to become increasingly based in the speaker’s subjective belief state/attitude toward the proposition’ (Traugott 1989: 35). According to Traugott, the history of the English modals *SHALL*, *WILL*, and *MOT* provides evidence that weakly subjective epistemic meanings always come before strongly subjective ones. For instance, to the extent that *MOT* is found epistemically in Old English—Traugott (1989: 42) is not entirely sure that it is—it is always only weakly subjective, but it then develops strongly subjective epistemic uses during the Middle English period, first only in the context of the adverb *nedes* ‘necessarily’, but later also more generally. A sketch of Traugott’s analysis of the three modals is given in Table 2.3.²³ The analysis of *MOT* is later elaborated by Traugott & Dasher (2002: 120–137), who also discuss the development of English *OUGHT*. The pathways proposed are very similar to those in Traugott (1989): deontic modality may develop into epistemic modality, but not vice versa; and within these domains the meaning may become more, but not less, subjective (see Traugott & Dasher 2002: 147–148). In addition to subjectification, Traugott & Dasher distinguish a further diachronic tendency, intersubjectification, which they describe as extending unidirectionally from subjectivized meanings. Intersubjectivity for Traugott & Dasher involves the speaker’s attention to the addressee and is defined as the coded expression of this attention, e.g.

²³ Note that—as Table 2.3 indicates—Traugott does not actually show an unequivocal development from weakly to strongly subjective in any of the three modals. According to her analysis, *SHALL* never developed a strongly subjective use, and the strongly subjective use of *WILL* arose from habitual or future uses, not weakly subjective epistemic ones. In the case of *MOT*, Traugott is not sure whether weakly subjective epistemic senses are ever found in the data. A closely related problem is that Traugott’s notions of ‘weak’ and ‘strong’ subjectivity are themselves subjective, meaning that it is often unclear how the analyses are arrived at. To give just one example, *muste* in the following is classified as strongly subjective epistemic:

(i) *the fruit muste be delicious, the tree being so beautiful*
(1623 Middleton *Spanish Gipsie*, cited from Visser 1963: III, 1810)

It is not obvious why *muste* here is not only ‘weakly’ subjective in Traugott’s terms, as the speaker backs up his assertion with evidence (see Traugott 1989: 36). Note also that while Traugott (1989: 42) cites (i) as an example of ‘the absence of the adverb’ *needs*, this absence is due to Visser’s condensation of the example. The original text reads ‘the Fruit must needs be delicious, the Tree being so beautifull’ (EBO, Middleton *The Spanish gipsie*, i. i.).

by ‘hedges, politeness markers, and honorific titles’ (Traugott & Dasher 2002: 23). However, except for a passing reference to a ‘particular kind of (inter)subjectivity’ in epistemic modals (Traugott & Dasher 2002: 115), the authors do not seem to invoke the notion of intersubjectification in their discussion of the English modals.

Table 2.3: Subjectivity in three epistemic modals according to Traugott (1989)

	Old English	Middle English	Modern English
SHALL	weakly subjective	no epistemic uses	no epistemic uses
WILL	no epistemic uses	no epistemic uses	strongly subjective
MOT	weakly subjective (?)	strongly subjective only with <i>nedes</i>	strongly subjective

The notion of intersubjectification has been employed by other authors writing on modality, although rarely in exactly the same way. A comparison of various proposals may be found in Narrog (2012: Ch. 3). Narrog’s own approach is to subsume subjectification and intersubjectification under the more general heading of increased speech-act orientation, which, like the other developments discussed in this section, is assumed to be unidirectional: modal expressions may develop from less to more oriented towards the speech act, but not the other way round (for details see Narrog 2012: 110–117). Other authors have taken subjectification and intersubjectification to be two distinct processes. Byloo & Nuyts (2014) and Nuyts & Byloo (2015) consider subjectification an increase in the role of the speaker in assessing the ‘qualificational’ status of the state of affairs in terms of tense, modality, and aspect. The more subjective a meaning is, the more it relies on the speaker’s evaluation of this status. Intersubjective meanings, by contrast, ‘function in the realm of interaction and discourse planning and management’ (Byloo & Nuyts 2014: 93). The authors give illocutionary modifiers, politeness markers, and clause connectors as examples of intersubjective elements. Unlike in Traugott & Dasher’s model, intersubjective meanings in Byloo & Nuyts’s terms need not develop out of highly subjective ones, but may ‘exit’ the domain of qualificational meanings at any stage. Note also that Byloo & Nuyts do not distinguish between different degrees of subjectivity *within* the various modal meanings (epistemic, deontic, and so forth), but have a more fine-grained classification of modality. I will return to the meaning categories in Byloo & Nuyts’s framework in Chapter 3.

2.3.3 Problems with grammaticalization

The ‘unidirectionality’ question

As shown in the preceding section, many authors working on the history of modality assume that modal meanings follow predictable (‘unidirectional’) pathways, e.g. from ‘root’ to epistemic and from less to more intersubjective meanings. One of the most hotly debated issues in the grammaticalization literature more broadly has also concerned unidirectionality, namely whether items involved in grammaticalization

always follow the course from less to more grammatical. According to a ‘strong’ interpretation of this hypothesis, grammaticalization is strictly unidirectional: lexical items may turn into grammatical ones, but not vice versa, and grammatical items may only become more, not less, grammatical. According to a ‘weak’ interpretation, which appears to be more widespread, unidirectionality is a general tendency which may occasionally be violated.

Lehmann (1982, 2015) uses the term ‘degrammaticalization’ to describe a hypothetical development where a more grammatical item turns into a less grammatical or lexical one. After surveying a number of potential cases, he concludes that ‘no cogent examples of degrammaticalization have been found’ (Lehmann 2015: 21).²⁴ Similarly, Heine (1993: 53) writes that ‘grammaticalization chains are *unidirectional*, extending from historically earlier/less grammaticalized to later/more grammaticalized uses’ (italics in original). However, a number of potential counterexamples to this unidirectionality have been suggested in the literature. For instance, Nevis (1986) and Campbell (1991) argue that two Estonian particles, interrogative *es* and emphatic *ep*, developed out of earlier clitics; Fischer (2000) suggests that the English infinitive particle *to* became more, not less, independent in the Late Middle English period; and the genitive marker *-s* has been argued to show a development from affix to clitic in English (Anderson 2008) and Mainland Scandinavian (Norde 2001, 2009). Campbell (2001b: 127–128) and Newmeyer (2001: 205–213), both in the same volume as Norde’s paper on Mainland Scandinavian, discuss further apparent counterexamples.

Many linguists working on grammaticalization have accepted that such counterexamples to unidirectionality do exist, but maintained that these are much less frequent than instances of grammaticalization and that unidirectionality remains a ‘robust tendency’ (Traugott 2001: 1) or a ‘basic generalization’ (Haspelmath 2004: 23) even if it is not an absolute principle; these are thus representatives of the ‘weak’ interpretation of the unidirectionality hypothesis.²⁵ In the unpublished paper by Traugott (2001), two likely counterexamples are acknowledged, the development of English infinitival *to* (Fischer 2000) and the ‘de-auxiliarization’ of Pennsylvania German *wotte* ‘want, wish’ (Burridge 1998; see below). Haspelmath (2004: 29) lists eight ‘real exceptions’ to unidirectionality, including English *to* and Mainland Scandinavian and English genitive *-s*.

Norde (2009) is an entire monograph devoted to possible instances of degrammaticalization, which the author classifies into three types, ‘degrammation’, ‘deinflectionalization’, and ‘debonding’. The first of these refers to the reanalysis of a func-

²⁴ Contrary to what has sometimes been suggested (e.g. Norde 2009: 1–2, 50; Börjars & Vincent 2011: 163), Lehmann (1982) did not actually claim that degrammaticalization does not exist, only that no clear cases had been recorded. In a postscript to the third edition Lehmann (2015: 192–193) clarifies this, but also adds that he is not convinced by any of the putative examples of degrammaticalization suggested in the literature since 1982.

²⁵ Or, as Kuteva et al. (2019: 6) have more recently put it, grammaticalization ‘is an *essentially* unidirectional process’ (emphasis added), and apparent counterexamples ‘can frequently be accounted for with reference to alternative factors’. The authors do not go into detail about what these alternative factors might be.

tion word to a member of a lexical part of speech.²⁶ According to Norde, this is very rare, but examples are attested. One is a Middle Welsh development described by Willis (2007) where the preposition *yn ol* ‘after’ was reanalysed as a verb, *nôl* ‘fetch’ (Norde 2009: 148–151). Norde’s second type, ‘deinflectionalization’, refers to the re-analysis of an inflectional affix into a ‘less bound’ functional morpheme, either a derivational affix or a clitic. English and Mainland Scandinavian genitive *-s* would belong here (Norde 2009: 160–179). Finally, ‘debonding’ refers to a purely formal change from bound to free morpheme, i.e. without any change in function (Norde 2009: 186). Norde considers English *to* and the Estonian particles *es* and *ep* examples of this phenomenon.

One particular type of counterexample seems to have been especially frequently reported in the Germanic languages, namely a development from modal to full verb. Some of these apparent counterexamples have been the object of much scrutiny, others have only been mentioned in passing in a single or a few studies. In Norde’s terminology the development from auxiliary to full verb would be a case of ‘degrammation’. Other terms that have been used in the literature include ‘demodalization’ (van der Auwera & Plungian 1998; Ziegeler 2003), ‘de-auxiliarization’ (Schlüter 2010; Nuyts 2013), and ‘grammatical re-autonomization’ (Nuyts & Byloo 2015). I will briefly review these proposals in the following; they are summed up in Table 2.4 (PennG = Pennsylvania German). The column with references include the authors who have argued for a particular ‘de-auxiliation’ analysis and, between brackets, scholars who have questioned this analysis.

Table 2.4: Suggested ‘de-auxiliation’ in Germanic

ITEM	DEVELOPMENT	REFERENCES
English <i>DARE</i>	modal → full verb	Beths 1999; Schlüter 2010 (but cf. Traugott 2001)
Danish <i>turde</i>	modal → full verb	Andersen 2008; Hansen & Heltoft 2011
PennG <i>wotte</i>	‘will’ → ‘wish’	Burridge 1998 (but cf. Börjars & Vincent 2011)
Swedish <i>må</i>	‘may’ → ‘feel’	van der Auwera & Plungian 1998; van der Auwera 2002 (but cf. Andersson 2008)
German <i>mögen</i>	‘may’ → ‘like’	van der Auwera & Plungian 1998 (but cf. Ziegeler 2003)
Dutch modals	‘reautonomization’	Nuyts 2011, 2013 (but cf. Honselaar & Olbertz 2016; Olbertz & Honselaar 2017)

The most discussed of these developments is probably English *DARE*, which has been argued on several occasions to show a change from more to less grammatical status. Beths (1999) gives a number of arguments for why the development of *DARE* is a counterexample to the unidirectionality hypothesis, and Schlüter (2010) comes

²⁶ Note that Norde distinguishes this from *lexicalization*, where a morpheme (or a whole phrase or clause) may be converted into a single lexical item ‘out of its context’. The examples mentioned by Norde include *ism* ‘ideology’ (from affix to noun), *up the price* (from adverb to verb), and *forget-me-not* (from clause to noun). As her lengthy discussion (Norde 2009: 8–18, 109–14) suggests, however, it is not always obvious where to draw the line between these two phenomena (as explicitly acknowledged; see Norde 2009: 11–12).

to the same conclusion after a detailed investigation of the development of DARE in a corpus of Early and Late Modern English. The tenor of the argument is that a number of formal changes have happened to DARE which have made it less auxiliary-like, such as the development of weak (i.e. regular) instead of preterite-present (irregular) morphology, and the use of the *to*-infinitive, which starts to occur in Early Modern English.²⁷ Compare the older past-tense form *durst* and the Ø-infinitive in (11) with regularized *dared* and the *to*-infinitive in (12).

- (11) Late Middle English (c.1450)

And the seruauntes saide thei durst not go to her.

‘And the servants said that they did not dare approach her.’ [Ime.stbarth, 76]

- (12) Early Modern English (1577)

these Scots were vtterlie expelled out of all the bounds of Britaine, in which they neuer dared to reenter

(EEBO, Holinshed *Chronicles*, 43)

The Danish verb *turde* ‘dare’ has been suggested as a counterexample for similar reasons. On this verb, Andersen (2008) writes the following:

In the 1900s, Da. *turde* ‘dare’ is reanalysed as a lexical verb. It comes to compete with the lexical *vove* ‘dare’, which it tends to replace. As a lexical verb, it comes to combine with *at*-infinitives and to receive full stress. (Andersen 2008: 22)

The arguments here are of a formal nature: in the case of English, the inflection of DARE and the form of the infinitive are taken as indicative of the grammatical status. In the case of Danish *turde*, Andersen points to the form of the infinitive as well as the stress pattern.²⁸ Norde (2009: 136–137) discusses both the English and Danish developments and concludes that since there does not appear to be any functional change in either case, neither of them qualifies as an example of degrammation. Traugott (2001) reaches a similar conclusion based on the English data in Beths (1999). I return to the development of DARE in Chapter 6.

²⁷ These formal changes to DARE had in fact already been pointed out by Nagle (1989) and Warner (1993: 202–203) (and, even earlier, in the unpublished dissertation by Reed 1981). However, these studies were written before the question of unidirectionality became a contested issue in the grammaticalization literature, and hence they do not attach much significance to the fact that the verb seems to have become more ‘lexical’. I will return to the work of these authors in Chapter 6.

²⁸ An argument based on semantics is suggested by Hansen & Heltoft (2011: 778). The authors write that *turde* has lost its earlier modal uses and now only has the meaning ‘dare’, which the authors do not consider modal. However, neither Hansen & Heltoft nor Andersen back up their claims about *turde* with any corpus data, so the interpretations rely entirely on the intuitions of the authors. As we will see in Chapter 6, there seems to be no indication that *turde* is replacing *vove* in my Danish material from KorpusDK.

Burridge (1998) suggests that the verb *wotte* in Pennsylvania German (specifically, the dialect spoken in the former Waterloo County in Ontario) is a degrammaticalized past subjunctive form of the modal *wette*, the cognate of Modern Standard German *wollen*. The verb in the present-day Waterloo County dialect has the meaning ‘wish, would like’, as in (13):

- (13) Pennsylvania German (Waterloo, ON)
Ich wott, du kennscht frieher kumme
 I wish you can:SBJV:2SG sooner come:INF
 ‘I wish you could come sooner’ (Burridge 1998: 28)

According to Burridge, the new verb *wotte* has split off from the original modal verb *wollen* in the contexts of ‘modest wish’, as in (14), but has now lost all traces of its earlier modal status. Hence, for instance, it does not take infinitival complements (**Ich wott kumme* ‘I want to come’) and has acquired a new past participle form, *gewott* (Burridge 1998: 28–29).

- (14) Modern Standard German
Ich wollte, ich wäre zu Hause
 I will:PST I COP:PST:SBJV to home:DAT
 ‘I wish I was home’ (Burridge 1998: 30)

Burridge proposes a somewhat controversial ‘cultural’ explanation for the development of *wotte*: because of strong social mores against immodesty in the Mennonite community, speakers of Pennsylvanian German have adopted this more ‘modest’ way of expressing wishes than the original verb *winsche*, the cognate of standard German *wünschen*. Both Traugott (2001: 12) and Norde (2009: 138–142) accept this explanation. It should be noted, however, that German *wollen* as used in (14), which *wotte* is supposed to have developed from, is not an auxiliary according to any of the received conceptions of this term, but a transitive verb with an object complement clause. In addition, as Börjars & Vincent (2011) point out, the analysis is based entirely on a reconstruction of the relevant steps as there is little to no historical data for this variety of Pennsylvania German. For this reason, the authors profess to ‘remain sceptical’ (Börjars & Vincent 2011: 170) about the example.

Börjars & Vincent mention another example which has been cited in the literature, the apparent development in Middle Swedish of a (regular) full verb *må* ‘feel’ out of the (preterite-present) modal *må*, the cognate of English *MAY*. This example was suggested by van der Auwera & Plungian (1998: 105); see also van der Auwera (2002: 23–24). However, as Ziegeler (2003: 243) suggests, these two verbs might also have developed out of an original lexical source, and this is indeed what Andersson (2008) finds in his study of *må* in Old and Middle Swedish: full-verb *må* meaning ‘feel’ is found throughout the recorded history of Swedish, and hence there is no evidence that the development was modal → full verb rather than the other way round. In fact, because the cognate verb is attested with the meaning ‘feel’ in Old Icelandic, Old English, and Old High German as well, the more economical explanation is that this is an instance of shared inheritance (Andersson 2008: 27–28).

The only major change in Swedish is that full-verb *må* has acquired regular instead of preterite-present morphology, which Andersson (2008: 24–26) shows happened in the early modern period, several centuries after the first attestations of the ‘feel’ meaning. Hence, the Swedish development is better classified as a lexical split.

An example from the history of German is suggested by van der Auwera & Plungian, namely the development of a transitive verb ‘like’, as in (15), out of the modal *mögen*, another cognate of English *MAY*.

(15) Present-Day German

Ich mag Tom nicht.

I like T. NEG

‘I don’t like Tom.’ (van der Auwera & Plungian 1998: 105)

However, this example has been questioned as well. As already noted by Lühr (1987) and further discussed by Diewald (1999: 315–316) and Ziegeler (2003: 244–245), the transitive use is recorded already in Old High German, although the example from Notker in (16) appears to be an isolated attestation (AWB, s.v. *magan*, sense I.5).

(16) Old High German (c. AD 1000)

Der stárchemo fêhe gîbet sine fuôra. Er uueîz
 DEM.M strong:DAT livestock:DAT give:3SG POSS nourishment 3SG.M know.3SG
die starchen die daz héuue mûgen.
 DEM.PL strong:PL DEM.PL DEM.N hay(N) mögen:PL

‘He gives strong beasts of burden their nourishment. He knows the strong ones, who like the hay.’ (Notker, Psalm 146; Tax 1983: 532)²⁹

In other words, like Swedish *må*, German *mögen* appears to continue an older primary-verb use alongside the modal one, and there is no evidence that the former developed out of the latter.

The development of the Dutch modals has been argued to show a different counter-directional tendency by Nuyts (2011, 2013). Unlike the Germanic examples discussed so far, the Dutch development is not limited to a single verb, but rather seems to affect the modals collectively. In examples like (17) with *mogen* ‘may’, the modals appear ‘autonomously’ without an infinitive, but with modal meaning.

(17) Present-Day Dutch

vind ie dat bepaalde dingen mogen of niet mogen?

find he COMP certain:PL things MAY:PL OR NEG MAY:PL

‘Does he think that certain things are acceptable or not?’ (Nuyts 2013: 127)

Nuyts (2013: 131–132) argues that none of Norde’s three types of degrammaticalization seems appropriate for this development. Whereas Norde’s ‘degrammation’ refers to a return to ‘lexical’ meaning, the function of *mogen* in (17) is still modal.

²⁹ Lühr (1987: 273) translates the passage ‘Der dem starken Vieh seine Nahrung gibt. Er kennt die Starken, die das Heu mögen’. There is nothing corresponding to the second clause in the Vulgate, which reads simply *Qui dat iumentis escam ipsorum* ‘Who giveth the beasts their food’ (Psalm 146: 9; trans. D–R).

However, in two contributions on the history of *moeten*, Honselaar & Olbertz (2016) and Olbertz & Honselaar (2017) have questioned the ‘re-autonomization’ analysis, arguing that—at least in the case of *moeten*—the ‘autonomous’ use continues an older pattern. An additional intricacy, pointed out in Caers & Gregersen (2019), is that the construction in (17) is not unique to Dutch, but also occurs in Afrikaans, West Frisian, and western Low German dialects. The distribution suggests that this is an areal feature, but whether this has any implications for the analysis of the development of the construction remains to be seen.

The ‘ontology’ question

Another frequently voiced objection to the notion of grammaticalization is that it has no independent status as a process or mechanism of change, but rather consists in a number of distinct changes. In other words, ‘grammaticalization’ is not an ontological category. This point is argued by several contributors (e.g. Campbell 2001b; Joseph 2001) to a special issue of *Language Sciences* devoted to (critiques of) the notion of grammaticalization (Campbell 2001a). As Campbell points out and illustrates with several examples, most contributors to the grammaticalization literature are well aware that the term is used to refer to a cluster of changes of different types. The following are two representative examples:

It is obvious that phonological attrition is omnipresent in linguistic change. It plays its role not only in grammaticalization, but affects, in the long run, practically every sign. [...] We will meet the same situation with some of the other parameters. None of them is by itself sufficient to define grammaticalization; it is only by the interplay of all of them that grammaticalization comes about. (Lehmann 2015: 135)

The events that occur during this process [sc. grammaticalization] may be discussed under rubrics of semantic, functional, grammatical, and phonological changes, though we will argue that these processes are intimately connected with one another. (Bybee et al. 1994: 5–6)

Campbell contends that while the changes mentioned by Lehmann and Bybee et al. *may* be connected with each other, they need not be, and none of them is necessary or sufficient to define grammaticalization. Since the developments which have been discussed under the heading ‘grammaticalization’ in the literature are always reducible to other mechanisms, such as reanalysis, analogy, and phonetic reduction, Campbell denies that the term has any value except as a heuristic:

In short, grammaticalization is derivative, epiphenomenal, and has no independent status of its own. ‘Grammaticalization theory’ has no explanatory value because what it claims to explain is explained already by other well-understood mechanisms which lie behind it and, as is generally agreed, it cannot ‘explain’ without appeal to these other mechanisms and kinds of change. (Campbell 2001b: 151)

Joseph argues the same point in his contribution to the special issue (Joseph 2001), as well as in several later works (e.g. Joseph 2004, 2011), characterizing grammaticalization as ‘an epiphenomenon resulting from other processes of change’ (Joseph 2001: 185). Similar arguments have been put forth by a number of scholars from different traditions (see e.g. Newmeyer 2001: 191–192; Janda 2001; Roberts & Roussou 2003: 1–4; Fischer 2008: 338; Aboh 2016).³⁰ It also seems to be the position of Warner (1993: 195–197) in a short section devoted to grammaticalization, which he rather cautiously suggests may have been formally rather than semantically motivated in the case of the modals: ‘one is bound to suspect that the cohesion of formal properties [...] takes precedence over the semantics’ (Warner 1993: 197). He does not state explicitly whether he considers grammaticalization ‘epiphenomenal’ or a process of change in its own right, but his short discussion suggests that he does not consider it to have much explanatory potential.

This ‘ontological’ objection has met with various responses in the grammaticalization literature. Hopper & Traugott (2003) mostly ignore it in the second edition of their textbook, instead focussing exclusively on the proposed counterexamples to unidirectionality:

The bulk of the arguments [in Campbell 2001a] was devoted to the discussion of a small number of cases in which a reversal of unidirectionality can be argued, some of these, however, such as the English possessive *’s*, being themselves quite controversial. (Hopper & Traugott 2003: 34)

The authors devote an entire chapter to the unidirectionality question, but do not engage with the more fundamental objection that grammaticalization is not a process in its own right. This question is addressed in a paper by Lehmann (2004), who argues that there are cases of ‘pure’ grammaticalization which cannot be explained by or reduced to any other mechanism. He gives as examples the development of preverbal cross-reference markers out of personal pronouns in some Romance languages, the Ancient Greek passive marker, and the development of indefinite and definite articles in Germanic and Romance.³¹

An alternative solution is proposed by Boye & Harder (2012), who criticize the notion of grammaticalization as a complex process consisting of a bundle or cluster of different changes, explicitly rejecting Lehmann’s parameter approach. Instead, they propose a functional–structural definition of the notion of ‘grammar’ according to which grammatical expressions are ‘by convention ancillary and as such discursive’.

³⁰ Note that this ‘epiphenomenal’ view of grammaticalization is already expressed by Samuels (1972: 58), albeit in a somewhat offhand way. Writing on the ‘grammaticisation’ of a lexical item that it consists in ‘a loss, in information content, of those components of its meaning that restrict it to specialised contexts’, Samuels adds that ‘[i]n its origins, the change does not differ from other semantic extensions’. Samuels thus recognizes that some changes may be described as instances of ‘grammaticisation’, but does not consider it different in kind from other functional changes.

³¹ But see Sommerer (2018) for an analogy-based account of the emergence of the English article system. Briefly stated, Sommerer’s argument is that a structural determination slot first developed at the left edge of the NP, after which the demonstrative pronoun and the numeral ‘one’ were recruited as default ‘fillers’. The relevant structure had thus been created by syntactic analogy before any grammaticalization or re-analysis happened.

sively secondary'. Lexical items, by contrast, are 'by convention capable of being discursively primary', i.e. being the main point of an utterance (Boye & Harder 2012: 7). Grammaticalization under this view is the change whereby a linguistic item loses the ability to be discursively primary. Other changes, such as phonetic reduction, may follow from grammaticalization and often do, but are not part of the process itself.

Boye & Harder's proposal solves some of the issues raised in the literature, but does not address the issue of the mechanisms which bring grammaticalization about (as the authors acknowledge; see Boye & Harder 2012: 24). Here the question remains whether there are any characteristics that set grammaticalization apart from other types of language change, or whether it is wholly reducible to other mechanisms. The two most frequently mentioned mechanisms are reanalysis, which attributes a new analysis to an existing structure, and analogy, which modifies a structure on the basis of existing patterns. A number of scholars (e.g. Hopper & Traugott 2003; Roberts & Roussou 2003) have considered (syntactic) reanalysis the primary mechanism in grammaticalization, but analogy has recently attracted increasing attention.³² Fischer (2007: 123) argues that analogy is fundamental to all language change, as change only happens 'within the contours of the communicative situation and the grammatical system in which a structure operates', and therefore is 'also confined and shaped by the formal structures that already exist'. I will return to the role of analogy in language change in Chapters 5 and 6.

2.3.4 Interim summary

The preceding sections have surveyed some of the most important works on grammaticalization and modal auxiliaries. I have introduced the notion of 'clines' of more or less grammaticalized items and the idea that there are predictable 'pathways' of change both within the notional domain of modality and in grammaticalization more generally. Claims and counterclaims about the supposed unidirectionality of change were discussed on the basis of examples mainly from the Germanic languages. As illustrated in Section 2.3.3, developments in the modal systems of a number of Germanic languages have been argued to constitute counterexamples to the hypothesis of unidirectionality—but as also shown, almost all of these apparent counterexamples have been contested as well.

Aside from the discussions about unidirectionality, another controversy discussed in Section 2.3.3 relates to the ontological status of grammaticalization, which has been argued to be an epiphenomenon with little or no explanatory value. Analogy and reanalysis have been argued to be the actual mechanisms by which change comes about, but scholars disagree about which of the two is more fundamental. No matter where one stands on these questions, I think all historical linguists can agree that grammaticalization is not the only interesting phenomenon in language change. Yet, as Joseph (2001, 2004, 2011) has argued on a number of occasions, the amount of

³² See for instance the work of Fischer (2007, 2008, 2010), De Smet (2012), De Smet & Fischer (2017), Noël (2017), and Sommerer (2018).

attention awarded to grammaticalization in the last decades may have led to a privileging among historical linguists of one type of change over others. As he writes in his ‘general critique’ in *The Oxford handbook of grammaticalization* (Narrog & Heine 2011):

One has to wonder [...] why one particular grouping of changes (semantic shifts of a certain type + phonetic reductions + extension of usage into novel realms, etc.) should be treated as special, deserving its own label, conferences, textbooks, and other compendia (Joseph 2011: 197)

The focus of this dissertation will be precisely the kinds of changes which Joseph argues have been overlooked, i.e. a number of changes which do not fit neatly under the grammaticalization ‘umbrella’. These will be detailed in the final section of this chapter.

2.4 This investigation

2.4.1 Beyond grammaticalization

Whether the modals are considered a ‘paradigm’ case of grammaticalization or not, there are a number of changes in their history which do not seem to fit the predictions made in the grammaticalization literature. Some of these are mentioned by Warner (1993) in his discussion of the category status of the modals in Middle English. Others have been used to argue that one particular item, DARE, constitutes a case of degrammaticalization. Most of the relevant changes have already been mentioned in passing in the preceding sections (see e.g. pp. 29, 40), but are repeated here for the sake of clarity:

New non-finites In the course of Middle English, a number of modals appear to acquire non-finite forms, either participles or infinitives, which are not attested in Old English. Warner (1993) mentions innovative non-finite forms of the modals MAY, DARE, and WILL. In the grammaticalization literature it is generally assumed that grammaticalizing items exhibit a reduction of inflectional forms, and the English modals are even mentioned as an example of this by Lehmann (2015: 140). The Middle English development would seem to run counter to this tendency.

Weak morphology Instead of the expected preterite-present ending *-en*, a weak (regularized) PRS.IND.PL ending *-eþ* is attested in Middle English ‘in some parts of the south and south-west midlands’ (Warner 1993: 101). This not only happens when the verbs are used as primary verbs, but also in secondary-verb (‘modal’) uses. Warner finds examples of CAN (*conneþ*), MAY (*moueþ*), SHALL (*shulleþ*), the last of these in a larger area than the other two. This would seem to contradict the prediction made in the literature that grammaticalizing items tend to become more, not less, irregular (see Lehmann 2015: 145–146).

‘Impersonal’ modals Beginning in the Early Middle English period a number of modals start to occur in the oblique experiencer construction traditionally referred to as the ‘impersonal’. An example from a fifteenth-century text, one of the mystery plays in the Towneley Cycle, is seen in (18):

- (18) *ffyrst must vs crepe / and sythen go.*
 ‘First we must crawl and then walk.’ [nme.towneley, 103]

This development is mentioned by Plank (1984: 322–323), who assumes that it must be due to analogy with verbs with similar meanings. Warner (1993: 102) takes it as an indication that the modals developed new ‘verblike’ properties in Middle English, as the impersonal construction is ‘shared’ with members of the class of full verbs. It is not clear, however, how or whether this development would fit in a grammaticalization account of the history of the modals. In the work of Goossens (1985, 1987b) cited above, for instance, verbs (‘full predicates’) grammaticalizing into auxiliaries (‘predicate operators’) are assumed to lose their ability to assign argument structure to the clause. In the case of ‘impersonal’ modals in Middle English, it rather appears that the modals in question gain the ability to assign argument structure.

The development of DARE Towards the end of the Middle English period the first instances of DARE with *to*-infinitives and direct object noun phrases appear. As discussed in Section 2.3.3, this has been seen as an instance of degrammaticalization, i.e. a counterexample to the unidirectionality hypothesis, whereas others have argued that it does not qualify as a true counterexample. In either case, as I will argue in Chapter 6, the ‘(de)grammaticalization’ label does little to explain why these developments happened.

MOT from ‘may’ to ‘must’ In very late Old English—or at the beginning of Early Middle English—the first instances of MOT with the meaning ‘must’ rather than ‘may’ are recorded. This development is included as an instance of grammaticalization in Kuteva et al. (2019: 344), though the authors note that the opposite change (‘must’ → ‘may’) is also recorded in some languages, suggesting that ‘this seems to be a bi-directional type of change’. Since the authors consider grammaticalization an otherwise ‘essentially unidirectional’ process (see p. 39, n. 25 above), it is unclear how this ‘bi-directional’ change fits under the moniker, and as far as I am aware no one has yet provided a satisfactory explanation for it.

Of these five developments, the first three all concern formal changes in the Middle English period, i.e. developments involving morphological and syntactic properties without any apparent change in meaning. Moreover, from the perspective of Present-Day English, they are all as it were ‘failed’ changes, since the standard Present-Day English modals have no non-finite forms, weak morphology, or impersonal uses.³³ For these reasons the three developments are treated together in Chapter 5.

³³ The obvious exception is DARE, which may have both non-finite forms and weak morphology. See the following paragraph. I refer to ‘standard’ English because non-finite forms of some of the modals are available in several dialects, notably Scottish, Northern England, and Southern US English.

The development of DARE has been much discussed and continues to inspire new investigations (see the recent contribution by Bemposta-Rivas 2019). The observed changes involve both formal and functional aspects of DARE, which will come under closer scrutiny in Chapter 6. The semantic development of MOT from Old to Middle English has also been much discussed, as the literature review at the beginning of Chapter 8 will show. Despite the ample literature, the development of MOT remains somewhat puzzling and there is no agreement about how to explain it. Chapter 8 contributes to this discussion and shows how insights from other Germanic languages may shed light on the Middle English situation.

2.4.2 A comparative perspective

In addition to the attempt to move ‘beyond’ grammaticalization, my dissertation also intends to place the English developments more explicitly in a cross-Germanic perspective. This is by no means an original idea, but in the literature on the English modals, the comparative Germanic perspective is often limited to a few brief comments on cognate developments.³⁴ Since one of the original objectives of this research project (see p. 12) was to allow an explicit comparison of the developments in English and Dutch (and potentially other Germanic languages), the investigation of semantic changes in Chapters 7 and 8 follows the general setup of the diachronic investigations by Byloo & Nuyts (2014) and Nuyts & Byloo (2015). These studies focus on the Dutch cognates *kunnen*, *mogen*, and *moeten* and their semantic development from Old to Present-Day Dutch. Using the same semantic classification in the investigation of English CAN, MAY, and MOT/MUST makes it easier to discover similarities and differences between the developments in the two languages. Some of these will be discussed in Chapter 7.

In addition to the possibility of an explicit comparison with the Dutch developments, the cross-Germanic perspective will also be of use in other respects. The discussion of the history of DARE in Chapter 6 makes reference to developments in other Germanic languages at several points. This is not merely an assemblage of random facts, but serves to make a more general point: because I will propose that Present-Day English DARE is a variable-source construction, it is relevant that cognates of DARE have interacted—or merged completely—with near-homonymous verbs in several other Germanic languages. In addition to this comparison, an analysis of the behaviour of the Present-Day Danish verbs *turde* ‘dare’ and *vove* ‘dare, venture’ shows that a language may have more than one ‘courage’ verb without these being wholly synonymous. This will turn out to be an important point in the analysis of the meaning of DARE in Old English.

The cross-Germanic perspective also pays off with respect to MOT, which has parallels in several languages. The cognate of MOT itself has developed from a possibility to a necessity modal in many West Germanic languages; furthermore, the cognate of MAY in Danish (MÅ) appears to have developed in a very similar way, changing

³⁴ See for instance Warner’s (1993: 60, 131, 147, 228–229) scattered remarks on German, Dutch, and the Scandinavian languages, Molencki (2005: 158) on the West Germanic cognates of DARE, or the single footnote on German in Traugott (1989: 42 n.).

from possibility to necessity in some of its functions. This suggests that the change possibility → necessity was not tied specifically to the etymon *MOT* and its cognates, and that the change may not be as rare or exceptional as it first appears. Because this parallel between Danish *MÅ* and West Germanic *MOT* has not been mentioned in any of the literature I surveyed, I decided to supplement my study of *MOT* with a small-scale investigation of the meanings of *MÅ* in Late Middle Danish. Thus, while the main focus of this chapter—and the dissertation as a whole—is on Old and Middle English, I also hope to contribute to our knowledge of Middle Danish and the other older Germanic languages.

CHAPTER 3

The semantics of modality

Gentlemen, you can't fight in here.
This is the War Room!
— Pres. Merkin Muffley in *Dr.
Strangelove*

3.1 Introduction

The notion of modality has been defined and delimited in many different ways. Some authors take ‘modality’ to refer to the expression of the speaker’s subjective beliefs and attitudes, others define it as the semantic field of possibility and necessity, and yet others see it merely as a cover term for a network of meanings related by family resemblance. In addition to the question of definition, another contested issue concerns the classification of modality into different subtypes, with proposals ranging from just two to about a dozen relevant categories.

This chapter attempts to give a concise overview of some of the competing approaches to modality and then goes on to present the classification which will be used in my own investigation. The linguistic literature on modality is much too large to be covered in its entirety, but a brief survey of some of the most influential approaches will, I hope, help clarify the various distinctions. The framework used for my analysis is based on that of Nuyts and colleagues (Van Ostaeyen & Nuyts 2004; Byloo & Nuyts 2011; Nuyts et al. 2010; Byloo & Nuyts 2014), but since their classification of modal meanings departs from the tradition in important ways, it is worthwhile to survey this tradition first in order to make explicit how my analysis differs from

earlier work on the English modals. Section 3.2 briefly reviews some of the ways ‘modality’ has been defined in the linguistic literature, Section 3.3 the ways it has been divided into different subtypes. Here I will cover the traditional distinction between deontic and epistemic modality as found, among many others, in Lyons (1977), the ‘semantic map’ approach adopted by Bybee et al. (1994) and van der Auwera & Plungian (1998), and some recent alternative proposals, such as Narrog (2012) and the work of Nuyts and colleagues. I also briefly discuss the notion of evidentiality and its relation to modality. Section 3.4 gives an overview of the classification which I will use in my analysis of the Old and Middle English material.

3.2 What is modality?

According to one view, modality is a semantic domain consisting of possibility and necessity. This is the standard approach within formal semantics (e.g. Kratzer 1981; Yalcin 2007; Yanovich 2013), but it is also found outside of this tradition (e.g. Bech 1951; van der Auwera & Plungian 1998; van der Auwera 2001; Hansen & Heltoft 2011). In this approach, the semantic values are often formalized using a set of operators borrowed from modal logic, most importantly \Diamond for possibility, \Box for necessity, and \neg for negation. $\Diamond p$ means that it is possible that the proposition p is true, $\Box p$ that it is necessary that p is true, $\neg \Diamond p$ that it is not possible that p is true, and so on. The negative operator can be used to express the relation between necessity and possibility: as shown in (1a), ‘ p is necessarily true’ is equivalent to ‘it is not possible that p is not true’; conversely, as shown in (1b), ‘ p is possibly true’ is equivalent to ‘it is not necessarily the case that p is not true’.

- (1) a. $\Box p \equiv \neg \Diamond \neg p$
 b. $\Diamond p \equiv \neg \Box \neg p$

One advantage of such a notation system when extended to the study of linguistic modality is that the scopal relations of negations and modal operators can be described in concise terms. An example is the difference between ‘external’ and ‘internal’ negation, as illustrated with *can’t* and *may not* in (2). In (2a) the possibility that the proposition (p = ‘the man they convicted is the murderer’) is true is negated. Here the negation is said to have scope over (or ‘outscope’) the modal operator. In (2b), on the other hand, the modal operator has scope over the negation: it is possibly the case that the proposition is not true (but it may be).¹

¹ The examples in (2) are adapted from a synopsis of a crime show episode on Australian television (ABC 2008).

- (2) a. *It turns out that the man they convicted can't be the murderer after all. The killings continue while he is behind bars.*
 $\neg \Diamond p$ ('it is not possible that p is true')
- b. *It turns out that the man they convicted may not be the murderer after all. A key witness just admitted to lying in court.*
 $\Diamond \neg p$ ('it is possible that p is not true')

A number of other phenomena relating to negation and modality are discussed by Fritz (1997: 52–59) and van der Auwera (2001); on the interaction of negation with the English modals, see Palmer (1990: 38–41). The possible role of negation in the history of MOT will be considered in Chapter 8.

A very different picture of modality is presented by many textbooks and reference works. According to one representative description, modality is 'concerned with the speaker's estimate of the relationship between the actor and the accomplishment of some event' (Trask 1993: 173), in other words with the speaker's subjective assessment or evaluation of the event. Similar characterizations are given, among others, by Bussmann (1996: 754), Velupillai (2012: 214), and Saeed (2016: 134).² While this view may seem to make sense intuitively in a number of cases, at the same time it excludes meanings which many authors would prefer to treat as part of the modal domain, such as expressions of ability or capacity (see [4] below). Another problem, as Narrog (2005b: 169–176) points out, is that speaker attitude may be reflected at all analytical levels: 'In actual discourse, one finds expressions of subjectivity across the lexicon and across grammatical categories' (Narrog 2005b: 176). A definition of modality in such terms might thus end up being exceedingly broad. A more fruitful perspective according to Narrog and others (e.g. Byloo & Nuyts 2014) is that modal meanings may be more or less based on the speaker's assessment or evaluation, i.e. more or less subjective, but that this is not a defining characteristic of modality as such.

Yet another approach is to define modality in terms of factuality, i.e. as relating to the factual status of events. Portner's informal characterization is that modality 'allows one to say things about, or on the basis of, situations which need not be real' (Portner 2009: 1). Similar views are expressed by, among others, Kiefer (1987), Palmer (2001), Timberlake (2007), and Narrog (2005b, 2012). Narrog gives the following definition:³

² The definition of modality in terms of speaker assessment is sometimes (e.g. by Palmer 1990: 2; Narrog 2005b: 169) attributed to Lyons (1977), who refers to the speaker's 'opinion or attitude towards the proposition that the sentence expresses or the situation that the proposition describes' (Lyons 1977: 452). However, in the passage in question Lyons is not discussing modality *per se*, but parenthetical sentence adverbs. The treatment of modality later in the book (1977: 787–849) is more in line with the 'possibility-and-necessity' tradition (see especially Lyons 1977: 806 n. 5).

³ Note that 'proposition' as used by Narrog here simply refers to any linguistic representation of an event or a situation, i.e. it is not meant in the more specific sense found in some functional frameworks (e.g. Dik 1997; Hengeveld & Mackenzie 2008).

Modality is a linguistic category referring to the factual status of a proposition. A proposition is modalized if it is marked for being undetermined with respect to its factual status, i.e. is neither positively nor negatively factual. (Narrog 2012: 6)

Such a definition may be broad enough to cover both the domain of possibility and necessity and a number of the subjective notions often considered modal, such as the speaker's hope or wish that the proposition is true. Kiefer (1987) indeed makes a case for reconciling the 'possibility-and-necessity' and 'speaker-assessment' conceptions of modality under the general heading of factuality ('validity' in Kiefer's terms).

Finally, some authors have suggested that it may not even be possible to define a coherent notional domain of modality. According to this view, 'modality' is rather a cover term for 'a set of diachronically related functions' (Bybee et al. 1994: 176), which because of a number of cross-linguistic tendencies in semantic change are often expressed by the same forms. In this sense, modality as understood by Bybee et al. is rather a network of categories related by family resemblance, and a meaning can be said to be 'modal' by virtue of being part of this network. By contrast, on the semantic map proposed by van der Auwera & Plungian (1998), which is based in large part on Bybee et al. (1994), only a subset of the meaning categories are said to be modal, namely those which express possibility or necessity—if an item 'leaves' the notional field of possibility and necessity by semantic change, it is said to have 'postmodal' meaning. I return to these semantic maps of modality in Section 3.3.

How one defines modality necessarily has some bearing on how many subtypes will have to be distinguished. The most straightforward example is that the 'possibility-and-necessity' conception of course excludes semantic values other than possibility and necessity. Consequently, under this view expressions of volition like the use of English *WANT to* in (3) do not belong to the field of modality. This is indeed the position of van der Auwera & Plungian (1998), although they concede that volition may be 'closely connected with modality' (van der Auwera & Plungian 1998: 86).

- (3) *Quite early in life she decided she wanted to be a dancer*
(BNC, 1987 W_misc)

By the same token, if modality is understood as the expression of the speaker's subjective attitudes, not only expressions of volition such as (3), but also ability expressions such as *CAN* in (4), would seem to be excluded from the modal domain. The function of *CAN* in (4) is not to express the speaker's subjective attitude towards the proposition, but to state an objective fact about the diving abilities of certain dolphins:

- (4) *Dolphins are superb divers. Many species can dive to depths of 200 metres*
(BNC, 1990 W_non_ac_nat_science)

This has led some (e.g. Gisborne 2007) to exclude ability expressions from the domain of modality.⁴ However, even authors who otherwise define modality in terms of speaker attitude sometimes include ability expressions like (4) as well (e.g. Saeed 2016: 136). Furthermore, whether one considers (3) and (4) to be examples of modality or not, it is well established that many languages use the same linguistic items to express these and ‘true’ modal meanings. In many cases, a linguistic description will thus need to take such meanings into account anyway, even if they are not considered ‘truly’ modal. This is certainly the case in an investigation like the present one, which is semasiological in orientation: all recorded meanings of the items under investigation are considered relevant, and hence they will need to be taken into account whether they are considered modal or not. Accordingly, a number of semantic categories were distinguished which not all linguists would consider part of the domain of modality. The various semantic distinctions will be the topic of the following sections.

3.3 Subtypes of modality

3.3.1 Basic types: Epistemic, deontic, dynamic

I begin the presentation of subtypes of modality with the most widely recognized ones and then move on to a number of further distinctions only made in some of the literature. The traditional view is that linguistic modality comprises at least two distinct types of meanings, one concerned with truth values and the other with allowing or obliging people to carry out certain actions. These two types typically go under the names ‘epistemic’ and ‘deontic’ modality. Whereas epistemic modality concerns the truth value of propositions, as in (5), deontic modality ‘is concerned with the necessity or possibility of acts performed by morally responsible agents’ (Lyons 1977: 823). Deontic modality thus comprises expressions of obligation and permission, as in (6).

- (5) EPISTEMIC MODALITY
- a. *Alfred may be unmarried*
 - b. *Alfred must be unmarried*
- (Lyons 1977: 797)

- (6) DEONTIC MODALITY
- a. *You may open the door*
 - b. *You must open the door*
- (Lyons 1977: 839)

⁴ Palmer’s position is ambiguous. On the one hand, in his book on the English modals he suggests in a parenthetical remark that CAN and WILL are ‘arguably not really modal at all’ (Palmer 1990: 37, see also p. 2), even though they are of course covered in the book. On the other, there seems to be no indication in Palmer (2001) that ability and volition should not be considered modal notions.

A third type, usually termed ‘dynamic’, is generally distinguished as well (e.g. Warner 1993; Palmer 1990, 2001; Traugott & Dasher 2002), but there is far from universal agreement about the precise delineation of this category. Under the most restrictive view, it comprises only expressions of ‘subject-internal’ ability, such as CAN in (4) above or in (7a) below. This is the view adhered to by Traugott & Dasher (2002), who rename the category ‘ability/capacity’ but explicitly equate it with what other authors call dynamic modality (Traugott & Dasher 2002: 107 n. 2). However, many linguists (e.g. Palmer 1990; Warner 1993: 15; Narrog 2012; Nuyts 2016) would consider this view too restrictive and also distinguish a dynamic necessity type: a subject referent may also experience needs or compulsions which cannot be considered deontic ‘obligations’ in any straightforward sense, as the use of *must* in (7b) illustrates.⁵

(7) DYNAMIC MODALITY

- a. *I take a furtive and secret pride in the fact that I can do all these things, that I am physically strong, can lift and carry things that defeat other women*
(BNC, 1985 W_non_ac_soc_science)
- b. *She said, ‘Joanna, I simply must go to bed. I’m dead beat. We’ll talk about all this in the morning.’*
(BNC, 1993 W_fict_prose)

The examples in (7) both express the subject referent’s ability or need. Some authors also distinguish other (‘subject-external’) subtypes of dynamic modality, where a necessity or possibility depends on factors outside of the subject referent. I return to this issue below.

In addition to ability and need, expressions of volition and intention, such as the use of WANT *to* in (3) above, are sometimes included under dynamic modality as well (e.g. Palmer 1990, 2001; Warner 1993). Traugott (1989: 38), on the other hand, considers volition a subtype of deontic modality, but this appears to be a minority view (see Nuyts 2016: 37). The status of volition is not discussed in the later work by Traugott & Dasher (2002).

However the field of dynamic modality is defined, it is generally agreed that there is a close connection between deontic and dynamic modality as opposed to epistemic modality. Thus, Palmer (2001) groups deontic and dynamic modality together under the heading ‘event’ modality, because both types concern the realization of events. Epistemic modality, on the other hand, concerns the truth value of propositions and together with evidential meaning forms ‘propositional’ modality; I return to evidentiality below.⁶ A number of authors go one step further and collapse the deontic and dynamic types into a larger category, often termed ‘root’ modality. This approach is frequently encountered in the earlier generative literature, where the distinction

⁵ Palmer (2001) also distinguishes no dynamic necessity category. The fact that it is overlooked by some authors is probably due to its more marginal status, both in terms of discourse frequency and dedicated markers; see Narrog (2012: 9–10, 199–201, 220–221) for discussion.

⁶ A similar view on the difference between ‘event’ and epistemic modality is expressed by van der Auwera & Plungian (1998: 81–82). However, as discussed below, these authors exclude most evidential meanings from the semantic map of modality.

was supposed to account for a number of syntactic differences between epistemic modals and the other types (e.g. Antinucci & Parisi 1971; Lightfoot 1979; van Kemenade 1993; see also more recently Thráinsson 2007 on Icelandic). Coates (1983: 20–21) argues for this broader notion of ‘root’ modality on purely semantic grounds, considering ‘deontic’ and ‘dynamic’ merely ends on a continuum of more or less subjective meanings.

Table 3.1: ‘Traditional’ classifications of modality

Lyons 1977	Coates 1983	Warner 1993	T&D 2002	Palmer 2001	
–	Root	Dynamic	Ability	Dynamic	} Event
Deontic		Deontic	Deontic	Deontic	
Epistemic	Epistemic	Epistemic	Epistemic	Epistemic	} Propositional
–	–	–	–	Evidential	

To conclude this section I give a summary overview of some of the ‘traditional’ classifications encountered in the literature; see Table 3.1 (T&D = Traugott & Dasher). The list of five works in the table is of course far from exhaustive, but it gives a general impression of some of the similarities and differences: epistemic modality is universally recognized as a separate type and contrasted with one or more ‘event’ or ‘root’ modalities. If more than one such type is recognized, the label ‘deontic’ is used for one of them.

3.3.2 The semantic map approach

A rather different classification from the one presented above is proposed by Bybee et al. (1994), who distinguish between four types of modality: agent-oriented, speaker-oriented, epistemic, and subordinating. The domain of agent-oriented modality comprises meanings which report ‘the existence of internal and external conditions on an agent with respect to the completion of the action expressed in the main predicate’ (Bybee et al. 1994: 177). This includes not only the abilities of the subject referent, but also various types of necessity, obligation, desire, intention, and willingness. This is thus a broader notion, which is more in line with Coates’s (1983) root modality than with dynamic modality as defined by Palmer (2001).

As mentioned in Section 3.2, Bybee et al. (1994) do not provide an independent definition of ‘modality’, but consider it a network of diachronically related semantic categories. This is also reflected in their notion of speaker-oriented modality, which is quite different from what is traditionally subsumed under the heading of modality, as it consists mainly of expressions which are directive rather than descriptive: rather than reporting the presence or absence of certain conditions on the subject referent, speaker-oriented modality expresses the speakers’ imposition of such conditions on the addressee (Bybee et al. 1994: 179). Imperatives are thus considered part of the domain of speaker-oriented modality, as are prohibitive, optative, hortative, admonitive, and permissive meanings. It is unclear to what extent agent-oriented and speaker-oriented modality may overlap in this framework. On the one hand,

they are distinguished as two separate semantic categories, but on the other, Bybee et al. (1994: 178–179) also write that agent-oriented modality can be ‘used’ in directive expressions such as (8), which they otherwise describe as speaker-oriented.⁷

- (8) *You can start the revels now*
(Bybee et al. 1994: 179, quoting Coates 1983: 88)

The notion of epistemic modality in Bybee et al. (1994) is more in line with the traditional concept. They describe it as an indication of ‘something less than a total commitment by the speaker to the truth of the proposition’ (Bybee et al. 1994: 179). They briefly mention that epistemicity is closely related to indirect evidentiality, but do not otherwise go into the discussion about the relation between epistemic and evidential meanings.

The fourth and last category distinguished by Bybee et al. is ‘subordinating’ modality or mood, which includes both inflectional subjunctives as found in Latin and the Romance languages and apparently ‘empty’ uses of modals such as *should* in (9):

- (9) *The police are expecting that the Libyans should make the first move*
(Bybee et al. 1994: 215)

As Nuyts (2016) points out, this is in fact a formal rather than a semantic category, since its distinguishing feature is that it occurs only in a particular clause type, namely subordinate clauses. The use of some of the English modals in this way is also noted by Coates (1983: 67–69), who terms it ‘quasi-subjunctive’ and characterizes the meaning of the modal as more or less empty depending on how harmonic it is with the meaning of the matrix clause. A number of such ‘quasi-subjunctive’ meanings are also recognized by van der Auwera & Plungian (1998) and Nuyts & Byloo (2015), although neither of these studies considers such meanings part of modality proper.

The most influential aspect of the work of Bybee et al. (1994) is probably the popularization of ‘maps’ illustrating the diachronic development of different semantic categories.⁸ An example of a semantic map of possibility meanings was given in Figure 2.3 in the previous chapter (see p. 37). Figure 3.1 reproduces the authors’ map of the relation between the four general types of modality. As the map suggests, the authors see agent-oriented modality as the starting point and subordinating modality

⁷ It is also worth mentioning that the terminology used by Bybee et al. (1994) is potentially misleading. Whereas ‘agent-oriented’ refers to the ‘target’ of the modal expression—i.e. the subject referent who is capable, permitted, obliged, and so on—‘speaker-oriented’ refers to its ‘source’, i.e. it is the speaker who allows, demands, etc. The term ‘agent-oriented’ is also somewhat unfortunate because the participant in question does not necessarily have the thematic role of AGENT. This is why van der Auwera & Plungian (1998) introduce the terms ‘participant-internal’ and ‘participant-external’ instead (see Table 3.2).

⁸ Note that the work of Bybee et al. (1994) was by no means the first to represent diachronic developments in this way. For earlier ‘maps’ of semantic pathways in English see e.g. Figure 2.1 (p. 17) from Standop (1957) or the work of Simon-Vandenberghe (1984) and Goossens (1992). For examples from the cross-linguistic literature, see Lehmann (1982, 2015) and Haspelmath (1989).

as the endpoint of diachronic change in the modal domain. Epistemic and speaker-oriented modality develop out of agent-oriented modality and may in turn change into subordinating modality.

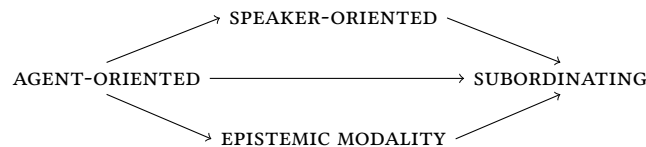


Figure 3.1: Pathways of modality (after Bybee et al. 1994: 241)

The study by van der Auwera & Plungian (1998) builds on Bybee et al. (1994) and proposes a semantic map in the spirit of Figure 3.1. However, the authors depart from the work of Bybee et al. in important ways. First, as already mentioned in Section 3.2, van der Auwera & Plungian define the field of modality in terms of the contrast between possibility and necessity. This means that expressions of volition (desire, willingness, etc.) are not regarded as modal, and that the ‘subordinating’ type distinguished by Bybee et al. is not considered part of the domain either. The link between modal and subjunctive-like meanings is acknowledged, however, by treating subjunctive-like uses as ‘postmodal’. Second, they take the category of ‘speaker-oriented modality’ in Bybee et al. (1994) to be a conflation of deontic modality and meanings pertaining to the illocutionary type of the utterance (van der Auwera & Plungian 1998: 83). Hence, imperatives and prohibitives are excluded as well, and the conception of modality is more ‘traditional’ than that of Bybee et al. (1994), as the authors explicitly acknowledge (van der Auwera & Plungian 1998: 80).

Three basic types of modality are distinguished by van der Auwera & Plungian (1998): participant-internal, participant-external, and epistemic modality. ‘Participant-external’ modality is taken to encompass two subtypes, deontic and non-deontic. Hence, all deontic meanings are per definition participant-external, but participant-external meanings need not be deontic; see Table 3.2. No alternative to the rather unwieldy term ‘participant-external non-deontic’ is suggested, but some later authors have used the term ‘circumstantial’ instead (Narrog 2012; Kehayov 2017).

Table 3.2: Types of modality (after van der Auwera & Plungian 1998)

		POSSIBILITY	NECESSITY
Participant-internal		Ability (capacity)	Need
Participant-external	Non-deontic	Possibility	Necessity
	Deontic	Permission	Obligation
Epistemic		Uncertainty	Probability

Deontic modality for van der Auwera & Plungian refers to permission and obligation, so this is in line with the tradition described in the previous section. Their conception of epistemic modality also follows the tradition. The ‘dynamic’ type distinguished by e.g. Warner (1993) and Palmer (1990, 2001), on the other hand, is deconstructed: van der Auwera & Plungian instead introduce the distinction between participant-internal modality, which refers to abilities and needs internal to a participant, and the participant-external non-deontic (‘circumstantial’) type, where external circumstances make something possible or necessary. This distinction is motivated by examples such as those in (10), where there is no participant-internal ability or need, but where it makes little sense to speak of permission or obligation either:

- (10) PARTICIPANT-EXTERNAL NON-DEONTIC
- a. *To get to the station, you can take bus 66.* (It is one of the ways to get there.)
 - b. *To get to the station, you have to take bus 66.* (It is the only way to get there.)
- (van der Auwera & Plungian 1998: 80)

The semantic map arrived at by van der Auwera & Plungian is shown in Figure 3.2 (based on the slightly more conveniently arranged version in van der Auwera et al. 2009). As in the map proposed by Bybee et al., the arrows illustrate the directionality of diachronic change: participant-external modality can develop into epistemic modality, and so on.

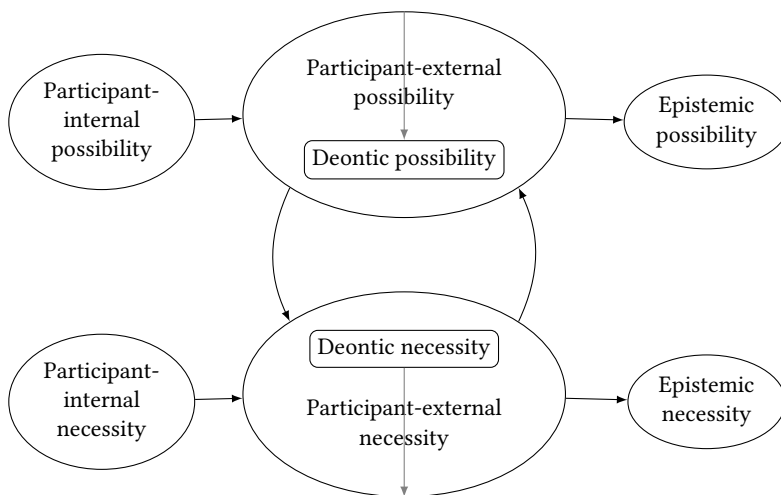


Figure 3.2: Modality's semantic map (after van der Auwera et al. 2009: 282)

3.3.3 Further subdivisions

Various modifications and elaborations have been proposed both for the ‘traditional’ classification and the semantic maps suggested by Bybee et al. (1994) and van der Auwera & Plungian (1998). An update of the latter is proposed by van der Auwera et al. (2009). This does not differ fundamentally from the original proposal, however, but is mainly intended to accommodate the existence of ‘acquisitive’ modal expressions in some languages, which often express both possibility and necessity meanings.⁹ The main modification to the original map in Figure 3.2 is that the diachronic link between participant-internal and participant-external possibility is now recognized to be bidirectional, i.e. either type may change into the other (see also Narrog 2012: 202–215; Kuteva et al. 2019: 344).

A number of points concerning participant-external and deontic modality have been raised in the literature. First, their position relative to each other is the topic of De Schepper & Zwarts’s (2009) contribution to the same volume as van der Auwera et al. (2009). De Schepper & Zwarts argue that there are no good a priori reasons for subsuming deontic under participant-external modality and that these two types should be regarded as separate.¹⁰ Second, a number of authors, including De Schepper & Zwarts, have suggested that the traditional notion ‘deontic’ actually covers more than one distinct type of modality (see also Nuyts et al. 2010; Depraetere & Reed 2011). I will introduce the notions distinguished by Nuyts et al. in Section 3.4. Third, the existence of an additional type of modality has been increasingly widely recognized, although there is no agreement about how it should be labelled. The phenomenon in question is illustrated in (11):

- (11) a. *Internet postings can lead to lawsuits.*
(Narrog 2012: 10)
- b. *Temperatures at the summit [of Mount Everest] are never above freezing and during January temperatures can drop as low as -60° C*
(Urmann 2014 on himalayanwonders.com)

Examples of this type have sometimes been classified as ‘objective’ epistemic in the literature.¹¹ However, whereas epistemic modality is usually understood in terms of an assessment or degree of commitment to the truth value of the proposition, there is

⁹ ‘Acquisitive modals’ is the authors’ term for modals derived from verbs with the meaning ‘get, acquire’. Their paper focusses on two linguistic areas where such modals are common, northern Europe (Uralic, Baltic, and Scandinavian languages) and southeast Asia (Khmer, Hmong–Mien, Sino-Tibetan, and other languages). I briefly discuss one such acquisitive modal, Norwegian *få*, in Chapter 8 (see p. 273).

¹⁰ The deontic type is subsumed under participant-external modality by van der Auwera et al. (2009) because the authors “do not know of any marker that has a participant-external non-deontic meaning without also having the participant-external deontic meaning” (van der Auwera et al. 2009: 276 n). As pointed out in Gregersen (2020b), the Present-Day Danish modals seem to provide an example of such a system. If my analysis of *MOT* in Chapter 8 is correct, (some dialects of) EME may possibly be added as well. This will have to await future investigation.

¹¹ See e.g. Lyons (1977: 797–802) or Warner (1993: 14). Hengeveld & Mackenzie (2008: 174–175) use the term ‘epistemic event-oriented modality’ for what appears to be the same meaning category.

no such assessment in (11), but rather an assertion that the situation can occur. Several other terms have been proposed for examples similar to those in (11), including ‘quantificational’ (Portner 2009), ‘existential’ (Narrog 2012), and ‘situational’ modality (Byloo & Nuyts 2011, 2014; Nuyts 2016), as well as ‘external’ (Goossens 1992), ‘wide-scope’ (Gamon 1993), and ‘general situation’ possibility (Depraetere & Reed 2011). I return to this type (and Nuyts and colleagues’ definition of it) in Section 3.4.

Finally, it is worth pointing out that while epistemic modality is often assumed to be clearly distinct from the rest of the modal field, this view is not universally accepted. In a tradition going back at least to Jespersen (1924: 319–321), a more fundamental distinction is made between modal notions that contain ‘an element of will’ and those that do not. Deontic modality belongs to the former type, dynamic and epistemic to the latter. The difference is that whereas the dynamic and epistemic types express what is possible or necessary (or possibly or necessarily the case) given how the world is, deontic modality expresses what is permitted or required, either by the speaker or someone else. The notions of permission and obligation thus presuppose an intentionality (a ‘will’) who wants the world to be in a particular way. This subdivision of modality appears to have been most influential in the Danish linguistic literature (e.g. Bech 1949, 1951; Jensen 1987; Obe 2013; Hansen & Heltoft 2011), but has also been adopted in the work of Narrog (2005a, 2012).

3.3.4 The position of evidentiality

Before presenting the classification used in my investigation I will briefly mention the issue of evidential meanings and how (or whether) they fit within the domain of modality. Evidentiality has attracted much scholarly attention since the 1980s (e.g. Chafe & Nichols 1986; Willett 1988; Mortelmans 2000; Aikhenvald & Dixon 2003; Aikhenvald 2004; Boye 2012), but perhaps unsurprisingly there is little agreement about its relation to modality. Some consider it a distinct but closely related category, others subsume it entirely under modality. As already indicated above, the latter is the position of Palmer (2001), who considers epistemic and evidential meaning subtypes of the more general category ‘propositional’ modality (see Table 3.1 on p. 57). He describes the difference between them as follows:

[W]ith epistemic modality speakers express their judgments about the factual status of the proposition, whereas with evidential modality they indicate the evidence they have for its factual status. (Palmer 2001: 8)

Evidentiality is also considered a modal category by Willett (1988), Timberlake (2007: 317–318), and Narrog (2012: 11–12). Aikhenvald (2004: 3–10), on the other hand, argues that evidentiality is an entirely separate phenomenon. Finally, some authors view modality and evidentiality as separate but intersecting categories: van der Auwera & Plungian (1998) see a point of overlap in inferential evidentiality, which they equate with epistemic necessity (see the discussion of *MUST* below); another approach is that of Boye (2012), who subsumes epistemic modality and evidentiality

under the more general heading of ‘epistemicity’. Evidential meaning is thus not part of modality proper, but linked to it through epistemic modality (see Boye 2012: 171 for his alternative semantic map).

The best known example of an evidential expression in Germanic is probably the use of German *sollen*, the cognate of English *SHALL*, in examples like (12) and (13). (12) is from the monthly magazine of the Viennese Music Association; (13) is from Fritz’s (1991) study of epistemic and evidential expressions in early modern newspapers:

(12) Present-Day German

Ein heftig-er Streit zwischen Beethoven und Bridgetower beend-et
 INDF.M violent-M conflict(M) between B. and B. end-3SG
die hoffnungsvoll-e Beziehung – es soll um ein-e Frau
 DEF.F promising-DEF relationship(F) it *sollen*.3SG about INDF-F woman
gegangen sein.
 go:PTCP COP.INF

‘A violent conflict between Beethoven and Bridgetower puts an end to their promising relationship—allegedly, it involved a woman.’ (Leibnitz 2020 on musikverein.at)

(13) New High German (1609)

Ertzhertzog Leopolt sol von hier stracks auff München
 Archduke Leopold *sollen*.3SG from here immediately towards Munich
gereist seyn
 travel:PTCP COP.INF

‘Archduke Leopold is said to have left for Munich immediately’ (Aviso; Fritz 1991: 34)

In both of these examples, *sollen* marks the proposition as second-hand information reported by someone else. Hence this type of evidential is usually termed ‘reportative’ or ‘hearsay’ in the literature. Similar uses of the cognates of *sollen* are found in several other Germanic languages (see Mortelmans et al. 2009), though not in Present-Day English.¹²

While *sollen* in (12) and (13) is generally considered evidential, the status of English *MUST* in examples like (14) is debated. This use is most often labelled ‘epistemic necessity’ (e.g. Traugott 1989; Warner 1993; Goossens 2000; Huddleston & Pullum 2002; Narrog 2012); compare also the example from Lyons (1977) in (5b) above.

(14) *Aunt Margaret must have made the shirt, it was so small and fine.*

(BNC, 1993 W_fict_prose)

Palmer (1990: 53) also uses the term ‘epistemic’, but notes that epistemic *MUST* ‘has some characteristics of an evidential’, the point being that epistemic certainty seems to always involve a degree of inference, which some would consider a type of evi-

¹² In earlier English, *SHALL* is attested with this meaning, however. See Bosworth-Toller (s.v. *sculan*, sense II.13), *MED* (s.v. *shulen* v.1, sense 24), and *OED* (s.v. *shall* v., sense 15). For additional examples and discussion of hearsay *sollen* in German, see Mortelmans (2000).

dence. As noted above, van der Auwera & Plungian (1998) simply consider the term ‘epistemic necessity’ synonymous with ‘inferential evidentiality’. In my investigation I have followed Nuyts and colleagues and used the label ‘evidential’. This has the additional advantage of distinguishing between *MAY* and *MUST*: *MAY* has epistemic and *MUST* has evidential uses. It should be kept in mind, of course, that the terms ‘epistemic necessity’ and ‘epistemic *MUST*’ are very commonly used in the literature, but because the category will only play a peripheral role in my investigation of Old and Middle English, the risk of confusion is minimal.

3.4 Classification used in this study

3.4.1 Presentation of categories

In this section I present the classification of modal meanings which I will use in my analysis. This will be of central importance in Chapters 7 and 8 on the semantics of *CAN*, *MAY*, and *MOT*, but will also occasionally be used in Chapters 5 and 6. It thus seems advisable to present the categories in detail in one place, which the reader may then return to for reference. The section ends with a summary overview of the categories and the abbreviations used to refer to them.

The classification of modality largely follows the one used by Nuyts and colleagues in their investigations of Dutch (e.g. Van Ostaeyen & Nuyts 2004; Byloo & Nuyts 2011; Nuyts et al. 2010; Byloo & Nuyts 2014). This classification has a number of similarities with both the ‘traditional’ approach to modality and with van der Auwera & Plungian’s semantic map, but it differs in a few important respects. First, three separate subtypes of dynamic modality are distinguished because of the addition of a ‘situational’ variant (see the discussion of [11] above). In this respect the framework of Nuyts and colleagues is similar to that of Narrog (2012). Second, the deontic type recognized both by the tradition and by van der Auwera & Plungian (as well as Narrog) is split into two different meaning domains, one covering moral evaluations, the other the notions of permission and obligation.

Given the many different approaches to modality and classifications of modal meanings, the choice of framework for a corpus investigation will necessarily involve a degree of arbitrariness. In particular, the many different terms used in the literature for what are ostensibly the same categories make it very difficult to prevent confusion altogether.¹³ The choice of the classification of modality suggested by Nuyts and colleagues was motivated by two factors: first, one of the goals of the present dissertation was to allow a more explicit comparison of the developments in Dutch and potentially other Germanic languages. Because the history of the Dutch modals has already been investigated in detail using this classification, it makes a comparison relatively straightforward.¹⁴ Second, the classification differs from both the more tra-

¹³ For further discussion of competing frameworks see e.g. Nuyts (2016) or Kehayov (2017: Ch. 3). Narrog (2012: 287–290) includes an appendix with a useful tabular comparison of different terms.

¹⁴ Relevant studies include Van Ostaeyen & Nuyts (2004) on *kunnen*, Byloo & Nuyts (2011) on *mogen*, Nuyts et al. (2005, 2010) on *mogen* and *moeten*, and Byloo & Nuyts (2014) and Nuyts & Byloo (2015) on the modal system as a whole.

ditional approaches and van der Auwera & Plungian's semantic map by distinguishing more categories and hence allowing a more fine-grained analysis of the semantic changes. This obviously makes the analysis more difficult—distinguishing a dozen or so semantic categories is less straightforward than distinguishing two or three. As I hope to show in Chapter 7 and (especially) Chapter 8, however, the higher level of granularity is worth the effort, as it contributes to a better understanding of several changes, such as the development of epistemic meaning in *MAY* and the change from possibility to necessity in *MOT*.

In the following I illustrate each of the meaning categories with English examples drawn primarily from the BNC and Dutch examples from the work of Nuyts and colleagues. A single category, eventuality (EVT), is mainly relevant for Danish and will be illustrated with an example from this language. The English material contains examples with *CAN*, *MAY*, *MUST*, *HAVE to*, and *BE going to*, the Dutch material of *kunnen*, *mogen*, and *moeten*. There are of course other ways of expressing modality in both of these languages, but since the focus here is mainly on illustrating the semantic categories, I will not go into detail about the various near-synonyms or stylistic alternatives of the expressions. For the same reason I give only an idiomatic translation of the Dutch examples, not a word-for-word gloss.

Dynamic meanings

Three dynamic categories are distinguished: participant-inherent (abbreviated DYN-INH), participant-imposed (DYN-IMP), and situational (DYN-SIT) meaning.

Participant-inherent dynamic modality (DYN-INH) expresses an ability or a need to realize the state of affairs which is inherent in the subject referent. This corresponds to the participant-internal type in van der Auwera & Plungian (1998) and Narrog (2012). The examples in (15) show possibility (ability), (16) necessity (need):¹⁵

(15) PARTICIPANT-INHERENT POSSIBILITY

- a. *The turkey vulture can detect a freshly killed carcass through kilometres of dense forest.*
(BNC, 1989 W_non_ac_nat_science)
- b. *de mensen uit Leiden konden echt geweldig goed zingen*
'The people from Leiden could really sing incredibly well' (Nuyts & Byloo 2015: 45)

¹⁵ Note that the Dutch example in (16b) contains a resultative adjective (*kwijt* 'rid of') rather than an infinitival complement. This type of non-verbal predication is similar to the use of directional expressions also found in German and Scandinavian, but in Dutch it is also possible with resultative adjectives and passive participles (see e.g. Barbiers 2002; Mortelmans et al. 2009: 24–26; Honselaar & Olbertz 2016).

(16) PARTICIPANT-INHERENT NECESSITY

- a. *Thank you for printing my letter. I was amazed at the answers and simply had to reply.*

(BNC, 1991 W_pop_lore)

- b. *dat moest ze gewoon even kwijt*

‘She just had to get rid of [sc. mention] this’ (Nuyts & Byloo 2015: 45)

Participant-imposed dynamic modality (DYN-IMP) expresses a possibility or necessity for a participant to realize the state of affairs which is conditioned by the circumstances. This is termed ‘circumstantial’ modality by Narrog (2012). In their work on possibility expressions in English, Depraetere & Reed (2011) term examples like (17a) ‘opportunity’.¹⁶

(17) PARTICIPANT-IMPOSED POSSIBILITY

- a. *Over by the volleyball court a crowd of older children gathered to look at postcards of Scotland (always an icebreaker, particularly if you can find a picture of someone in a kilt).*

(BNC, 1992 W_newsp_brdsht_nat_misc)

- b. *In de grote steden heeft bijna iedereen zelf tv of kan er bij familieleden naar kijken*

‘In the big cities almost everybody has a TV set or is able to watch TV at a family member’s place’ (Van Ostaeyen & Nuyts 2004: 172)

(18) PARTICIPANT-IMPOSED NECESSITY

- a. *I said that owls couldn’t run very fast and so they had to fly to catch mice, which could run fast. Simple answers like this seem to delight younger kids*

(BNC, 1991 W_biography)

- b. A: *kunt ge daar [...] ook die metalen pootjes mee afschuren?* B: *da ’s veel te breed hè. dat moet ge met de handen doen.*

‘A: Can you polish ... those metal legs with it as well? B: It’s much too wide, I think. You’ll have to do that manually.’ (Nuyts et al. 2010: 22)

¹⁶ The DYN-IMP type does not correspond exactly to ‘participant-external’ modality in van der Auwera & Plungian (1998), as the participant-external type also covers the notions of permission and obligation and, presumably, situational modal expressions like those in (20)–(21).

Note that the participant who can or has to realize the state of affairs does not have to be the grammatical subject of the clause. In other words, the participant-imposed type does not involve ‘subject selection’ in Warner’s (1993) terms. This is most clearly seen in passive contexts, where the participant realizing the state of affairs may not be mentioned at all, as in (19):

- (19) a. *Direct cylinders can be converted simply to indirect ones using a cylinder conversion kit.*
(BNC, 1992 W_instructional)
- b. *The gentle and yet rapid response that one achieves has to be experienced to be understood.*
(BNC, 1991 W_non_ac_medicine)

In (19a) the AGENT argument who can convert the hot water cylinders is not mentioned; the possibility of converting the cylinders is not due to the ability or skill of any particular participant, but the properties of the cylinders and the cylinder conversion kit. Similarly, in (19b) there is no overt EXPERIENCER argument; according to the author of the text, it is a general property of the homeopathic treatment in question that it has to be experienced first-hand to be understood properly.

Situational dynamic modality (DYN-SIT) involves a potential or inevitability which is inherent in the state of affairs as a whole. In other words, the situation as a whole can or must occur by its very nature, not because any participant realizes it; this distinguishes it from the participant-imposed type illustrated in (17)–(19). Examples of situational dynamic modality are sometimes termed ‘epistemic’ in the literature, but these two categories are considered distinct in the framework adopted here, even if they are not always easy to distinguish; see the discussion in Section 3.3.3 above. For instance, in (20a) the interviewee is not estimating the probability that making TV gets boring, but stating that it is possible for this situation to occur (and strongly implying that it already did). In (21a) the speaker is not inferring that the proposition must be true—in fact, he already knows that it is—but stating that the departure of Kevin (a rugby coach) was inevitable. Similar arguments can be made about the Dutch examples in (20b) and (21b): they do not express probability or inference, but situational possibility and inevitability.

- (20) SITUATIONAL POSSIBILITY
- a. *I had a lot of fun making the programme but it can get boring after a while. Now I want to be an actor.*
(BNC, 1992 W_newsp_tabloid)
- b. *Bij een aardbeving kan er zelfs aan dit soort van bouw materiaal schade ontstaan*
‘During an earthquake damage can occur even to this type of construction material’ (Byloo & Nuyts 2011: 15)

(21) SITUATIONAL NECESSITY

- a. *'We had six good seasons under Kevin but I suppose his departure had to happen,' Wilkinson said*
(BNC, 1989 W_newsp_brdsht_nat_sports)
- b. *Die onverschilligheid van de regerenden moest volgens Bertrand wel leiden tot een uitbarsting van woede en wanorde*
'This indifference on the part of the government, according to Bertrand, simply had to result in an outburst of anger and chaos' (Nuyts & Byloo 2015: 46)

Epistemic and evidential

Epistemic modality (EPI) involves an estimation of the probability that a proposition is true. This conception is generally in line with the tradition. As already mentioned, the epistemic type may in some cases be difficult to distinguish from situational possibility—in fact, Van Ostaeyen & Nuyts (2004) consider the example in (22b) ambiguous between the two meanings. In the English example in (22a) there is no such ambiguity: the author is not merely stating that it is objectively possible for Lyfing to have been a notable preacher, but expressing a degree of likelihood that he was. Unlike in (20a), one can add an epistemic adverb like *perhaps* or *possibly* without any significant change in meaning.

(22) EPISTEMIC

- a. *Lyfing was later a pluralist with no good reputation, but it is worth noting the Chronicle D text's description of him as 'the eloquent bishop': like Wulfstan, he may have been a notable preacher*
(BNC, 1993 W_ac_humanities_arts)
- b. *Vannacht, en morgen waarschijnlijk ook een groot deel van de dag. Morgenochtend kan het ook nog motregen.*
'[Mist] tonight, and tomorrow probably also most of the day. Tomorrow morning there may also be a slight drizzle.' (Van Ostaeyen & Nuyts 2004: 184)

As discussed in Section 3.3.4, English *MUST*—along with Dutch *moeten*—is sometimes said to express epistemic necessity. In the framework adopted here, these uses are termed 'evidential' (EVI), specifically the inferential subtype. Two examples are given in (23):

(23) EVIDENTIAL

- a. *She seized hold of the door handle and tried to open it. It wouldn't move, though. Julius must have wedged the chair in the hall under the handle, to make sure she couldn't get out*
(BNC, 1992 W_fict_prose)
- b. *Maar ze moeten blijkbaar heel veel vertrouwen in ons hebben*
'But they must apparently have very strong confidence in us' (Nuyts & Byloo 2015: 48)

For further discussion of this category I refer to Section 3.3.4 above. As mentioned there, it turned out to be marginal in the data and will only play a peripheral role in the remainder of the dissertation.

Deontic, permission, and obligation

An important difference between most of the traditional approaches to modality and the one proposed by Nuyts and colleagues, is that the notion of deontic modality is divided into two distinct types. Nuyts and colleagues use the term 'deontic' (DEO) only for expressions involving the moral acceptability ('possibility') or expediency ('necessity') of a state of affairs, whereas the term is traditionally used also for expressions of permission and obligation. Deontic modality under this view is thus a narrower category than in most classifications of modality, e.g. van der Auwera & Plungian (1998), Palmer (2001), and Narrog (2012). To make this difference clear I will generally refer to the type as 'deontic-moral' (abbreviated DEO).¹⁷

(24) DEONTIC (MORAL) ACCEPTABILITY

- a. *We cannot abandon people to the horrors of primitive siege warfare, so the ramshackle institutions of the United Nations will have to be drastically overhauled to cope with this crisis*
(BNC, n.d. W_newsp_other_social)
- b. *De lessen die we kunnen trekken uit alle mislukte planeconomieën, mogen we toch niet eenvoudig opzij schuiven.*
'The lessons we can draw from the many failed planned economies we cannot simply brush aside.' (Byloo & Nuyts 2011: 170)

¹⁷ As Eva van Lier has suggested to me (p.c., May 2018), one might also simply adopt the term 'moral' instead in order to avoid confusion with the broader notion of deontic modality used in much of the literature. I agree that this would probably be more transparent, but since the category turned out to be relatively marginal in my material and the risk of confusion is minimal, I have decided to keep the label used by Nuyts and colleagues.

(25) DEONTIC (MORAL) EXPEDIENCY

- a. *She says all we know is that he comes from London and he wants to remain anonymous. I'd have loved to have thanked him personally, but we have to respect his wish to remain anonymous.*

(BNC, n.d. W_news_script)

- b. *A: en gij gaat dan uw gedichten meebrengen of wat? B: ja want ik kan zo moeilijk beslissen wat dat 'k ga nemen. ik moet er drie uitnemen en ze moeten een beetje verband hebben met elkaar vind ik*

'A: And you are then going to bring your poems along or what? B: Yes, because I find it so difficult to decide what I'm going to bring. I have to choose three and they ought to have a bit of a connection with each other, I think' (Nuyts et al. 2010: 24)

The notions of permission (PERM) and obligation (OBLIG) are considered distinct from the deontic (moral) meanings illustrated in (24)–(25). Nuyts et al. (2010) propose the label 'directive' as a cover term for the permission and obligation meanings.¹⁸ I will use the more specific terms 'permission' for examples like those in (26) and 'obligation' for those in (27). The distinction between permission, obligation, and the dynamic subtypes will be of central importance in Chapter 8 on MOT.

(26) PERMISSION

- a. *Certificate of Motor Insurance: a certificate that proves you have the motor insurance you must have by law. It states who can drive your car and what purposes it can be used for*

(BNC, n.d. W_misc)

- b. *naleving van de wet betekent vaak dat bewoners daar helemaal niet meer mogen roken*

'Observance of the law often means that residents are not allowed to smoke there at all anymore' (Byloo & Nuyts 2011: 180)

(27) OBLIGATION

- a. *To register to vote for example, a union citizen must have been resident in Great Britain on the qualifying date of the tenth of October*

(BNC, 1994 S_parliament)

- b. *zondag moeten alle Belgen ouder dan achttien en mogen alle Europese burgers die dat willen gaan stemmen*

'Next Sunday all Belgians above the age of eighteen have to vote, and all European citizens who wish to do so are allowed to' (Nuyts & Byloo 2015: 49)

¹⁸ This use of the term 'directive' differs from the way it is generally used in the literature, where it refers to an illocutionary type (e.g. Huddleston & Pullum 2002; Portner 2009; Narrog 2012; Kehayov 2017). I circumvent this issue by not using any cover term and simply referring to 'permission' and 'obligation'. In the case of CAN and MAY (Chapter 7), only the permission meaning is relevant, so the cover term is unnecessary. In the case of MOT (Chapter 8), the distinction between permission and obligation is important and would have to be made anyway.

Some authors have proposed a distinction between ‘narrow’ and ‘wide’ subtypes of permission and obligation. These subtypes go by different names in the literature and, perhaps not surprisingly, there is some unclarity about how the different proposals correspond to each other. Hengeveld & Mackenzie (2008: 176, 213) distinguish between ‘participant-oriented’ and ‘event-oriented’ permission and obligation, De Schepper & Zwarts (2009) speak of ‘directed’ and ‘non-directed’ meanings, and Depraetere & Reed (2011) distinguish between ‘permission’ and ‘situation permissibility’. What these terminological pairs have in common is that the first term refers to permissions and/or obligations which apply only to the participant(s) in the clause (presumably *alle Belgen* in [27b] would be an example), while the second term describes permissions/obligations of a more general (‘non-directed’) nature.¹⁹ I am not aware of any studies evaluating or comparing these notional distinctions, and it does not appear to have been investigated whether they reflect systematic differences in coding in some languages. Because of this general lack of relevant literature and because no similar distinction is found in Nuyts and colleagues’ framework, I have not attempted to observe the distinction in my investigation.

Optative

One category which will turn out to be quite prominent in the material will be named ‘optative’ (OPT). This is the expression of a wish or hope that the state of affairs will be realized. This was a common function of MOT in early English (see Chapter 8). In Present-Day English MAY seems to be relatively common with optative meaning, whereas the Dutch cognate *mogen* appears to be restricted to a number of fixed expressions, often in the fossilized subjunctive form *moge* (see Byloo & Nuyts 2011: 18–19).

(28) OPTATIVE

- a. *And here are my best wishes to the O’Malley family. May they remain in good health and continue to prosper*
(BNC, 1991 W_fict_prose)
- b. *Het moge duidelijk zijn dat deze notitie als een aanvulling, en niet meer, gezien moet worden.*
‘Hopefully it is clear that this memo should only be seen as a supplement and nothing more’ (Byloo & Nuyts 2011: 162)

Some authors restrict the term ‘optative’ to the type of speech act exemplified in (28), i.e. the expression of the speaker’s wish or hope (e.g. Bybee et al. 1994: 179; Hengeveld & Mackenzie 2008: 71). I will use the term in a wider sense which also in-

¹⁹ The Dutch example in (26b) might be an instance of the ‘event-oriented’ (Hengeveld & Mackenzie 2008) or ‘non-directed’ (De Schepper & Zwarts 2009) subtype: presumably the law in question is not just directed towards the residents but forbids smoking for everyone. However, Byloo & Nuyts (2011: 180) do not give any additional context for the example, so this interpretation is somewhat tentative.

cludes reported hopes and wishes, i.e. descriptive rather than performative uses, such as those in (29). As the examples show, the source of the wish may be the speaker(s) (29a) or someone else (29b).

- (29) a. *We hope it may be possible to get these objects back on loan. They are not of real interest to the Egyptian archaeologists, with whom we have a good professional relationship*
(BNC, n.d. W_pop_lore)
- b. *Nicola from Chartbury in Oxfordshire is very worried about her younger son, and she is hoping that some of you may be able to help*
(BNC, 1991 W_non_ac_soc_science)

Other categories

Three other categories will be relevant in the analysis. One is the ‘future’ or ‘predictive’ meaning (FUT) often expressed by Present-Day English BE *going to*, as in (30). This is occasionally found in the early English material as well as the Middle Danish texts investigated in Chapter 8.

- (30) FUTURE (PREDICTIVE)
They just aren’t commercial enough. No theatre booker in the land is going to take them.
(BNC, 1991 W_biography)

The relation between modal and future expressions is contested. Some authors argue that expressions of future time are also modal in nature because the future is inherently uncertain and thus never exclusively temporal in nature (Narrog 2012: 8, 117, 166–167). Others would exclude future expressions from the domain of modality, either because this is defined in terms of possibility and necessity (van der Auwera & Plungian 1998) or because tense markers do not in themselves ‘express the possibility of several courses of events’ (Kiefer 1987: 88).²⁰ For reasons already outlined in the preceding sections—see especially Section 3.2—this theoretical discussion is not of central importance for my investigation. Because my approach is semasiological, i.e. concerned with the uses of particular linguistic items, all meanings recorded in the material are relevant. Whether these are ‘truly’ modal or not is only of secondary importance.

One category which is not usually distinguished in the literature is the expression of a demand or insistence that something should be the case. As with several other categories the source of the demand may be either the speaker, as in (31b), or someone else. In the examples with HAVE *to* in (31a), from an online forum post, it is the writer’s children who used to demand that their clothes had to be expensive. Byloo & Nuyts

²⁰ Kiefer does not explicitly discuss future tense markers, but it is clear enough from his discussion that these should not be considered modal (‘It would, however, be completely mistaken to treat temporal quantifiers as modal expressions’; Kiefer 1987: 88).

(2014) term this meaning category ‘volition’, but as this is also frequently used for expressions of the desire of the subject referent (e.g. with English *WANT to*), I will use the less common term ‘mandative’ (MAND) to prevent any confusion.

(31) MANDATIVE

- a. *Heck, back when they were teens they wouldn’t even have considered a sales rack in the best of clothing stores. Everything had to be the most expensive they could find and nothing else would do.*
(White 2019 on quora.com)
- b. *Mijn broer moet meegaan, anders voel ik me onzeker*
‘My brother has to [*i.e.* I want him to] come with me, otherwise I’ll feel insecure’ (Byloo & Nuyts 2014: 91)

Finally, one meaning category not included in the framework of Nuyts and colleagues needs to be distinguished in the investigation of Danish *MÅ* in Chapter 8. It also appears to be marginally present in *MAY* in my Middle English material. I will use Jensen’s (1987) term ‘eventuality’ (EVT) to refer to it. In Jensen’s Present-Day Danish material it is found in various types of adverbial clauses, where it expresses the indeterminacy of the truth value of the proposition, and in relative clauses, where it indicates that the existence of the antecedent referent is undetermined. Note that these are not expressions of epistemic modality in the sense adhered to in this investigation, as they do not involve the chance or degree of certainty that the proposition is true, but merely marks it as undetermined. In (32a) *MÅ* occurs in a hypothetical conditional clause. In (32b) it occurs in a locative relative clause.²¹

(32) EVENTUALITY

- a. *Et enkel-t glas tag-er alter+gænger-en naturligvis ingen skade*
INDF.N single-N glass(N) take:PRS altar+goer-DEF.C of.course no harm
af. Heller ikke af to, om han måtte have så mange synd-er at
of neither NEG of two if he *MÅ*:PST have:INF so many sin-PL COMP
bekend-e
confess-INF
‘A single glass of course won’t hurt the churchgoer. Or two for that matter, in case he has that many sins to confess.’ (1980 *Politiken*; Jensen 1987: 108)

²¹ One mistake in (32a) was corrected: Jensen’s text has *En enkelt glas...* with the common rather than the neuter indefinite article. I assume that this can only be a typo.

- b. *Endelig vil jeg opfordr-e undervisnings+minister-en og alle*
 finally want.PRS I suggest-INF education+minister-DEF.C and all:PL
ansvarlig-e til at gør-e deres yderst-e for at stands-e dette
 responsible-PL to COMP do-INF their utmost-DEF for COMP stop-INF this.N
glad-e vanvid på Odense Universitet og andre sted-er, hvor
 happy-DEF madness(N) at O. university and other.PL place-PL where
noget lignende måtte foregå.
 something similar MÅ:PST happen:INF
 ‘Finally, I would like to suggest that the minister for education and all
 responsible actors should do their utmost to put an end to this utter
 madness at the University of Odense and anywhere else where such
 things might be happening.’ (1974 *Fyens Stiftstidende*; Jensen 1987: 110)

3.4.2 Concluding remarks

This chapter has given an overview of some of the most prominent approaches to modality and of the classification I will use for my semantic analysis. I have introduced some of the various definitions and subdivisions of modality in the scholarly literature and pointed out the main similarities and differences between them. As I hope the discussion has made clear, this is a very rich literature which it would be impossible to cover in its entirety. For the purposes of my investigation the most important point is that the differences between more traditional approaches and the classification of modality used in my investigation should have been made clear. For the sake of clarity I will repeat the most important differences here:

- Rather than a single type of dynamic modality or a two-way distinction between participant-internal and participant-external modality, the model makes a three-way distinction between participant-inherent (DYN-INH), participant-imposed (DYN-IMP), and situational (DYN-SIT) dynamic meanings.
- The traditional notion of deontic modality is split in two: evaluations of moral acceptability or expediency (DEO) on the one hand vs. the notions of permission (PERM) and obligation (OBLIG) on the other.
- The term ‘epistemic’ (EPI) is used for the estimation of degrees of likelihood. Inferential uses like those of English *MUST* are termed ‘evidential’ (EVI).
- A number of meanings not always considered part of modality proper are distinguished: optative (OPT) for hopes and wishes, future (FUT) for predictions, mandative (MAND) for demands, and eventuality (EVT) for propositions which are merely presented as indeterminate.

It may be worth stating explicitly that the categories introduced in the above are semantic rather than structural: no claim is made that they must always correspond to formal distinctions in English (or any other language). In fact, as the example

sentences in the preceding section have shown, the same form may express numerous different meanings. Several of the Present-Day English modals are indeed highly polyfunctional. Consider the case of *CAN*, which may be used in at least five of the different functions distinguished above. The examples in (33) are all with the same predicate verb, *smoke*:

- (33) a. DYN-INH
I couldn't smoke when I was pregnant, I, it made me feel sick, I couldn't stand the smell of it
 (BNC, 1991 S_conv)
- b. DYN-IMP
You simply can't smoke in an enclosed space without spreading second-hand smoke through the entire room.
 (American Cancer Society n.d.)
- c. DYN-SIT
an out-of-control kitchen fire can smoke up an entire house, cause extensive damage and temporarily displace residents
 (Reynolds 2009 on starnewsonline.com)
- d. DEO
One simply cannot smoke in front of the little darlings and force upon them the horror of knowing that mommy or daddy is a junkie.
 (Addis 1994)
- e. PERM
A county council has told its entire staff that they can no longer smoke in their offices
 (BNC, n.d. W_news_script)

However, the degree of polysemy differs between different modal expressions in Present-Day English, and we should not assume *a priori* that the same patterns of polysemy were found at the earlier stages of the language. As the investigation of *CAN*, *MAY*, and *MOT* in Chapters 7 and 8 will show, there were significant changes already from Old to Late Middle English.

As a conclusion to this chapter, the various meaning categories and abbreviations which I will use are summed up in Table 3.3. The numbers in the 'Examples' column refer to the examples in the preceding section. The table also includes the corresponding terms in the frameworks of Narrog (2012) and Palmer (2001). Note that the terms may not correspond one to one, and that the absence of a term should not be taken to imply that Narrog or Palmer would not recognize a particular notional category, only that I found no corresponding term in their classification of modal meanings.

Having thus introduced the semantic categories to be used in the analysis, the next chapter will present the Old and Middle English material and the methods used to search it.

Table 3.3: Summary of modal meaning categories

Category	Abbr.	Examples	Narrog 2012	Palmer 2001
Participant-inherent	DYN-INH	(15)–(16)	Participant-internal	} Dynamic
Participant-imposed	DYN-IMP	(17)–(18)	Circumstantial	
Situational	DYN-SIT	(20)–(21)	Existential	
Epistemic	EPI	(22)	Epistemic	} Epistemic
Evidential	EVI	(23)	Evidential	
Deontic (moral)	DEO	(24)–(25)	} Deontic	} Deontic
Permission	PERM	(26)		
Obligation	OBLIG	(27)		
Optative	OPT	(28)–(29)	Future/prediction	
Future (predictive)	FUT	(30)		
Mandative	MAND	(31)		
Eventuality	EVT	(32)		

CHAPTER 4

Material and methods

You try to make your self 1 with some
thing or some body but try as you wil
the 2ness of every thing is working
agenst you all the way. You try to take
holt of the 1ness and it comes in 2 in
your hans.

— Russell Hoban, *Riddley Walker*

4.1 Introduction

This chapter presents the material—both from earlier English and other languages—used for my investigation and the methods and tools used to search it. I also discuss a number of issues relating to the selection and use of historical corpora and the degree of comparability (or lack thereof) between the investigated periods. Section 4.2 introduces the corpora of earlier English and other languages which I have used in the investigation. This is followed by a brief account of the methods used to query the corpora in Section 4.3. Finally, Section 4.4 discusses some of the limitations of the material (and of the use of historical corpora in general) and explains my decision to include both prose and verse texts in the investigation.

4.2 Corpus material

4.2.1 Initial considerations

Historical linguistic research is by its nature corpus-based if ‘corpus’ is taken to refer merely to any body of written texts. However, since at least the 1980s the term ‘corpus’ has come to be used in a more specific way, referring to electronic text collections compiled with the explicit goal of facilitating linguistic analysis. One of the pioneering historical corpora compiled in the 1980s is the *Helsinki Corpus of English Texts* (HC), whose periodization and genre labels are still commonly used in English historical linguistics.¹ This is the case, for instance, in the Penn-Helsinki ‘family’ of syntactically annotated corpora, including the *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2), and the *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME).

Before beginning the research presented in this dissertation, I carried out a small-scale pilot study of the complementation patterns of CAN, MAY, MOT, SHALL, and WILL in the three Penn-Helsinki corpora mentioned above, i.e. YCOE, PPCME2, and PPCEME. Noting that the observed patterns largely conformed to the general picture painted in the literature, I opted to focus my attention mainly on a number of issues which have either received less attention, such as the morphosyntactic changes covered in Chapter 5, or have not yet been answered satisfactorily, such as the changes to DARE covered in Chapter 6 and the development of MOT from ‘may’ to ‘must’ discussed in Chapter 8. Some of these were investigated on the basis of data from the Penn-Helsinki corpora; for other questions other resources were consulted in addition to (or instead of) the Penn-Helsinki corpora.

The investigations in Chapters 5 to 8 thus concern different aspects of the history of the language and require different methods. Chapters 5 and 6 mainly concern morphosyntactic developments and how to explain them. Material from a number of corpora will be used at various points to illustrate the developments. For the discussion of verbal morphology in Chapter 5 (Section 5.3), I mainly rely on data from the LAEME and eLALME, two electronic atlases of Middle English dialects. The investigation of impersonal constructions in the same chapter (Section 5.4) uses the syntactically annotated version of the PPCME2 to gather examples for analysis. Chapter 6 on DARE uses data from several corpora, including the DOEC corpus of Old English texts, the EEBOCorp for Early Modern English, and KorpusDK for the comparison with Present-Day Danish. Chapters 7 and 8 mainly concern semantic changes in Old and Middle English. Because of the collaborative nature of the project, it was decided to investigate these changes in a way broadly parallel to the existing studies of Dutch *kunnen*, *mogen*, and *moeten* (Byloo & Nuyts 2014; Nuyts & Byloo 2015) and, for this part of the project, to focus mainly on the cognates of these verbs, i.e. CAN, MAY, and

¹ For a detailed introduction to the HC along with a number of case studies, see the contributions to Rissanen et al. (1993).

MOT. For reasons which will be explained below, I decided to collect material from a number of existing corpora for this purpose, and to include both prose and verse texts.

4.2.2 Old English

Almost all of the surviving Old English material (c. AD 800–1100) is available in electronic form. Two corpora were used for the investigations in this dissertation:

DOEC The *Dictionary of Old English Corpus in Electronic Form* was compiled in connection with the Dictionary of Old English Project at the University of Toronto. It aims to be a complete record of the surviving Old English texts, with the exception of some minor manuscript variants. This means both that a number of texts are included in more than one version and that the corpus does not in any way attempt to achieve a degree of balance between different types of texts. The number of Old English words in the corpus is c. 3 million, of which prose accounts for c. 2 million.²

YCOE The *York-Toronto-Helsinki Parsed Corpus of Old English Prose* is a syntactically parsed corpus, annotated using the Penn Treebank scheme. It contains a large amount of the prose material from the DOEC, some 1.5 million words. Like the DOEC, the YCOE is not structured to be representative of different text types. It also includes a few texts in more than one version.

In this work I have mainly relied on the DOEC, but the annotated YCOE has also come in handy at several points. I use it in Chapter 5 for the comparison of infinitives and participles in Old and Middle English. I have also consulted the corpus at several points to check how a sentence was parsed by the corpus compilers. For general queries of the entire Old English record, I used the version of the DOEC currently available online (2009 release).

For the investigation of semantic changes in Chapters 7 and 8 I decided to include both prose and verse texts. However, I have limited the Old English part of this custom-made corpus to texts from manuscripts from the period c. 900–1050; the majority of texts are from the late tenth to the early eleventh century. For this purpose I used the downloadable version of the DOEC (2000 release) from the *Oxford Text Archive* (OTA), which allowed me to search only the texts of my choice. An overview of the texts included in this part of the investigation is given in Table A.1 in Appendix A. A more detailed list, including the filenames in the corpus, genre labels, and the approximate manuscript dates according to Ker (1957), is available in the project repository.

² The remainder of the corpus consists of OE verse texts (c.177,000 words), interlinear glosses (c.700,000 words of OE), and inscriptions (a few hundred words). Because some texts, most importantly the glosses, include both Latin and OE material, the corpus also contains some 758,000 words of Latin.

4.2.3 Middle English

The Middle English material was gathered from several different corpora and other resources. I used the PPCME2 for parts of the investigation but decided to supplement this with texts from other corpora when preparing the study of semantic changes in Chapters 7 and 8. This was both to get a larger variety of genres and to make up for the very limited amount of material in some of the PPCME2 periods; see Table 4.1 below for the figures. For the semantic investigation it was decided to analyse 200 instances of each modal in the three periods Old, Early Middle, and Late Middle English, but in the case of *MOT* the PPCME2 only returned 170 hits in the Early Middle English period (i.e. M1 and M2 in Table 4.1). In addition, a small number of comparatively long texts dominate these periods in the corpus; hence, it is likely that the observed patterns are largely due to the idiosyncracies of a few texts, as discussed in Section 5.4 on impersonals in Chapter 5.³

Most of these additional texts were collected from two corpora from the Innsbruck family (ICMEP and ICEL) and the online CMEPV. The texts were downloaded or transferred from CD-ROM and converted to txt format to facilitate searching with AntConc (on which see below). The main sources of Middle English material were the following:

HC As one of the first historical computer corpora of English (see above), the *Helsinki Corpus of English Texts* has to some extent been superseded by later and larger corpora. However, the Middle English section contains a few texts not included in the PPCME2, such as a small number of statutes, charters, and other official documents. I included most of these in my custom corpus.

PPCME2 The *Penn-Helsinki Parsed Corpus of Middle English* consists of about 1 million words of (mainly) prose texts. Like the YCOE, the corpus is syntactically annotated using the Penn Treebank annotation scheme, which can be queried with the program CorpusSearch. The corpus uses the same periodization and genre classification as the HC. The Middle English periods are shown in Table 4.1.

CMEPV The *Corpus of Middle English Prose and Verse* is an online repository of Middle English texts, many of which are not included in any of the other corpora. Although it is far from being a complete collection of all surviving Middle English, it is somewhat similar to the DOEC in that it contains several versions of some of the texts and aims for comprehensiveness rather than balance between texts and text types.

ICEL One of the two corpora from the Innsbruck family is the *Innsbruck Corpus of English Letters*. This consists of a large number of letters from c. 1400–1700. For my study I included most of the letters, about one hundred, from the fifteenth century. These come from the collections Paston, Cely, Stonor, Shillingford, Bekynton, Coldingham, and London (including some of Henry V's correspondence).

³ To illustrate, the four PPCME2 texts *Ancrene Riwe* (cmancriw, 63,790 words), *Ayenbite of Inwyrt* (cmayenb, 45,944 words), *Ormulum* (cmorm, 50,579 words), and the Psalter translation (cmearlps, 44,521 words) together account for c.58% of the words in the M1 and M2 subperiods.

ICMEP The *Innsbruck Corpus of Middle English Prose* contains a substantial number of prose texts, including most of the extant ones from the Early Middle English period. A number of texts still under copyright—and hence not available in online repositories like CMEPV and OTA—are also included.

Table 4.1: PPCME2 periods and word counts

		DATES	WORDS
EME	M1	1150–1250	284,345
	M2	1250–1350	93,914
LME	M3	1350–1420	407,640
	M4	1420–1500	408,464
TOTAL			1,194,363

In addition to these five electronic corpora, I gathered texts from a few other sources. Some texts not included in any of the corpora were available in digitized versions, such as the digital edition of the Auchinleck manuscript published by Burnley & Wiggins (2005) and Morris's (1873b) edition of the verse *Genesis and Exodus*, which is available in digitized form in the Project Gutenberg database (gutenberg.org). The major sources are listed in Table 4.2.

Table 4.2: Sources of Middle English material

SOURCE	FULL TITLE	ACCESS
HC	<i>Helsinki Corpus of English Texts</i>	OTA
PPCME2	<i>Penn-Helsinki Parsed Corpus of Middle English</i>	CD-ROM
CMEPV	<i>Corpus of Middle English Prose and Verse</i>	Online
ICEL	<i>Innsbruck Corpus of English Letters</i>	CD-ROM
ICMEP	<i>Innsbruck Corpus of Middle English Prose</i>	CD-ROM
Auchinleck	<i>The Auchinleck manuscript</i> (Burnley & Wiggins 2005)	OTA
Gutenberg	Project Gutenberg (gutenberg.org)	Online

The HC and PPCME2 divide the Middle English period into four subperiods as shown in Table 4.1. These are often used in the literature, and I will also use them when referring to the PPCME2 material. However, for the diachronic investigation in Chapters 7 and 8 I decided to operate with only two periods, Early and Late Middle English (i.e. EME and LME). The former corresponds to the Penn-Helsinki periods M1 and M2, the latter to M3 and M4. This makes my findings easy to compare to studies using the Penn-Helsinki subdivision.

There were both principled and more pragmatic reasons for only distinguishing two periods. One is that the dating of texts is often imprecise, meaning that a higher level of granularity leads to difficulties in assigning texts to periods. Another is that

the textual records from the different subperiods cannot necessarily be reliably compared anyway. As the word counts from the PPCME2 in Table 4.1 show, for instance, the M2 subperiod contains a much smaller amount of prose material than the other subperiods. In fact only two substantial prose texts survive from c. 1250–1350, both of them close translations (of Old French and Latin, respectively), leading to problems with the reliability of the PPCME2 material. This will be discussed at greater length in Chapter 5 (Section 5.4). I have tried to remedy this gap by including a number of verse chronicles and lyrics from this subperiod in my corpus, but one might still argue that this more secular material is not directly comparable to the mainly homiletic material in the M1 period. By only distinguishing two Middle English subperiods, the diachronic picture of course becomes more coarse-grained, but it may also be less at risk of the kind of unreliability discussed in Chapter 5 in relation to the M2 material.

Medieval texts often went through numerous rounds of copying, and some texts survive in manuscripts which are a century or more later than the (presumed) original date of composition. In the PPCME2 such texts are given a double period label. For instance, ‘M23’ is used for texts found in manuscripts from M3 which are assumed to have been originally composed in M2 (e.g. the translation of Aelred of Rievaulx’s *De institutione inclusarum* included in the corpus as *cmaelr3*). ‘MX4’ is used for texts from manuscripts from M4 with an ‘unknown’ date of composition, such as the Thornton medical book (*cmthorn*). I have given priority to the manuscript date throughout, and hence these two texts are considered to belong to M3 and M4, respectively. The manuscript date is generally determined on the basis of extralinguistic factors (e.g. the type of parchment and ink, information about ownership, forms of the letters), whereas the presumed date of composition is often based on an analysis of linguistic and stylistic features. This leads to a risk of circularity if the date of composition is then used as a basis for linguistic investigations.

Although Old and Middle English are usually treated as entirely separate periods of the language—with their own corpora, textbooks, grammars, and so forth—the boundary between them is not hard and fast. A number of texts survive from the very early Middle English period which are actually Old English texts that were copied or ‘translated’ by later scribes. Scholars do not always agree whether such texts should be considered Old English or Early Middle English. The compilers of the HC originally included a number of such ‘inbetween’ texts in the Early Middle English part of the corpus despite their obvious ‘continuity with the Old English homily tradition’ (Nevanlinna et al. 1993: 37). These include some of the Trinity, Vespasian, Bodley, and Lambeth homilies (all named after the library or collection of the manuscript). Some of these are also included in the PPCME2 along with the two so-called Ken-tish homilies, which come from the same manuscript as the Vespasian homilies (the twelfth-century BL, Cotton MS Vespasian D. xiv). The matter is complicated further by the fact that some of the Lambeth and Trinity homilies are actually different copies of the same texts. In keeping with my principle of giving priority to the manuscript date, I have generally followed the PPCME2 when assigning these texts to a period. However, I have not included different versions of the same homily in my custom corpus, and I have only included texts which may reasonably be regarded as Early Middle English, not those which are clearly *literatim* copies of much older originals,

such as the late twelfth-century homilies in Bodley MS 343 (see Ker 1957: 368–375); in this regard I thus depart from the principle of mainly considering the manuscript date. This means that I have included the two Kentish homilies and the four Vespasian homilies, six of the Lambeth homilies, and the thirty Trinity homilies which are not already represented in other versions in the Lambeth collection. For the full list of these see the documentation in the project repository.

The majority of Late Middle English texts in my custom corpus are from the PPCME2 and the ICMEP. To these I added the fifteenth-century letters in the ICEL, a smaller number of texts from the HC (including some documents and metrical plays), and some (mostly verse) texts from the CMEPV. Because of the dialectal discontinuity between Early and Late Middle English I assigned a number of late texts from the north of England to a separate smaller subcorpus; substantial material of Northern English provenance only survives from Late Middle English, whereas this area is almost completely absent from the Early Middle English record. In order to be able to detect possible discrepancies or regional differences in Late Middle English, I kept the Northern material separate.⁴ See further below (Section 4.4.1) on the issue of comparability between periods.

Finally, I substituted some of the texts originally included in the HC and PPCME2. A case in point is the edition of Chaucer chosen by the corpus compilers. The Chaucer texts in the two corpora were all taken from *The Riverside Chaucer* (Benson 1987), a composite ‘best text’ put together from a number of different manuscripts and editions (for criticism see Lass 2004). For the investigation in Chapters 7 and 8 I substituted these with texts in the ICMEP, which are all based on single-witness editions, either of the National Library of Wales, Peniarth MS 392 D (‘Hengwrt MS’) (Blake 1980) or Cambridge University Library, MS Dd. 3. 53 (Skeat 1899).

An overview of the number of words per period in my custom corpus is given in Table 4.3. For the number of words per individual text I refer to the detailed list of texts in the project repository.

⁴ At an early stage of this project, the inclusion of Early Scots material was also considered. This has sometimes been treated as an end of the Middle English dialect continuum (e.g. by the *OED* and Mossé 1952), but it is now more often treated as a separate language, leading to the creation of separate linguistic resources for it (e.g. *DOST*; HCOS; LAOS). Having carried out a few test searches in the HCOS corpus, I decided against including it in the investigation because the material from the relevant period was limited and likely to yield only few examples for analysis. I note, however, that a number of the items discussed in connection with Northern ME in Chapters 5 and 8 are also recorded in Early Scots (see *DOST*, s.vv. *aw*, *behufe*, *mot*) and would certainly be worthwhile to investigate further.

Table 4.3: Custom corpus, words per period

	WORDS
OE	1,326,058
EME	1,072,562
LME (general)	1,970,509
LME (Northern)	300,380
TOTAL	4,669,509

4.2.4 Other languages and resources

In addition to the Old and Middle English material described above, I have used a number of corpora and other data sources from Modern and Present-Day English as well as other Germanic languages. The Early Modern English material was mainly gathered from EEBOCorp (Petré 2013), a large collection of texts based on the *Early English Books Online* database. This material was searched with AntConc (see below). Examples from Present-Day English were mainly collected from the *British National Corpus* (BNC) and through searches on the internet. Online sources of linguistic examples are given individual entries in the bibliography. Such examples are identified in the text by the inclusion of the name of the website after the reference (e.g. ‘Urmann 2014 on himalayanwonders.com’). The full web addresses can be found in the bibliography.

The investigation of the regularization of verbal inflections in Chapter 5 relies mainly on two linguistic ‘atlases’ of Middle English, the *A Linguistic Atlas of Early Middle English, 1150–1325* (LAEME; Laing 2013) and *A Linguistic Atlas of Late Mediaeval English*, online version (eLALME; McIntosh et al. 2013). These most valuable resources, both developed at the University of Edinburgh, provide dialectological surveys of the Early (c. 1150–1325) and Late (c. 1350–1450) Middle English periods based on careful analysis of the extant manuscripts and other documents. The sources are mapped with a technique known as ‘fitting’, a kind of triangulation where securely localizable documents (‘anchor texts’) are first placed on the map and other sources are then fitted to these points based on their linguistic characteristics.⁵ The atlases differ in a number of important ways. The eLALME is based on the LALME, originally published in 1986, which surveys the texts by means of a questionnaire. For each text a ‘linguistic profile’ (LP) was created with information about the forms of a number of frequent linguistic items (e.g. whether ‘she’ was written *sho*, *3eo*, *heo*, *ha*, etc.). Based on these linguistic profiles, the texts were fitted to the anchor points. The LAEME is corpus- rather than questionnaire-based. Instead of a linguistic profile, a close transcription was made for each text, either in its entirety or of an excerpt. This

⁵ Technically, the basic unit of analysis is not the document or manuscript, but the ‘scribal text’, i.e. the writing of each individual scribe. More than one scribe may of course have contributed to the same manuscript. For details see e.g. Lass (2004), Laing & Lass (2006), or the extensive introductions to LAEME and eLALME, which are available online.

makes it easier to survey variation within texts and, of course, makes it possible to use the atlas as an Early Middle English corpus. The methods I used to extract data from these atlases will be explained at the relevant points in Chapter 5.

For the comparisons with other Germanic languages I have relied on existing corpora, dictionaries, and other resources. Some Present-Day Dutch examples were drawn from the online *Corpus Hedendaags Nederlands* (CHN), developed at the Instituut voor de Nederlandse Taal. Examples from earlier Dutch were gathered from the relevant literature, the historical dictionaries (mainly *MNW* and *WNT*), and the *Digitale Bibliotheek voor de Nederlandse Letteren* (DBNL), a large repository of historical Dutch texts. Examples from Present-Day German were collected through internet searches.

Present-Day Danish examples are drawn from KorpusDK, a large corpus of contemporary written language. The current version contains about 107 million words. It is queried with the concordance tool CoREST (Asmussen 2010), developed at the Danish Society for Language and Literature (DSL). The editions used for the investigation of Middle Danish in Chapter 8 were accessed through tekstnet.dk and Arkiv for Dansk Litteratur (ADL), two online repositories of historical Danish texts, also maintained by DSL. The Old West Norse examples discussed in Chapter 7 were excerpted from the *Dictionary of Old Norse Prose* (ONP).

In identifying relevant earlier studies, several bibliographies and other reference works were consulted; Mitchell (1990), Millett (1996), Sylvester & Roberts (2000) deserve to be mentioned. Information about the date and provenance of the textual sources was found in Ker's (1957) catalogue of Anglo-Saxon manuscripts, the LAEME and eLALME, the online bibliography of the *MED*, and the catalogue of the British Library.

4.3 Search methods

Two computer programs were used to search the early English (and Middle Danish) material. The corpora from the Penn-Helsinki family were searched with the program CorpusSearch (Randall 2005), which is designed for corpora using the Penn Treebank format. The other texts were searched with the concordance program AntConc (Anthony 2014), which allows one to search any txt file for one or more strings of text.

Searching in CorpusSearch is done by constructing a separate query file with the search terms and opening this in the program along with the corpus files to be searched. This generates a so-called output file with the results and a breakdown of hits per text in the corpus. Note that while the Penn-Helsinki corpora are enriched with syntactic annotation and part-of-speech tags, they are not lemmatized. In other words, one may search for any morphosyntactic category distinguished by the corpus compilers—e.g. all noun phrases, finite verbs, past participles, or subordinate clauses—but not for all forms of an individual lexeme. Considering the significant spelling variation, especially in Middle English, this might make it difficult to find all the forms relevant for my purposes. However, the CorpusSearch program includes a handy solution to this issue, at least in the case of the modals. With the

function `make_lexicon` one can export a list ('lexicon') of all forms with a given morphosyntactic tag. To extract a list of all modal forms, I simply had to ask the program to create a list of all forms with the tag MD. On this list I could easily identify the relevant forms of the individual modals. Using these forms I then queried the corpus again, this time searching all modal nodes for the relevant forms, i.e. all nodes in the parse tree with a modal as its head. For instance, the following query was used to extract all examples of *MOT* from the YCOE (\$ indicates emendations):

```
node: MD*
query: (most|mostan|moste|$moste|mosten|$mosten|moston|mot|Mot|MOT|
$mot|motan|$motan|mote|moten|moton exists)
```

The same procedure could be used for the investigation of *OUGHT* in Middle English in Chapter 5. For the investigation of *BEHOVE*, on the other hand, the search was slightly more laborious. This item is not considered a modal in the PPCME2, but is simply tagged as a verb. Hence I had to identify all relevant spellings on a list of verb forms from the corpus (see Section 5.4.3 for details).

The material from the Innsbruck corpora, DOEC, HC, and other sources were searched with AntConc. This program can be used to query text files either with a list of search terms or with regular expressions. It also has a function to create word lists similar to the `make_lexicon` function in `CorpusSearch`. I used this to create a list of all tokens in each of my subcorpora, on which I identified potential spellings of *CAN*, *MAY*, and *MOT*. In this I relied on the surveys of forms in the *DOE*, Bosworth-Toller, *MED*, and *OED*. To exemplify, I give here the list of search terms for *MOT* in Early Middle English (not all of which returned relevant hits):

mast	mot
mat	móte
mate	mote
maten	mote+d
mates	moten
most	motenn
moste	motes
mosten	motest
mostes	must
\$mot	muste

Unlike the YCOE and PPCME2, the other corpora which I used are not annotated with grammatical information. This means that more noise has to be removed from the concordances. For instance, a large number of hits for the spelling <most> are examples of the adverb and determiner *most* rather than the modal *MOT*/*MUST*. Such irrelevant examples were removed when I extracted the samples for analysis.

The concordances were exported to spreadsheets along with the most relevant metadata, such as the name of the text, the dialect area, and the period. From these I extracted a selection of examples for analysis. For the investigation in Chapters 7

and 8, I analysed 200 instances of each of the three modals from the three periods. In order to achieve some measure of comparability between the three periods, I used a simple classification of the texts into seven types as a sampling frame: narrative texts, religious instruction, secular instruction, statutory (legal) texts, dialogues (e.g. debate poems), lyrics, and letters. These were inspired by the text types distinguished in the HC. There are of course many other possible ways to divide up the material, and not all of these genre labels are equally accurate. In particular, one may question whether any texts in the corpus can really be described as ‘secular’, as religious modes of discourse are almost always present to some extent. The label is used here simply to refer to instructive texts which are less overtly religious than others, such as medical handbooks, lapidaries, geographical descriptions, and the like. Religious instruction includes sermons, guidebooks for nuns and anchorites, monastic rules, and similar types of texts.

The main goal of this sampling was to excerpt a comparable number of examples from each text type from each period. As the overview in Table 4.4 shows, this was not always feasible. The Early Middle English period is especially problematic, with several text types being almost completely absent. The type ‘letters’ is only available from the fifteenth century onwards. Although there are no directly comparable texts in the earlier material, I decided to include a small number of examples from Late Middle English letters in order to have this valuable text type represented as well.

Table 4.4: Analysed examples (Chapters 7 and 8), per text type

	CAN			MAY			MOT		
	OE	EME	LME	OE	EME	LME	OE	EME	LME
Narrative	62	81	58	55	77	55	57	92	70
Religious instr.	61	89	62	60	78	60	68	77	54
Secular instr.	42		32	40	4	35	37		36
Statutory	7		10	18	1	15	15		3
Dialogues	12	15	15	12	20	10	8	14	17
Lyrics	16	15	8	15	20	10	15	17	10
Letters			15			15			10
TOTAL	200	200	200	200	200	200	200	200	200

In addition to the sampling according to text types, an attempt was made to avoid relying on too few individual texts and gathering the examples from as many different sources as possible. This was relatively easy for Old and Late Middle English. For instance, the 200 examples of MOT from Old English came from 144 different texts, most of which provided only one or two examples; the maximum number of examples from a single text was four. In the Early Middle English material, on the other hand, a degree of ‘clustering’ around a few longer texts could not be avoided: the 200 examples of MOT from Early Middle English come from only 47 texts. The maxi-

imum number of examples from an individual text here was 12. This caveat about the Early Middle English material should of course be kept in mind (see also below on representativity and the discussion of the PPCME2 in Chapter 5).

In Chapters 7 and 8, I have carried out Pearson's χ^2 tests for goodness of fit ($\alpha = .05$) and Cramér's V tests for effect size where I considered it helpful (for details on these tests, see e.g. Levshina 2015: Ch. 9; Brezina 2018: 108–117). It must be kept in mind, however, that such statistical tests make a number of assumptions about the representativity of the corpus data which are by their nature unverifiable, not least in the case of historical corpus material. The sampling described in this section may go some way to ensure that the analysed examples from the different periods come from broadly comparable texts, but there is no way of knowing how representative the surviving written texts are of the spoken language in general (see the following section).⁶ The test statistic should thus only be taken for what it is, namely an indication of the likelihood that the observed distribution is random. It tells us nothing about the possible causes of this distribution.

The spreadsheets with the examples analysed for Chapters 7 and 8 may be downloaded from the project repository, which also contains a full list of the texts included in my custom corpus. The PPCME2 data used for the investigation of impersonals in Chapter 5, as well as the Danish examples discussed in Chapters 6 and 8, are also available from the repository.

4.4 Three methodological issues

Having presented the Old and Middle English material and the methods used to search it, I will now consider three potential problems which one ought to keep in mind when working with historical corpora. There are no simple solutions to any of them, but one can go some way to minimize the problems by being aware of them and the possible precautions one may take. The problems concern the representativity and comparability of the corpus periods, the question of text types, and what Rissanen (1989) terms 'the philologist's dilemma'.

4.4.1 Representativity and comparability

The first issue has to do with the degree of representativity—whether the material in the corpus is broadly representative of the language as a whole—and the comparability of the periods in the corpus—whether the different periods contain broadly comparable material. A historical corpus is by its nature limited to texts which happen to survive, but we cannot assume *a priori* that this material reflects the language as it was actually spoken. The surviving texts may be close translations of texts in

⁶ Indeed, it has been argued that significance testing should be abandoned in corpus linguistics altogether—i.e. also in synchronic corpus studies—because the assumption of random sampling is never met in the case of language data (Koplenig 2019); see also the discussion between Kilgariff (2005) and Gries (2005). Frequently mentioned alternatives or supplements to significance testing include effect size measures (e.g. Brezina 2018: Ch. 8) and regression analysis (e.g. Koplenig 2019).

other languages, such as Latin or Anglo-Norman; they may have been written for specific purposes and only show a limited range of discourse functions and vocabulary, such as some legal and prognostic texts; and they may represent conflation of different source material or different dialects, resulting in a *Mischsprache* (Benskin & Laing 1981) which was never actually spoken by anyone.

A closely related issue is the comparability of different periods in diachronic corpora, both in terms of text types and dialectal provenance. The written evidence may originate in different places in different periods. In the case of early English, the discrepancy between Old and Middle English is well known. The Old English material is almost exclusively written in the southern dialect known as West Saxon, and the texts that show some non-West Saxon features usually show West Saxon influence as well because of the dominance of scribes trained in this dialect.⁷ See Figure 4.1 (on p. 90) for the traditional subdivision of Old English dialects. In the Early Middle English period the main centres of text production shifted northwards, and the bulk of the surviving material is from the Midlands (continuing the 'Mercian' dialect of Old English).⁸ Towards the end of Middle English, texts written in Northern dialects start appearing in greater numbers, which until then had mainly been represented by the few Northumbrian glosses in late Old English. An illustration of this discrepancy will be given in Chapter 5, Section 5.3.3 on the distribution of weak plural modals (compare the LAEME and eLALME maps on pp. 121 and 127). As Strang (1970: 224) famously put it in her introduction to the history of English,

ME is, *par excellence*, the dialectal phase of English, in the sense that while dialects have been spoken at all periods, it was in ME that divergent local usage was normally indicated in writing.

The problem with this dialectal 'disconnect' in the written record from the perspective of diachronic linguistics is that one cannot know for certain whether an observed difference represents variation or change: if a word or construction is unattested in Old English but appears in Middle English, this may indicate that a change has occurred, but could also reflect the wider geographical distribution of the Middle English material. The word or construction may well have existed in other varieties of Old English than those which happen to be recorded. Conversely, if a construction disappears from the written record after Middle English, this may simply mean that it disappeared from the developing written standard, not that it became obsolete in all of the many spoken varieties. I will discuss this issue at various points in the investigation.

⁷ Consider the availability of non-West Saxon evidence in the YCOE: of all the text files in this corpus that are identified with a dialect tag, only five are listed as containing no WS material (i.e. being exclusively Kentish or Mercian). These amount to 4,390 words, about 0.3% of the entire corpus (see YCOE documentation, filename YcoeTextInfo.htm).

⁸ 'The Midlands' in ME dialectology refers broadly to the area between the Thames and the Humber. It thus covers a larger area than 'the Midlands' in contemporary English usage.

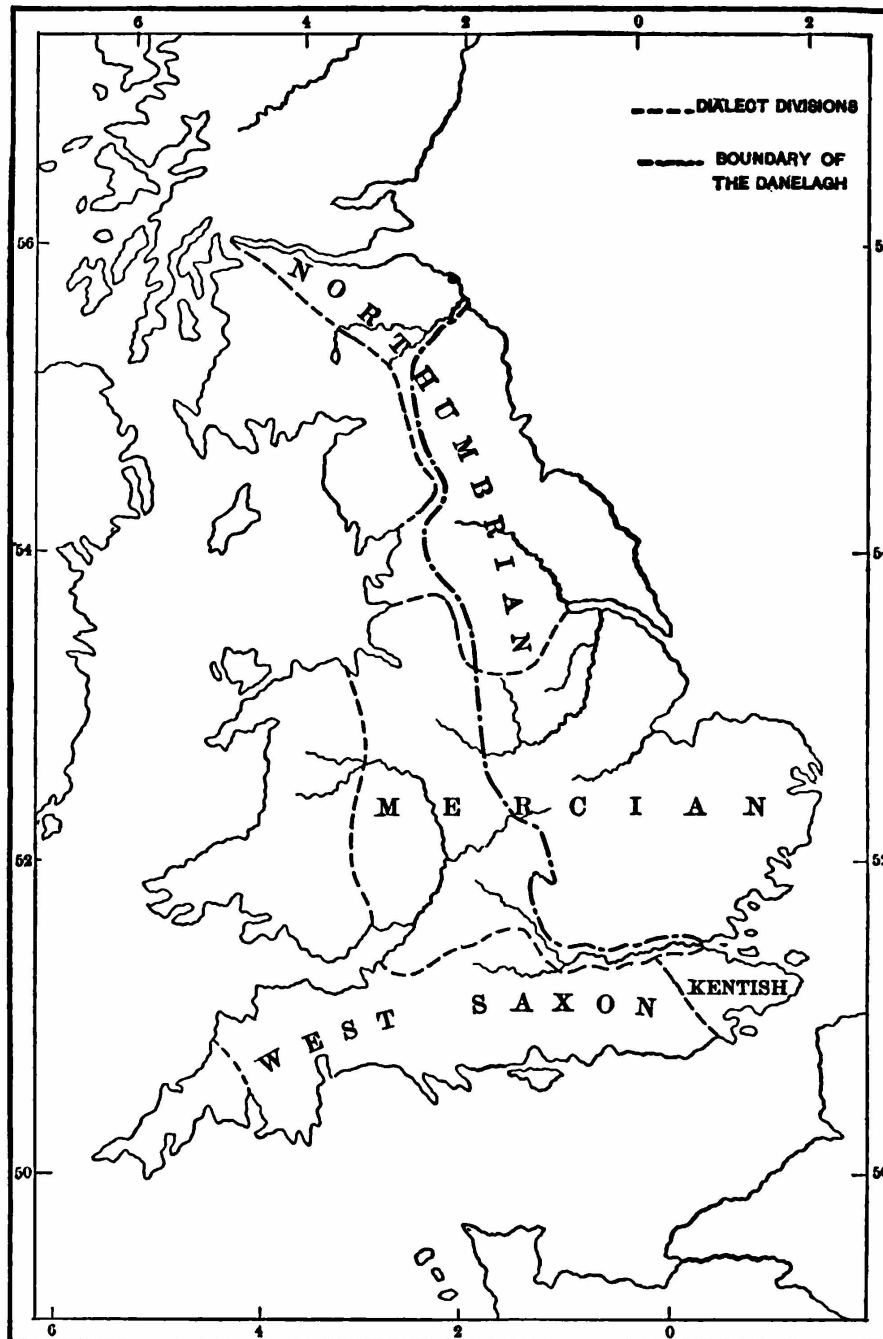


Figure 4.1: Old English dialects (reprinted from Emerson 1901: 28)

4.4.2 Prose and verse

It appears to be the received opinion among historical syntacticians that evidence should primarily or exclusively be gathered from prose texts. Most of the available corpora contain only or mainly prose texts, such as YCOE, PPCME2, and the Innsbruck corpora; and statements like the following seem to be representative of the general sentiment:

Poetry, as a rule, is not used in syntactic investigations for a number of reasons: archaic structures tend to persist in poetry beyond their shelf life in the spoken language, and the requirements of rhyme and meter may also skew the results (van Kemenade & Los 2013: 229)

While there may certainly be good reasons for investigating some phenomena, such as word order, primarily or exclusively on the basis of prose, there is also a risk of ruling out important evidence. This is most obvious in the case of periods from which only limited prose material survives, such as the PPCME2 period M2 mentioned in Section 4.2.3 above. In addition, some aspects of language may not differ significantly between prose and verse texts, and if they do, the only way to find out is to investigate both text types.⁹ Rather than assume that prose is the best representative of the spoken language—as van Kemenade & Los appear to do in the above quotation—I think a more fruitful approach is to consider as many different text types as possible and keep in mind the potential pitfalls of each.

Assuming that the possible meanings of the modals are not likely to differ significantly between prose and verse, I decided to include verse texts in my investigation of semantic changes. A few precautions were taken: no instances of modals in rhyming or alliterating position were included, and all verse texts were clearly marked as such in the metadata and concordances. In the presentation of the material in Chapters 7 and 8, all examples from verse texts are cited with line breaks and thus easily identifiable. I will discuss the possible influence of the metre where relevant.

4.4.3 The philologist's dilemma

Finally, the third issue concerns the nature of corpus-based work itself. In a short discussion paper written in connection with the compilation of the HC, Rissanen (1989) identified three problems with the use of diachronic corpora, which he termed the 'philologist's dilemma', the 'God's truth fallacy', and the 'mystery of vanishing reliability'. The 'God's truth fallacy' is probably self-explanatory; it refers to the mistaken

⁹ It is also worth noting that the distinction between prose and verse is not as straightforward as it may appear. Much medieval prose makes use of alliteration, such as some of Ælfric's and Wulfstan's homilies or the EME Katherine Group. There are also prose texts which are evidently reworkings of earlier verse, keeping much of the alliteration intact, such as Malory's *Morte Darthur*. On the other hand, some ME verse texts are so informal that they occasionally approach a kind of rhythmical prose. In *Lazamon's Brut*, for instance, the half-lines vary between two and four beats, and while there is usually alliteration between them, this may also be absent (see Brehe 2000); clearly the poet had a great deal of liberty to fit the form to the content. As long as one is aware of such facts and always keeps an eye on possible metrical influence, I believe it is justifiable to include verse texts in an investigation like the one in Chapters 7 and 8.

idea that a corpus of texts gives one the full picture—God’s truth—and is ‘an accurate reflection of the entire reality of the language it is intended to represent’ (Rissanen 1989: 17).

The ‘mystery of vanishing reliability’ has already been discussed implicitly above. It relates to the composition of the corpus and the criteria used to determine which texts should be included. A diachronic corpus should ideally contain similar types of texts from different periods, but the stricter the selectional criteria, the smaller the corpus, leading to potentially unreliable results.¹⁰ I discuss an example of this in the section on impersonal modals in Chapter 5.

Rissanen’s ‘philologist’s dilemma’ refers to the problem that computer-aided analysis may lead linguists away from the study of the historical texts themselves. For Rissanen, the solution to this is quite obvious—the linguist must remember to read and analyse texts in the language under investigation: ‘We will be able to ask the right questions, draw inferences and explain the phenomena revealed by our data only if we develop a good overall mastery of the ancient language form we are studying’ (Rissanen 1989: 16–17). I think this an important—if perhaps quite obvious—point, and I have tried to take Rissanen’s advice to heart while working on this dissertation. But the dilemma remains: the more one wants to familiarize oneself with the material and its historical background, the more time is spent reading texts and philological studies rather than doing linguistic analysis. It is worth keeping in mind, however, that superficial or less careful analyses of historical material do not depend on digital corpora and computer-aided methods. One may certainly also be misled by more traditional sources, such as dictionaries, printed concordances, or reference works such as Visser (1963) (for discussion of this issue, see Allen 1995: 5–8). An example of this has already been mentioned in Chapter 2 (see p. 37, n. 23). Another will be discussed in Chapter 6 (Section 6.4.2).

One problem closely related to the philologist’s dilemma may be specific to electronic corpus research, namely the addition of an extra ‘layer’ between the original manuscript and the text used for linguistic analysis. Electronic corpora are almost without exception based on text editions, not the original manuscripts themselves. The only exception that I am aware of among English historical corpora is the corpus part of LAEME, which consists of close transcriptions of the manuscript texts themselves. In the introduction to LAEME (Ch. 3) the reasons for this practice are explained. The editors point out numerous problems with the use of editions as the basis of electronic corpora, such as the silent expansion of abbreviations, the ‘normalization’ of deviant spellings common in earlier editorial practice, the addition of punctuation and the regularization of word divisions, and the occasional conflation of texts from different manuscripts (see above on Benson 1987). While some of these may not seem as problematic for syntactic research as they obviously are for historical phonology and morphology, the fact that the editor always has to make choices will inevitably lead to conjectural readings. All responsible editions of medieval and

¹⁰ See also the introductory matter to LAEME (Ch. 1) on a similar problem in historical dialectology: ideally the timespan of a dialect corpus should be very narrow so that the observed variation is dialectal rather than diachronic—but the narrower the timespan, the less material one can include from the different dialect areas.

early modern texts indicate such conjectures (as well as emendations, scribal deletions, and so forth), but this information is not always kept in the electronic corpora. An example of this occurred during my initial pilot investigation. In the PPCME2 material the example in (1) was found, which appears to contain a past participle of CAN, *cuðe*:

- (1) *and giue us swo findige speche. þat þe fewe word þe we on ure bede seien be cuðe alle halegen þe wunieð on heuene*
 ‘and give us such effective speech that the few words that we say in our prayer may be known [?] to all the saints that live in heaven’ (PPCME2, cmtrinit, 121.1619)

Looking this up in the edition, however, one finds that this is not the whole story. The form *cuðe* is indeed the one given in the running text, but in a footnote the editor adds the following:

I think we ought to read *tuðe* (cp. *tiðe* on p. 125) = favourable, acceptable. In the MS. *c* and *t* are very similar; and in *cuðe* the top of the *c* is longer than usual. (Morris 1969: 119 n.)

In other words, the editor of this text himself thought that this was not an example of the participle *cuðe*, but a different word altogether (*OED*, s.v. *tithe* adj.). The *OED* entry, on the other hand, seems to suggest that *cuðe* is the correct reading; compare also the reading in LAEME (filename trhomBt). No matter which reading is the more appropriate one, the point here is that there is no trace in the PPCME2 of the uncertainty in the Early Middle English text—this information only emerges if one takes the time to look up the example in the edition.¹¹ Obviously it would not be possible to check the editions and manuscript texts of all instances in my corpus. What one can do is cross-check all instances where there is doubt about the reading and, of course, make sure to only include reliable editions in the corpus in the first place. For this reason I have avoided the use of modernizing editions such as those in the TEAMS Middle English Texts Series. These editions present the texts ‘within the parameters of modern reading conventions’ (University of Rochester n.d.) and hence have no place in a linguistic investigation of early English.

¹¹ In Chapter 7 (see p. 211, n. 10), I discuss a different kind of uncertainty, where the interpretation in the corpus is not supported by the OE manuscript text.

Part II

Investigation

CHAPTER 5

Morphosyntactic changes in Middle English

It behooves us to know our sources.
(Allen 1997: 16)

5.1 Introduction

This chapter investigates three morphosyntactic changes that have been observed in the modals in Middle English. All of these have been mentioned in passing in several works, and one of them is partly covered in the LAEME and eLALME atlases, but as far as I know they have not so far received any comprehensive treatment in the literature. The present chapter addresses this issue. The changes in question were already introduced in Chapter 2 but are repeated here in condensed form for the sake of clarity:

New non-finites A number of modals are unattested in non-finite forms in Old English but appear in such forms, either as participles or infinitives, in the Middle English period.

Weak morphology Some of the Middle English modals are attested with a weak (i.e. regularized) present plural indicative ending rather than the older (irregular) preterite-present ending. For instance, some Middle English texts have the plural form *shulleþ* for expected *shullen*.

‘Impersonal’ modals In Middle English a number of modals are attested with non-canonical subjects (of the type *us must*, *him ought*) which are not found in this construction in Old English.

I will survey all of these and argue that only two of them are real innovations: weak morphology and impersonal modals are both securely attested in the material, though not in exactly the same modals or dialects. The first change, on the other hand, will be argued to be a pseudo-change, as it were: the observed developments do not actually reflect any real change to the modals in question, but are the result either of more general developments in the verbal system or of the larger amount of surviving material from the Middle English period.

The three developments are treated in their order of appearance above. Section 5.2 deals with the apparent development of new non-finite forms, first giving an overview of various comments on this in the literature and the evidence that has been adduced for it. I argue against a too uncritical use of Ælfric’s *Grammar* (early 11th c.) as metalinguistic evidence on Old English grammar, showing that some of the examples that have been discussed in the literature also allow alternative interpretations. Using data from the YCOE and PPCME2 corpora, I then suggest that the apparent development of new non-finites is indeed only apparent and must be understood in light of the language system as a whole and the nature and amount of the surviving material.

Section 5.3 surveys the development and distribution of weak morphology in some of the modals. I supplement the scattered comments on this in the literature with a more systematic overview based on the material in LAEME and eLALME, probably the most reliable resources for investigations of Middle English morphology. The regularized plural ending *-eþ* (instead of expected *-en*) is attested in *SHALL*, *CAN*, and *MAY*, but not with the same distribution. Whereas *SHALL* is frequently found with this ending, it only occurs sporadically in *CAN* and *MAY*. I suggest that the reason for the spread in *SHALL* was analogical influence from *WILL*, which always had the ending *-eþ* and had the same stem vowel as *SHALL* in the present plural in some dialects.

Section 5.4, finally, begins with a summary overview of the relevant literature on impersonal constructions in Old and Middle English and then presents a study of three such ‘impersonal’ modals in Middle English, using the PPCME2: *MOT*, *OUGHT*, and *BEHOVE*. I suggest that the most likely explanation for these innovations is analogy in the general direction *BEHOVE* (and other necessity expressions) \mapsto *OUGHT/MOT*. A number of limitations to the corpus material will also be discussed, along with some ways to investigate the developments further in future studies.

5.2 New non-finites

5.2.1 The significance of non-finite forms

The first topic of this chapter is the apparent development of new non-finite forms of a number of modals in Middle English. Considering the importance assigned to non-finite forms in Lightfoot’s (1979) account of the modals, it is no surprise that the

history of non-finite modals should attract the attention of later commentators. In Lightfoot's (1979) account the main distinguishing feature of the category 'modal' from Early Modern English onwards is that it does not allow non-finites: forms such as INF **to may*, PROG **maying*, and PTCP **mayed* are not available. According to Lightfoot (and some later authors, such as Roberts & Roussou 2003) this is a result of their reanalysis from verbs to auxiliaries in the sixteenth century.

Plank (1984: 314–318) argues at some length against Lightfoot's analysis, which he considers flawed on two counts: it ignores that some of the modals continue to occur as non-finites after the reanalysis is supposed to have taken place, and it overlooks that some of them do not occur in non-finite forms at any point in their attested history, i.e. there seems to have been a 'finiteness restriction' on some of the modals already in Old and Middle English.

The discussion of non-finite modals in Warner (1993: 100–102, 144–148, 189–191) is probably the most detailed in the literature on early English. Like Plank, Warner notes that some of the modals do not seem to be recorded in non-finite forms at any historical stage, but as he also points out, some of them appear in non-finite forms in Middle English which are not attested in such forms in the Old English material. The evidence thus points in different directions. On the one hand, some early English modals arguably already had a 'finiteness restriction' setting them apart from ordinary verbs—but on the other, the appearance of new non-finite forms in Middle English is taken as evidence that 'verbal status was maintained in Middle English' (Warner 1993: 101).¹ In a section devoted exclusively to these developments, Warner (1993: 144–148) carefully considers the available evidence, which consists mainly of metalinguistic statements in Ælfric's *Grammar* and the attested forms in the major dictionaries and reference works. I will reconsider some of Warner's conclusions in the following. Although I will argue for slightly different interpretations in some cases, it is perhaps worth mentioning explicitly that I consider Warner's treatment of the available evidence exemplary both in its meticulousness and its consideration of the most obvious alternative hypothesis, namely that certain non-finite forms simply happen to be unattested in the written record by accident. Later commentators have occasionally been less wary of making definite pronouncements on this issue. For instance, Beths (1999: 1078) writes on Old English that '[t]he paradigm of these verbs was defective in that [...] (for most modals) there were no nonfinite forms'.² Similarly, Schlüter (2010: 319) writes that the Old English modals were 'largely restricted to finite forms'. Such statements seem rather too confident to me. In the absence of explicit grammaticality judgements in the surviving Old English material, we cannot know for certain whether a given pattern was impossible, marginally possible but infrequently used, or completely unexceptional but unattested purely by chance. As

¹ Van Kemenade (1992, 1993) makes a similar point, although she does not discuss whether this has any implications for the category status of the modals: 'Main verb modals in ME evidence a wider range of main verb characteristics than in OE. Beside the complementations they already had in OE [...] they occur with some frequency in infinitive forms and participial forms' (van Kemenade 1992: 302).

² See also the following unqualified assertion further on in the same paper: 'new forms of *dare* appeared in the course of the ME period that had not been possible in OE' (Beths 1999: 1093).

I will argue in the section on Ælfric's *Grammar* below, even when more or less explicit metalinguistic comments do exist, these may allow alternative interpretations and must be handled with due caution.

The question of non-finite forms has also been discussed by Fischer (2004, 2007) and Fischer & van der Wurff (2006). Referring to Warner's findings, Fischer (2007: 165) describes the attestation of infinitives in the material as following a 'wave-like' trajectory: rare in Old English, more frequent in Middle English, and gradually disappearing in Modern English. However, as Fischer goes on to suggest, this apparent increase may be related to a more general development towards increased periphrasis (see also Fischer 2004: 18 n.; Fischer & van der Wurff 2006: 150):

These findings can probably be related to the fact that periphrastic tense and aspect constructions became more and more usual in Middle English [...] which led to a need for participles and infinitives of all verbs, including the modals. (Fischer 2007: 165)

I will explore this hypothesis with a small corpus study in Section 5.2.4 below. Before doing that, however, it is necessary to outline the changes that have been observed in the literature.

5.2.2 Observed developments

Warner (1993) surveys the attested non-finite forms in Old and later Middle English (covering AD 1300–1500) on the basis of the historical dictionaries, Visser (1963), and a number of other grammars and individual studies.³ Warner's list of recorded forms of the modals is shown in Table 5.1. I leave out the non-modal preterite-presents also included in Warner's table.⁴

As Table 5.1 shows, Warner finds infinitive forms of DARE in Middle English which are not attested in Old English. A new present progressive form is recorded in the case of CAN along with new past participle forms of DARE, MAY, and WILL. However, there are a number of important caveats to this picture, some of which Warner himself discusses in detail. First, in several cases it is unclear if a given attestation counts as a genuine instance of a non-finite form. As indicated in the table, Warner finds forms in Old English which he considers adjectives derived from THARF and OUGHT rather than non-finite forms of the verbs themselves. In the case of OUGHT, Warner notes that there is a progressive form in Old English which is only attested in compounds, but as the DOE entry shows, the simplex form is also recorded.⁵ The apparently innovative progressive participle of CAN in Middle English is another case

³ Warner (1993: 145) mentions as sources 'the major published grammars of Old English and Middle English, accounts of individual texts and the major detailed histories of the language'. A full list of references is not given, however.

⁴ I have also left out the invariant item *uton* 'let's', which is arguably not a verb in OE but a hortative particle (see van Bergen 2013), as well as the Northern ME verb *mun* (OED, q.v.), which is almost certainly an EME borrowing from ON. In the latter case there is thus no OE situation to compare.

⁵ See DOE (s.v. *agan*). The progressive participle is apparently only attested in non-modal functions ('owe'), but as far as I can tell, the difference between modal and non-modal functions was not taken into account in Warner's overview of attested forms.

Table 5.1: Recorded non-finites (after Warner 1993: 145)

	Old English			Middle English		
	INF	PROG	PTCP	INF	PROG	PTCP
CAN	+	—	+	+	+	+
DARE	—	—	—	+	—	+
MAY	+	+	—	+	+	+
MOT	—	—	—	—	—	—
SHALL	—	—	—	—	—	—
THARF	?+	adj.	—	—	—	—
OUGHT	+	+	adj.	+	+	+
WILL	+	+	—	+	+	+

in point. Warner includes it in the table but also notes elsewhere that it may be irrelevant because ‘it has marked adjectival characteristics and it is not cited with the plain infinitive in *MED*’ (Warner 1993: 101 n. 10). It is still found in Present-Day English as the adjective *cunning* (*OED*, q.v.). Visser (1963: §1651) also considers it an adjective in Middle English and writes that there are no attestations of a progressive participle followed by an infinitive (i.e. with a modal or other secondary-verb function).⁶

Second, but no less importantly, it should be stressed that the approach adopted by Warner says nothing about frequencies, only whether a given form is recorded or not. In other words, the difference between — and + in Table 5.1 may well be a difference between 0 and 1. By the same token, whether a form is attested once or several hundred times does not matter: both values will be represented as + in the table.⁷ As Warner himself points out, this is particularly problematic in the case of the less frequent modals, where the absence of attestations is more likely to be due to chance. In fact, the only new infinitive in Middle English according to Table 5.1, that of *DARE*, is acknowledged in an endnote (Warner 1993: 146 n. 21) to be a possible accident: *DARE* is much less frequent in Old English than most of the other modals, so the apparent absence of non-finite forms at this stage could very well be accidental.

An additional frequency-related issue—which as far as I can tell is not considered anywhere in Warner (1993)—is the size of the Old and Middle English corpora. If one of these is substantially larger than the other, it is to be expected that the smaller corpus is more likely to contain ‘gaps’ in the attested forms. That the Old and Middle English corpora do indeed differ substantially can easily be verified. The entire DOEC, which includes almost all edited Old English texts, contains 3,033,142 words of Old

⁶ It is also not entirely certain whether *cunning* is a straightforward derivation from *CAN* alone or whether the verb *cun* ‘try, experience’ (*OED*, q.v.) may have played a role. Their progressive participles in ME would have been identical.

⁷ The non-finite forms of *MAY* are a case in point. The infinitive of *MAY* is well attested in Middle English, with the *MED* (s.v. *mouen* v.3, sense 10) listing more than fifty examples from numerous different sources. The progressive participle, on the other hand, appears to be very rare. I return to this form below.

English.⁸ By contrast, according to the documentation of one of the largest Middle English corpora, the ICMEP, this contains 8,945,946 words, making it almost three times the size of the DOEC. Note that whereas the ICMEP only contains prose—and by no means all extant Middle English prose texts—the DOEC includes texts of all types, i.e. also verse texts, inscriptions, and interlinear glosses. I have not been able to find any estimates of the total amount of surviving Middle English material, but given the substantial number of texts, both verse and prose, not included in the ICMEP, there can be little doubt that it is several times the size of the Old English corpus. Of course, not all surviving Middle English texts were surveyed by Visser (1963) and the editors of the *MED* when they compiled their lists of attested forms, but it seems like a reasonable assumption that they had more textual material at their disposal than the editors of the Old English dictionaries and grammars.

Finally, there is a recurring problem of possible transfer from Latin source texts. In addition to the lack of frequency counts, another type of information not included in Table 5.1 is what types of texts the non-finite forms were found in. Since Warner does not list the textual references to the identified forms, nor all of the grammars and studies that were searched (see p. 100, n. 3 above), the results of his survey are very difficult to verify. However, one could go some way to reproduce the information by surveying all the reference works and studies which are mentioned and then looking up the attestations. For my purposes in this chapter I have decided against such an endeavour. Since one of my main arguments will be that the Old and Middle English situations are not directly comparable anyway—both because of the different sizes of the corpora and the grammatical differences discussed in Section 5.2.4 below—the question whether a given non-finite form is attested or not is of lesser importance than how such attestations are to be interpreted. However, to illustrate that the issue of Latin influence is not merely hypothetical, I will briefly discuss the attestations of a single form, the progressive participle of *MAY*.

Mowing — authentic Middle English?

According to Warner's information in Table 5.1, a progressive participle of *MAY* is attested both in Old and Middle English. As already mentioned, the table says nothing about the frequency or the types of texts where the form was found. From the information in Visser (1963: §1686) and the *MED* (s.v. *mouen* v.3, sense 11), however, one gets the impression that this was a very restricted form indeed. Visser notes that it is 'occasionally used' and includes a small selection of examples. In the *MED* entry the form is said to be 'rare before 1400, first appearing in transl. from Latin'. In total, the *MED* and *OED* entries contain six attestations of Old and Middle English participles. The two Old English attestations in the *OED* are both glosses, one of them an interlinear gloss NEC UALENS *na megende* [OccGl 49, 7.11], the other an example from

⁸ According to the DOEC documentation, the corpus aims to be 'a complete record of surviving Old English except for some variant manuscripts of individual texts' (DOEC, documentation file corpus.pdf). As mentioned in Chapter 4, the corpus also contains some 758,000 words of Latin in addition to the OE. Note that the word counts are from the version of the corpus currently online (2009 release). The version in the OTA (2000 release) does not include word counts in the documentation.

Ælfric's *Grammar*: QUEO *ic mæg* QUIENS *magende* [ÆGram, 251.16]. I have found no other potential examples in the DOEC. To get a relatively comprehensive picture of the Middle English situation I supplemented the information from the dictionaries and Visser with searches in my own custom corpus and the entire ICMEP.⁹ The majority of hits were false positives, either forms of the verbs *move* or *mow*. Only three texts in the ICMEP contained examples which could plausibly be analysed as progressive participles of MAY: Reginald Pecock's *Donet*, Nicholas Love's *Mirror of the Life of Christ*, and Chaucer's Boethius translation. The first two are both recorded by Visser and the *MED*. In the third, from Chaucer's very literal translation of the Latin Boethius, *mowyng* is a verbal noun translating *possibilitas* 'possibility' and *potestas* 'ability, power'.¹⁰ It is recorded as such by the dictionaries, neither of which gives examples from any other text (see *OED*, s.v. *mowing* n.²; *MED*, s.v. *mouinge* ger.3). This would thus seem to be a nonce word in Chaucer.

In total, the corpora, dictionaries, and Visser (1963) contain examples of the progressive participle from four Middle English texts, listed in Table 5.2.¹¹ The dates in the table are the manuscript dates according to the *MED*. The manuscripts mentioned are the ones cited in the *MED*.

Table 5.2: Attestations of *mowing* in Middle English

<i>MED</i> abbr.	Text	Date	MS(S)
WBible(1)	Wycliffite Bible (1st v.)	a.1382	MS Bodley 959 (et al.)
Love <i>Mirror</i>	Nicholas Love, <i>Mirror of the Life of Christ</i>	c.1430	Brasenose College MS e.9 (et al.)
Pecock <i>Donet</i>	Reginald Pecock, <i>Donet</i>	c.1475	MS Bodley 916
<i>Mirror Salv.</i>	<i>Mirour of Mans Saluacioun</i>	a.1500	olim Beeleigh Abbey

In light of the large body of material searched to identify the four texts in Table 5.2, I think one can safely say that the progressive participle of MAY was not just rare 'before 1400', as the *MED* states, but exceedingly rare throughout the whole Middle English period. Moreover, the four texts listed in the table all show Latin influence in some way or other. Three of them—the Wycliffite Bible, Love's *Mirror*, and the *Mirour*

⁹ Search terms using regular expressions: ⟨mo[uw][iy]nge?⟩ and ⟨mo[uw][ae]nde?⟩ (for a concise introduction to regular expressions, see Knox 2013). It cannot be ruled out that these search terms miss some potential hits, but they capture at least all the forms listed in the *MED* and *OED*, such as *mowyng*, *mowing*, and *mowende*.

¹⁰ According to Wetherbee (2009), Chaucer's translation is based on the Latin Boethius, Jean de Meun's Old French translation *Li livres de Confort de Philosophie*, and the Anglo-Norman scholar Nicholas Trevet's Latin commentary. The ME text is characterized as more literal than de Meun's Old French version and 'clearly aims to engage the Latin as closely and thoughtfully as English will allow' (Wetherbee 2009: 282).

¹¹ Visser cites an additional example from the *OED*, apparently from a will, with the signature '1487 Will Knight (Somerset Ho.): *Not mowyng for hastynesse of deth to reforme his testament*. The example was indeed included in the first edition of the dictionary (see *NED*, vol. VI, s.v. *may*) but has been removed from the revised version currently online (entry for *may* v.¹ dated March 2001). I have not been able to locate the original source of this example, but in light of its apparent removal from the *OED* I consider it doubtful and will ignore it in the following.

of *Mans Saluacioun*—are direct translations of Latin texts, the first of the Vulgate, the other two of popular devotional pieces, Pseudo-Bonaventure's *Meditationes vitae Christi* and the anonymous *Speculum humanae salvationis*. At least one of these can readily be compared with the original. The early Wycliffite Bible is well known for following the Vulgate text very closely, leading to an 'awkward and often not clear' style (Wells 1916: 410).¹² Compare the example in (1a) with the Vulgate version in (1b). The Middle English follows the Latin word for word, omitting the copula of the first clause and using the rare finite verb *unknow* (*OED*, q.v.) to render *nescierunt* 'they are ignorant'. The progressive participle *mowende* is a direct translation of Latin *valentes*.

- (1) a. *His tooteres alle blinde, alle þei vnknewen; doumbe dogges not mowende berken*
(Wycliffite Bible, Isa. 56; Forshall & Madden 1850: 323)
- b. *Speculatores eius cæci omnes, nescierunt vniuersi: canes muti non valentes latrare*
'His watchmen are all blind. They are all ignorant: dumb dogs not able to bark' (Isa. [D–R] 56: 10)

Compare also the use of the same expression to describe the corrupt Catholic clergy in another Wycliffite text, cited from the *MED* (s.v. *domb*, *doumb* adj.). Here a relative clause is used instead:

- (2) *Doumb doggis, prelats corrupt, þat may not bark.*
'Dumb dogs, corrupt prelates, who cannot bark' (c.1475 *Wycl.Apol.* 58)

The only attestation not from a Latin translation is from Reginald Pecock's *Donet*, a treatise on Christian living. That Pecock's style is not representative of Late Middle English more broadly is well known. Mustanoja (1960: 194–195, 358, 515, 538) points to several syntactic features of Pecock's writings which either set him apart from his contemporaries or strongly hint at Latin influence. His vocabulary has been described as 'fundamentally Latinate' (Simpson 2004: 277), and Simpson suggests that he deliberately aimed for a complicated style for pedagogical purposes (Simpson 2004: 276–277). The example of the progressive participle quoted in the *MED* (s.v. *mouen* v.3) in fact comes from a passage where Pecock explains his style, from the very beginning of the text:

- (3) *þei, not mowing to so take for lengþe of þese maters þerynne tretim, myzt þerbi [...]* *be peyned*
'They [the readers], not being able to grasp this because of the length of the matters treated in it [the book], might ... be upset by this' (Pecock *Donet* 1/11)

¹² I have not been able to compare the ME and Latin versions of the two devotional texts. Love's *Mirror* is included in the ICMEP, but I was unable to locate an edition of a (more or less) contemporaneous Latin version. The edition of the *Mirour of Mans Saluacioun* cited in the *MED* (Henry 1987) was not available to me. Görlach (1988: 203) notes in his review of Henry's edition that earlier commentators have pointed to the overly literal translation style of the ME text. However, no references are given.

Looking up the passage in the edition of the *Donet* reveals that the style is even more complicated than the fragment in (3) suggests. It is part of a much longer sentence which takes up almost an entire page in the edition (Hitchcock 1921: 1–2). I quote here only from the beginning to the clause with *mowing*:

[F]or as moche as þe book y-callid ‘þe reule of cristen religioun’, with þe opire bokis to him perteynyng, is made to renne vpon vij maters moost necessary to eche cristen lyuer to be knowun, & þese maters ben þerynne so tariyngli tretid þat, perauenture, manye reeders, being so desirose to have anoon of þese maters þe comprehensioun & ful taking, or ellis to haue þe general confuse knowing going afore þe specialist & clerist of þe same maters siȝt & feling, & þei, not mowing to so take for lengþe of þese maters þerynne treting, myȝt þerbi in ful scharp hungir & þirst aftir her desirid ententis & endis be peyned in longyng (Hitchcock 1921: 1)

Even if, as Görlach (1988: 203) notes, we cannot today judge exactly how natural or unnatural a Middle English text may have sounded, I think we can be relatively confident that this excerpt from Pecock does not represent colloquial Middle English usage. Given that Pecock is already known to rely on Latin syntactic and stylistic models and that all the other recorded Old and Middle English examples of the progressive participle of *MAY* are from Latin translations or glosses, it seems like a reasonable hypothesis that *mowing* was not actually in use in colloquial Old and Middle English. This is of course impossible to prove, but in light of the apparently complete absence of the form from ‘truly’ vernacular (i.e. non-Latinate) writings, there is no evidence to the contrary either.

5.2.3 Evidence from Ælfric’s *Grammar*

I now turn to the second type of evidence adduced by Warner, the metalinguistic comments in Ælfric’s *Grammar*. Here a careful consideration of the relation to the Latin is also of crucial importance: the *Grammar* is not a grammar of Old English, but an Old English translation and adaptation of a Latin grammar for the instruction of young novices, known as the *Excerptiones de Prisciano*. The translator identifies himself in the preface as Ælfric, an abbot and a prolific writer of Old English who lived and worked in southern England in the late tenth century. Copies of the *Grammar* survive in whole or in part in fifteen manuscripts (for a list see Bitner 2018: xxvii), suggesting that it was widely used in the eleventh and twelfth centuries. The standard edition by Zupitza (1880), which is the one included in the DOEC, uses Oxford, St. John’s College MS 154 as its base text. The recent edition by Bitner (2018) is based on BL, MS Harley 3271. Both of these are from the early eleventh century (Ker 1957: 309, 436).¹³ The Latin *Excerptiones de Prisciano* which Ælfric’s *Grammar* is based on

¹³ Bitner’s edition also gives a concise introduction to the *Grammar* and an overview of Ælfric’s grammatical terminology (Bitner 2018: vi–xxxi, 141–142). For different views on Ælfric’s use of the vernacular in the *Grammar* see Law (1987) and Menzer (2004). The volume on Ælfric by Magennis & Swan (2009) also discusses the *Grammar* extensively.

is itself an adaptation of a much longer grammatical treatise, Priscian's *Institutiones grammaticae* from the early sixth century. The editio princeps of the *Excerptiones* is Porter (2002).¹⁴ The references to the Latin text in the following are to this edition. The Old English version is cited from the DOEC, but the excerpts under discussion were cross-checked with the version edited by Bitner (2018). There are no significant differences between the passages in question in the two versions.

Evidence from the *Grammar* has been used in the literature on at least three Old English modals, MOT, MAY, and DARE. Although the text is a grammar of Latin and as such does not provide any detailed descriptions of Old English, it was meant for students who had this as their first language and occasionally points out differences between the two languages. In addition, the Old English paraphrases of Latin examples may of course tell us what Ælfric considered appropriate translations of the Latin forms. It is important to keep in mind, however, that these are usually individual word forms or very short sentences with no additional context.

Warner (1993: 146–147) discusses the excerpt in (4) in detail and uses it to argue that MOT had no infinitive form in Old English; see also the shorter discussion in Warner (1990: 547). I do not include a gloss in (4), but only a close translation of the Old English, as I discuss the individual forms below. I use small capitals for the Latin forms.

- (4) LICET MIHI BIBERE *mot ic drincan*, MIHI LICUIT *ic moste*, TIBI LICET, NOBIS LICET, SI NOBIS LICERET *gyf we moston*: INVINITIVVM LICERE *beon alyfed* 7 LICUISSE 7 LICITUM ESSE; LICENTIA *is leaf*
 'LICET MIHI BIBERE "may I drink", MIHI LICET "I might [sc. was allowed]", TIBI LICET, NOBIS LICET, SI NOBIS LICERET "if we might [sc. were allowed]": infinitive LICERE "be permitted" and LICUISSE and LICITUM ESSE; LICENTIA is "permission" [ÆGram, 207.1]

The example sentences with finite forms of the Latin verb are translated with the modal MOT: *mot ic drincan* 'may I drink', *ic moste* 'I was allowed', *gyf we moston* 'if we were allowed' (the Latin example sentences TIBI LICET 'you may' and NOBIS LICET 'we may' are left untranslated). However, when Ælfric gets to the infinitive LICERE he avoids MOT and instead gives the translation *beon alyfed* 'be permitted'. Warner takes this as evidence that the infinitive **motan* did not exist in Old English: if it did, we would expect Ælfric to have glossed the Latin infinitive with this form, not the apparent circumlocution *beon alyfed*.

To the best of my knowledge, Warner's analysis of (4) has never been challenged in the literature. The two explicit references I have found to it (Beths 1999: 1078–1079; Rohrbacher 1999: 189) both accept it as evidence that MOT lacked an infinitive in Old English. However, I believe closer scrutiny of (4) reveals that it does not provide this type of metalinguistic evidence. What Warner seems to overlook is that Old English

¹⁴ The *Excerptiones de Prisciano* survives in two complete MSS and a badly damaged one (*olim* Chartres, Bibliothèque municipale MS 56). The two complete versions are Bibliothèque Nationale de France, Nouv. Acq. Lat. MS 586 and Antwerp, Plantin-Moretus Museum MS 16.2 + BL, Addit. MS 32246 (the latter MS separated at some point in the 17th or 18th c.). Both of these also contain OE glosses; see Ker (1957: 1–3, 442–443) and Porter (2002: 1–9) for details.

MOT and Latin LICERE do not have the same argument structure. The Old English modal takes a nominative experiencer (EXP), i.e. the participant who is allowed to do something is expressed as a canonical nominative subject.¹⁵ The modal MOT agrees with the nominative argument in person and number. By contrast, Latin LICERE has a dative-marked experiencer and no nominative subject. It does not agree in person and number with the experiencer argument; hence its traditional analysis as an ‘impersonal’ verb (see *OLD*, s.v. *licet*). Compare the complementation patterns of LICERE and MOT in Table 5.3.

Table 5.3: Latin LICERE vs. Old English MOT

	EXP	V _{fin}	V _{nonfin}
LICERE	DAT	<i>licet</i> (3SG)	INF
MOT	NOM	<i>mot/moten/...</i>	INF

The different argument structure of the two verbs means that they are not exact translation equivalents. Because the experiencer in the Latin construction is a dative-marked argument, a very literal translation of Ælfric’s Latin example sentence, repeated here in (5), would be ‘it is permitted for me to drink’. In the Old English construction, where the experiencer is nominative-marked, this would not be appropriate as a word-for-word translation.

- (5) LICET MIHI BIBERE *mot* *ic* *drincan*
 be.permitted:3SG 1SG.DAT drink:INF MOT.PRS.SG 1SG.NOM drink:INF
 ‘It is permitted for me to drink; I may drink.’ [ÆGram, 207.1]

This means that, without any context, the Latin infinitive form LICERE does not in fact mean ‘may’ but ‘be permitted/permissible (for someone)’. We can say with certainty that Ælfric was aware of these differences: the example in (4)–(5) comes from his section on impersonal verbs, and he uses LICERE to illustrate the pattern with a dative-marked argument. Furthermore, LICERE is later used as an example in another chapter, and here it is clear that Ælfric only translates it with MOT in the context of an experiencer argument, as shown in (6): MIHI LICET and NOBIS LICET are rendered *ic mot* ‘I may’ and *we moton* ‘we may’, but the finite form LICET without an experiencer is translated *is alyfed* ‘is permitted’:

- (6) LICET *is alyfed is word*: MIHI LICET *ic mot*, NOBIS LICET *we moton*; TIBI LICUIT
ðu mostest
 ‘LICET “is permitted” is a verb: MIHI LICET “I may”, NOBIS LICET “we may”;
 TIBI LICUIT “you were allowed”’ [ÆGram, 264.7]

¹⁵ I use the term ‘experiencer’ in a general sense which also includes the ‘permittee’ of permission expressions; on the choice of this term see also Section 5.4.1 below.

In other words, even if Old English did have an infinitive form **motan*, it would not have been appropriate to use it to translate *LICERE* in (4), just as *mot* is not used to translate *LICET* in the first example in (6). Needless to say, this observation does not in any way prove that the hypothetical infinitive form **motan* did exist; the point is rather that the evidence in Ælfric's *Grammar* does not prove that it did not.

The two other examples that have been mentioned in the literature may initially seem more convincing. One is the apparent absence of non-finite forms of *DARE*, the other is Ælfric's avoidance of the infinitive of *MAY* in translating the Latin participle *QUITURUS*. These two examples come from the same chapter on participles towards the end of the *Grammar*, so I will discuss them together here. They are also both mentioned by Beths (1999: 1078–1079), who uses them to support his argument that the Old English modals should be analysed as auxiliaries. I will discuss them in their order of appearance in the *Grammar*, beginning with *DARE* in (7).¹⁶

- (7) *Of þam fif þrowigendlicum NEUTRUM cumað þreo PARTICIPIA: GAUDEO ic blissige, 7 of ðam is GAUDENS blissigende 7 GAUISUS geblissod 7 GAUISURUS se ðe blissian sceal; AUDEO ic dearr, AUDENS gedyrstlæcende, AUSUS dyrstig oððe gedyrstlæht, AUSURUS se ðe gedyrstlæcð*

‘From the five passive neuter [sc. semi-deponent] verbs three participles are derived: *GAUDEO* “I rejoice” and from that *GAUDENS* “rejoicing” and *GAUISUS* “rejoiced” and *GAUISURUS* “he who shall rejoice”; *AUDEO* “I dare”, *AUDENS* “venturing”, *AUSUS* “brave” or “ventured”, *AUSURUS* “he who ventures” [ÆGram, 246.21]

Here Latin *GAUDEO* and its participles are all translated with forms of Old English *blissian* ‘rejoice, exult’ (Bosworth–Toller, q.v.; *DOE*, s.v. *blissian*, *blipsian*). The forms of Latin *AUDEO* are treated differently: 1SG.PRS *AUDEO* is translated *ic dearr* ‘I dare’, but the three participles are all given translations with the verb *gedyrstlæcan* ‘dare, venture, be bold’. For *AUSUS* the adjective *dyrstig* ‘brave, bold’ (*DOE*, q.v.) is also provided as a translation. Beths (1999) takes this as evidence that *DARE* had no non-finite forms in Old English. Writing on (7) (and [4] with *MOT* above), he observes that ‘the nonfinite Latin forms appear as nonfinite forms of the corresponding OE lexical or main verbs *gedyrstlæcan* and *aliefan*’ (Beths 1999: 1078). I think there are two problems with this interpretation. First, it takes for granted that *gedyrstlæcan* and *aliefan/alyfan* were synonymous with *DARE* and *MOT*, respectively (assuming that this is what Beths means by ‘corresponding’). As already discussed in connection with (4), this was certainly not the case with *MOT* and *alyfan*: the former meant ‘may’, the latter ‘permit’. I will suggest in Chapter 6 that *DARE* and *gedyrstlæcan* were not exactly synonymous either, *DARE* being used almost exclusively as a secondary verb in non-affirmative contexts; *gedyrstlæcan* does not appear to have had such a restriction. While both of them could clearly be used to render Latin *AUDEO* (*OLD*,

¹⁶ The passage corresponding to (7) in the Latin *Excerptiones* is found in Porter (2002: 274); for the same passage in the other OE edition, see Bitner (2018: 112). Ælfric's term *þrowigendlicum neutrum* is a direct translation of the Latin *neutrapassiva*, a term used for the ‘semi-deponent’ verbs which have active forms in the present but passive forms in the perfect.

q.v.), note that this verb does not just translate as Present-Day English ‘dare’; the *OLD* also gives meanings such as ‘venture, presume, act boldly’. As I will argue in Chapter 6, such meanings were expressed by *gedyrstlæcan* (and a number of other verbs) in Old English.

Second, the Latin future participle *AUSURUS* is not actually rendered by a non-finite form of *gedyrstlæcan*, as Beths writes, but by a relative clause with a finite (PRS.IND.3SG) form: *se ðe gedyrstlæcð* ‘he who dares/ventures’. Following Beths’s logic, this would actually seem to indicate that *DARE* had no PRS.IND.3SG form, since Ælfric might then have used that to render *AUSURUS* (i.e. **se ðe dearr*). This would be a very improbable interpretation, however, as the PRS.IND.3SG form of *DARE* is attested about 30 times at least in the Old English corpus.¹⁷ For whatever reason, the verb *gedyrstlæcan* was considered to be a more adequate gloss of the three participial forms of *AUDEO* in (7). In light of the generally very careful nature of Ælfric’s glosses—see above on impersonal *LICET* and below on future participles—I do not think we can conclude that his apparent avoidance of participial forms of *DARE* must necessarily mean that such forms were ungrammatical. It might just as well mean that forms of *gedyrstlæcan* were considered clearer and more adequate in rendering the Latin concisely in the absence of any supporting context.

The other example is mentioned both by Beths and Warner. It occurs in the same chapter as (7) and is part of a discussion of the morphology of participles of irregular verbs. I quote the passage in full in (8), as I think the context is necessary to understand the nature of the example. The Latin form in question is the future participle *QUITURUS*:

- (8) *Þæt word EO ic fare, is ðu færst, it he færd macað PARTICIPIVM IENS farende, EUNTIS farendes. Eallswa of QUEO ic mæg QUIENS magende, QUEUNTIS, QUEUNTI 7 swa forð, 7 ealle þa ðe of him gefegede beoð, habbað E 7 U on ðam fif gebigedum CASUM. Heora towewardan PARTICIPIA synd ðas: ITURUS se ðe wyle oððe sceal faran; QUITURUS, ac we ne cunnon nan englisc þær to.*

‘The verb *EO* “I go”, *is* “you go”, *it* “he goes” has the participle *IENS* “going[NOM]”, *EUNTIS* “going[GEN]”. Likewise of *QUEO* “I am able”: *QUIENS* “being able”, *QUEUNTIS*, *QUEUNTI*, and so forth, and all those that are derived from them have *e* and *u* in the five nominal cases. Their future participles are these: *ITURUS* “he who will or shall go”; *QUITURUS*, but we do not know any English for that.’ [*ÆGram*, 251.15–252.3]

Warner notes that Ælfric offers no English equivalent of the Latin future participle *QUITURUS* although he frequently glosses such participles with *WILL* or *SHALL* plus an infinitive elsewhere; compare the translation of *ITURUS* in (8) as *se ðe wyle oððe sceal faran* ‘he who will or shall go’. As in the case of *MOT* discussed above, Warner takes this as an indication that *MAY* had no infinitive when the *Grammar* was written c.1000. However, he also notes that the first infinitive of *MAY* is attested not long

¹⁷ Confirmed by a DOEC search for the 1/3SG form *dear/dearr* and sorting out the instances with the 1SG pronoun *ic*. The total number of attestations of the lemma *DARE* in the corpus is about 400 (DOEC, s.v. *dearr*).

after, in a gloss from c.1050, and is ‘reasonably common’ in Middle English. This leads Warner to suggest that the infinitive of MAY might have been ‘innovating or dialectal’ when Ælfric wrote the *Grammar* (Warner 1993: 102). This analysis appears to be accepted by Beths (1999: 1078).

Similarly to the case of (7) discussed above, I think there are two problems with Warner’s interpretation. One concerns the dating of the examples, the other the translation of the Latin future participle itself. A difference of half a century between two examples might indeed imply that language change had occurred, but the dates ‘c.1000’ and ‘c.1050’ are misleading. The former is the date of composition conventionally assigned to Ælfric’s *Grammar*, while the latter (apparently taken from Visser 1963: §1684) appears to be a manuscript date. In fact, the gloss quoted by Visser is from a manuscript dated ‘s. XI med.’ by Ker (1957: 240), to be read as ‘around the middle of the eleventh century’.¹⁸ As Ker explains in his introduction (see Ker 1957: xx–xxi), the dating system is deliberately vague because of the great difficulty involved in giving exact dates for medieval manuscripts. The two earliest manuscripts of Ælfric’s *Grammar* are dated ‘s. XII’ and ‘s. XI in.’ by Ker (1957: 309, 436), i.e. from the beginning of the eleventh century. Given the margin of error involved in the dating, the temporal distance between the earliest *Grammar* manuscripts and the Tiberius gloss may be much less than the half-century implied by Warner’s dates. While this does not rule out that language change might have happened and MAY developed an infinitive form in the early eleventh century, I do not think this is the only possible explanation.¹⁹

The second issue relates to the Latin participial form QUITURUS itself. The passage quoted in (8) is very interesting indeed and has been commented on by a number of scholars (Derolez 1989: 473; Toupin 2010: 336; Bitner 2018: xviii, 115). Bitner calls it ‘curious’ that Ælfric does not provide a translation of QUITURUS and wonders why he would include a form ‘which he is uncharacteristically unable to explain’ (Bitner 2018: 115 n. 24). I think the most likely reason for this is systematicity. The passage quoted in (8) is from a section dealing with irregular participles where Ælfric demonstrates how to form the participles of EO ‘go’. The derivation of the etymologically related verb QUEO ‘be able’ is identical, and hence this is treated here as well. As far as I can see, the inclusion of QUITURUS is quite consistent with Ælfric’s general treatment of morphological parallels; compare the juxtaposition of GAUDEO and AUDEO in (7). The question, then, is not so much why the form is included, but why Ælfric offers no Old English translation of it. According to Warner’s interpretation,

¹⁸ The manuscript is BL, Cotton MS Tiberius A. iii (MS no. 186 in Ker 1957). The gloss in question is POSSE CARERE *magan þolian* ‘be able to suffer’ [RegCGI, 23.455]. I will not go into further detail about this particular example, but refer to my general remarks on the use of evidence from glosses in Section 5.2.2 above.

¹⁹ Warner’s suggestion that the difference—i.e. the absence of an infinitive of MAY in the *Grammar* and the presence in the gloss—may be due to dialectal differences is, in my opinion, not particularly compelling either. According to Kornexl (1995: 123), the language of the gloss in Tiberius A. iii ‘largely conforms to the Late West Saxon standard’ with only sporadic non-WS (Kentish) forms, placing it in the same general area as the earliest MSS of Ælfric’s *Grammar*. The Tiberius MS has in fact been connected to Ælfric’s student Ælfric Bata, whose name appears in it, though it is uncertain if this is a later misattribution; see Ker (1957: 240–241) and the description in the online BL catalogue (link in Appendix B).

already outlined above, this was because *MAY* lacked an infinitive form to use in the translation. However, I do not think this is the only or even the most likely interpretation. First, if one examines the different ways future forms are translated in the *Grammar*, it becomes clear that these translations do not follow any fixed template but are carefully chosen to fit the context and the meaning of the individual verbs. I have identified five different ways future participles are translated in the *Grammar*, shown in Table 5.4 along with an example of each; the two rightmost columns give the references to [ÆGram] and the corresponding passages in Bitner (2018). The most common strategies are *SHALL*, *WILL*, or both of these plus the infinitive of the verb in question. Less common are *to*-infinitives (twice) and the present-tense form in (7).²⁰ Ælfric at several points uses different strategies within the same paragraph (as in both [7] and [8]), suggesting that there were principled differences between them. The most obvious difference is that between *SHALL* and *WILL*: the latter is only used to translate future participles which involve a degree of volition or agentivity on the part of the subject, as in *DOCTURUS SUM CRAS PUEROS ic wylle tæcan to merigen þam cildum* ‘I will teach the children tomorrow’ [ÆGram 152.7].

Table 5.4: Translations of future participles in Ælfric’s *Grammar*

Strategy	Latin	Old English	ÆGram	Bitner
<i>SHALL</i>	<i>PARITURUS</i>	<i>se ðe cennan sceal</i>	252.11	p. 115
<i>WILL</i>	<i>DOCTURUS SUM</i>	<i>ic wylle tæcan</i>	152.7	p. 73
<i>WILL/SHALL</i>	<i>ITURUS</i>	<i>se ðe wyle oððe sceal faran</i>	252.3	p. 115
<i>to</i> -infinitive	<i>FACTURUS</i>	<i>to wyrccenne</i>	246.7	p. 112
<i>PRS</i>	<i>AUSURUS</i>	<i>se ðe gedyrstlæcð</i>	246.21	p. 112
—	<i>QUITURUS</i>	—	252.3	p. 115

Note that all of the strategies in Table 5.4 except the *to*-infinitive involve finite clauses. In addition to these strategies, Ælfric has different ways of dealing with finite future forms, usually involving *gyt* ‘yet, at some point’ (*DOE*, q.v.) or another adverb (see e.g. [ÆGram, 123.13] or [ÆGram, 131.14]). In light of these many alternatives and Ælfric’s careful choice of translations, it is indeed odd that he leaves *QUITURUS* untranslated. At the same time, it also seems odd to me that he would do so merely for lack of an infinitive of *MAY* when he was clearly able to think of other paraphrases. I will venture an alternative hypothesis, namely that *QUITURUS* is not an authentic Latin form, but was merely included for the sake of systematicity. Having searched the Corpus Corporum—the largest collection of Latin texts that I am aware of—and consulted several reference works (*OLD*; *EDLI*; Roby 1872; Woodcock 1959; Sihler 1995; Pinkster 2015), I have not been able to find a single attestation of any form of the future participle *QUITURUS*.²¹ Roby (1872: I, 236) explicitly states that ‘no

²⁰ The *to*-infinitive is also sometimes used for gerundival forms, e.g. *HABENDUS EST he is to hæbbenne* [ÆGram, 255.13]. I have only included future active participles and their translations in Table 5.4.

²¹ The Corpus Corporum currently (May 2020) contains c. 160 million words, mostly of ancient and medieval Latin; see Roelli (2014) for an introduction. The lemmatized parts of the corpus contain 9,465 hits for *QUEO*, none of which was an example of *QUITURUS*. There were no hits for *quitur-* in the remainder of the corpus.

imperative, participle, or gerund' is recorded for QUEO. If this is indeed an inauthentic form made up to complete the paradigm, the Latin form itself was probably to some extent meaningless and the lack of a translation cannot be relied on to tell us much about the grammar of Old English. Note that Ælfric's statement that it is Old English which lacks a corresponding form is perfectly in line with his general treatment of the vernacular in the *Grammar*: whenever there is a discrepancy between the two languages, Old English is singled out as the deficient one. He also seems to use this strategy when a particular subject gets too difficult; consider the passages in (9)–(11):

- (9) *Eac we mihton be eallum [þam] oðrum stafum menigfealdlice sprecaþ gif hit on englisc gedafenlic wære.*
 'We could also say many different things about the other letters if it was convenient ['fitting'] in English.' [ÆGram, 6.19]
- (10) *We ne magon þisne part fullice trahtnian on engliscum gereorde, ac we wyllað gyt hwæt lytles be þam secgan.*
 'We cannot explain this part of speech [sc. adverbs] in full in the English language, but we still want to say a few things about it.' [ÆGram, 240.16]
- (11) *Þes dæl INTERIECTIO hæfð wordes fremminge þeah ðe he færllice geclypod beo, 7 he hæfð swa fela stemna swa he hæfð getacnunga, 7 hi ne magon ealle beon on englisc awende.*
 'This part of speech, 'interjection', has the force of a verb even if it is spoken abruptly, and it has as many sounds as it has meanings, and they cannot all be translated into English' [ÆGram, 279.12]

I would thus venture the following competing hypothesis to Warner's: Ælfric did not refrain from translating QUITURUS into Old English because he was unable to, but because the Latin form itself was only constructed to complete the paradigm. Rather than explaining—or admitting—this, he instead used his standard strategy of claiming that Old English was deficient and, as it were, blaming the vernacular rather than the liturgical language. This is obviously a speculative hypothesis, but, I would contend, no more so than Warner's suggestion that MAY developed an infinitive shortly after Ælfric compiled the *Grammar*.

To conclude this excursus on the details of Ælfric's *Grammar*, I think the evidence from this text has to be regarded as inconclusive. In the case of MOT in (4), I have argued that the translations in the *Grammar* are sensitive to differences in argument structure between Old English and Latin and that LICET is only rendered by MOT when the context allows an unambiguous interpretation of it; the absence of an infinitive of MOT in the translation of the Latin infinitive LICERE is what we would expect in light of the different argument structure of the verbs. In the case of (7) and (8), we have seen that Ælfric does not use non-finite forms of DARE and MAY to translate the participles of AUDEO and QUEO. As I have argued above, however, this does not force the conclusion that such non-finite forms were ungrammatical in Old

The *Thesaurus linguae Latinae* (TLL) has not yet published the letter *q*. A search for *quitur* on Google Books returns only grammars from the early modern period onwards, where the form is given as part of the paradigm. These can of course not be regarded as authentic if the form never occurs in actual Latin texts.

English. DARE was evidently not the only possible translation of AUDEO, and forms of *gedyrstlæcan* appear to have been the preferred choice in some cases. While this might be because DARE had no non-finites, it could also be because *gedyrstlæcan* was considered to be a clearer gloss. Similarly, while the lack of a translation of the form QUITURUS might be due to the lack of an infinitive form of MAY, I think it is likely that this form was only included for the sake of systematicity. I have suggested that Ælfric's lack of a translation for it may actually reflect the artificiality of the Latin form rather than any 'gap' in the grammar of Old English. This hypothesis—like all speculations about Ælfric's intentions more than a millennium ago—will of course have to remain untestable.

While I have suggested that Ælfric's *Grammar* does not provide direct evidence concerning infinitive and participial forms of the Old English modals, I hope that the preceding discussion clearly attests to the richness of this document, the oldest surviving grammar written in a European vernacular. If it does not offer much help in understanding the history of the modals, it can certainly teach us something about how the differences between Latin and Old English were perceived and explained to eleventh-century students. With the publication of the Latin *Excerptiones de Prisciano* by Porter (2002)—which was of course not available to Warner (1993) and Beths (1999)—we now have a further opportunity to uncover new aspects of the Old English grammatical tradition and Ælfric's handling of his Latin source material.

5.2.4 Non-finites and the TMA system

The arguments presented in the above may to some extent appear to run counter to one another. On the one hand, I have argued that the attestation of a particular form need not imply that this form was actually used in the spoken language; in the case of the progressive participle of MAY, it was pointed out that all of the Middle English attestations of this form are from texts showing Latin influence, either because they were translated from Latin or because the author deliberately employed a Latinate style. On the other hand, I have suggested that the *non*-attestation of a form need not imply that it did *not* exist in the spoken language. It may be unattested by sheer accident or, in the case of 'metalinguistic' documents like Ælfric's *Grammar*, because a different lexeme was considered a more apt paraphrase in a particular context. Still, it does seem to be the case that some of the modals become more frequent in non-finite forms in Middle English, although perhaps not quite to the extent suggested by Warner's table (my Table 5.1 on p. 101). As already mentioned above, Warner himself acknowledges that the progressive participle of CAN (*cunning* and spelling variants) is probably better regarded as a derived adjective and that the absence of non-finites of DARE in Old English may be accidental because of the relatively low frequency of this verb.

If the non-finites of CAN and DARE are discounted, there seems to be rather little left of the 'new non-finites' generalization. What remains is the apparently increased frequency of infinitives of MAY and past participles of MAY and WILL. The question is whether this increase in non-finite forms represents a real innovation in Middle

English or simply reflects the larger amount of data. As mentioned in Section 5.2.2, it is uncertain exactly how large the entire body of surviving Middle English material is, but it is certain that it is several times larger than the Old English corpus. Furthermore, the language of course underwent other changes, which might have had implications for the attested forms of the modals. In Section 5.2.1 I briefly referred to Fischer's suggestion that the non-finite forms appearing in Middle English reflect a more general change in the expression of tense, modality, and aspect ('TMA') in that period, namely the increasing use of periphrastic constructions (see Fischer 2004: 18 n., 2007: 165; Fischer & van der Wurff 2006: 150). The best known constructions are probably the periphrastic future with *WILL* and *SHALL* and the perfect and pluperfect with *have* and *be*. Judging from the material collected in the *MED*, these constructions are the main contexts where non-finite *MAY* and *WILL* occur. Of the 59 infinitives of *MAY* listed in the *MED* entry (s.v. *mouen* v.3, sense 10), 48 occur in periphrasis with *SHALL*; see (12) for an example from one of the Paston letters (quoted from the *MED* entry). Of 10 participles, 9 occur in a periphrastic perfect or pluperfect construction with *have*. There is no separate list of participial forms of *WILL* in the *MED* (s.v. *willen*), but of the five Middle English and two Early Modern English examples given in the *OED* (s.v. *will* v.¹, sense 49), all are in the context of a periphrastic (plu)perfect, as in (13), from a Wycliffite sermon.

- (12) *She seth that he shall not mown comyn to you.*

'She says that he is not going to be able to come to you.' (1461 *Paston* 3.310)

- (13) *He myȝt, ȝif he hadde wolde, have take greet veniaunce of hem.*

'He [sc. Jesus] could, if he had wanted to, have taken a great revenge against them.' (c.1380 *Wyclif Sel. Wks.* II. 293)

In this section I test the 'periphrasis' explanation using two of the Penn-Helsinki corpora introduced in Chapter 4, the YCOE and PPCME2. The corpora are annotated with syntactic and part-of-speech information, and for this reason it is easy to search for a particular morphosyntactic category as long as this was distinguished by the annotators. The corpora were queried with CorpusSearch. One could approach the issue from at least two angles: either the corpus search could target the secondary verbs ('auxiliaries') used to form periphrastic constructions, or one could look at the overall incidence of the non-finite forms occurring in periphrastic constructions. I decided on the latter option as more appropriate for my purposes here. Infinitives and participles are tagged as such in the Penn-Helsinki corpora, and it is thus fairly straightforward to extract all instances of these forms. Future and (plu)perfect auxiliaries, on the other hand, are not tagged as such and it would be a much more laborious task to sort out when, for instance, *have* is used as a verb of possession and when it is a (plu)perfect auxiliary. In the case of future periphrasis, the modal *SHALL* (and, less frequently, *WILL*) is used in this function in early English, but the modal and temporal functions are often difficult to distinguish (as the discussion in Wischer 2008 suggests). For these reasons I concluded that it was both more suitable for my

purposes and more efficient to focus exclusively on the non-finite forms in question. The premise here is that the more frequently these non-finites are attested, the more likely it is—*ceteris paribus*—that a given verb will be attested in such forms.

Participles and infinitives are not tagged in exactly the same way in the two corpora. In the YCOE two infinitives are distinguished, the ‘short’ form (tagged VB) and the ‘long’ or ‘inflected’ infinitive (tagged VB[^]D). No such distinction is made in the PPCME2. On the other hand, the PPCME2 makes a distinction between PTCP forms in (plu)perfect contexts, tagged VBN, and passive contexts, tagged VAN. In the YCOE there is no such distinction, and all past participles are tagged VBN. For the sake of comparability I had to include both of the tags VBN and VAN in the PPCME2 search.²² This is admittedly a crude way of gauging the productivity of periphrastic TMA forms: counting the frequency of participial and infinitival forms of course does not give us a direct measure of this productivity, only the overall incidence of these two morphological categories. It should also be stressed that—as pointed out in Chapter 4—corpora like YCOE and PPCME2 are unlikely to give a representative view of the actual spoken language at the time. In the case under consideration here, however, this is rather beside the point: the important thing is that the corpora give a representative view of the surviving material, which is of course the material on which philologists and lexicographers have based their accounts of the historical morphology and attested forms. Given that the YCOE and PPCME2 contain most of the available prose works from Old and Early Middle English and a fair number of texts from Late Middle English, this seems like a reasonable assumption. Thus, while the method chosen here only probes the question of the changing TMA system in a somewhat oblique way, it still gives a useful indication of the overall frequency of the two non-finite categories.

Table 5.5: Frequency of non-finites (YCOE and PPCME2 data)

	PTCP		INF	
	<i>n</i>	<i>f</i>	<i>n</i>	<i>f</i>
OE	17,171	11.8	26,585	18.3
EME	6,569	17.4	11,257	29.8
LME	18,747	23.0	26,298	32.2

The figures from the corpora are shown in Table 5.5. I give the absolute numbers (*n*) and normalized frequencies (*f*) per 1,000 words, rounded off to one decimal.²³ The normalized frequencies are plotted on a simple line chart in Figure 5.1. These figures strongly suggest that there is a general increase of non-finite forms in Middle English.

²² The part-of-speech categories included in the search were, in the YCOE, VB (verbs), MD (modals), AX (‘auxiliaries’, e.g. *onginnan* ‘begin’), HV (*have*), and BE (*be*), and in the PPCME2 VB (verbs), HV (*have*), BE (*be*), and DO (*do*). I had to exclude the category MD from the PPCME2 search because infinitives and participles are not distinguished for this. The actual frequency of non-finites in Middle English is thus almost certainly higher than shown in Table 5.5.

²³ The word counts of the corpora are as follows: OE (YCOE) 1,450,376 words; EME (PPCME2, periods M1 and M2) 378,259 words; LME (PPCME2, M3 + M4) 816,104 words.

In the Late Middle English material in the PPCME2, past participles are about twice as frequent as in the YCOE; the frequency of infinitives increases by about 75% in the same period.

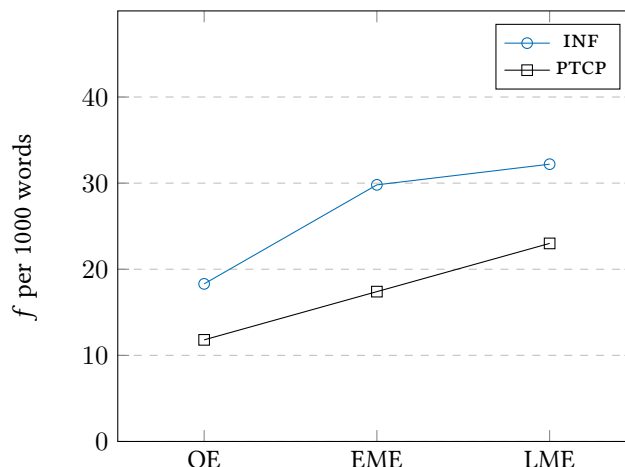


Figure 5.1: Non-finites per 1,000 words, YCOE and PPCME2 data

In light of these facts, I think it is indeed very likely that the ‘new’ non-finite forms observed in Late Middle English do not reflect an actual change to the modals, but the larger size of the corpus and other more general changes to the grammatical system. Not only is the Old English corpus several times smaller than the surviving body of Late Middle English material—only a fraction of which is included in the PPCME2—the categories ‘infinitive’ and ‘past participle’ are also about twice as frequent in Late Middle English. There are thus both more relevant usage contexts for the non-finite forms and more textual material where they could be recorded. In other words, I do not think the data allow us to conclude that the modals acquired new non-finite forms in Middle English. They may simply have been less frequent in the Old English period and hence have flown under the radar in the surviving material.

In his discussion of unattested non-finite forms, Warner (1993: 146) asks, evidently not just rhetorically, ‘How seriously should we take these apparent gaps?’ My reply to Warner would be ‘not too seriously’. There are several possible reasons for the attestation or non-attestation of a particular form, not all of which are directly related to the availability or non-availability of a form in the spoken language at the time. A form may be attested in the written language because a particular writer wished to stay as close to the Latin structure as possible, and it may be missing from the written record by sheer accident. These caveats must be kept in mind when attempting to make generalizations about the language as a whole.

In the above I have argued both for paying close attention to the minutiae of individual texts and for considering the language system in its entirety and the nature and size of the surviving record. Focussing only on the attestations of individual modal

forms may give the impression that some of them develop non-finite forms in Middle English, but I believe a reconsideration of the evidence weakens this generalization: some forms may not be genuine, others arguably reflect a combination of the larger corpus and the increasing use of periphrastic future and (plu)perfect constructions. While this may not be a groundbreaking conclusion, it is worth noting that the ‘new non-finites’ story has quite often been cited as if it were a fact about the grammar of early English (e.g. van Kemenade 1992: 302, 1993: 159; Beths 1999: 1089; Molencki 2005: 148; Schlüter 2010: 291; Coupé & van Kemenade 2009: 251). According to the analysis presented above, it is precisely not an established fact about Middle English grammar, but only a generalization about the surviving material.

5.3 Weak morphology

5.3.1 Observed developments

Unlike the apparent development of new non-finite forms, the changes to be discussed in the following evidently reflect genuine morphological innovations. They concern the substitution of the original present indicative plural ending *-en* by *-eþ* (*-eð*, *-eth*, etc.) in some of the modals. This is one of the Middle English developments mentioned by Warner (1993). It has since been referred to by a few other authors (Fischer 2004: 18 n.; Trousdale 2017: 108) and one modal, *SHALL*, is included on the dialect maps in LAEME and eLALME, but otherwise I have found no literature exploring this development. It is not usually treated explicitly in Middle English handbooks or reference works on morphology.²⁴ In the following I will survey the distribution of these plural forms with the help of LAEME and eLALME and a number of other corpora. I will refer to the forms in question as ‘weak’ plurals because the ending *-eþ* is also found in the weak verbs, the largest inflectional class in Old and Middle English. The label is not meant to imply any particular analysis of the development—in fact, I will argue that the ‘anomalous’ verb *WILL* played a greater role as an analogical model than the weak verbs—but is merely used for the sake of convenience.

As already mentioned, Warner (1993) considers the ‘reformed’ present indicative plural evidence of the continued verbal status of the modals in Middle English. It receives much less attention than the development of new non-finite forms, however, with only one short section dealing with it (see Warner 1993: 101). Warner’s observations and interpretation are as follows: instead of the expected present indicative plural ending *-en* (← OE *-on*), the weak (i.e. regularized) ending *-eþ* (← OE *-aþ*) is found in several modals ‘in some parts of the south and south-west midlands’ (Warner 1993: 101). This occurs both when they are used as ‘full’ (i.e. primary) verbs and with modal functions. Warner bases his survey on LALME and the historical dictionaries and finds examples of weak plurals of *SHALL* (*shulleþ*, *sholleþ*, and other

²⁴ Burrow & Turville-Petre (1992) include examples of weak plural modals in their glossary, but do not discuss these in the grammatical introduction. I found no mention of the phenomenon in the overviews by Lass (1992, 2006) and Horobin & Smith (2002). Curiously, both Mossé (1952: 82–83) and Brunner (1970: 82–83) mention the form *cunneþ/conneþ* but not the more frequent *sholleþ*.

spelling variants), CAN (*cunneþ*, *conneþ*), and MAY (*moueþ*, *moweþ*). The first of these is more frequently attested than the other two. Weak plural forms are also found in some of the non-modal preterite-present verbs, such as WIT; I will focus only on the developments in the modals here.²⁵ According to Warner, the fact that these modals developed regular weak-verb endings suggests that they were still felt to be part of the larger category of verbs. He mentions the plural form of WILL (OE *willap*; see below) as a possible model for the analogy at least in the case of SHALL, but also notes that weak plural forms of WILL and SHALL do not always co-occur in the manuscripts surveyed in LALME: ‘the presence of *shulleþ* as a normal form in a manuscript by no means implies the presence of *willeþ*’ (Warner 1993: 101). In other words, while WILL must have influenced the development of SHALL, it cannot have been the only source of the spread of weak morphology, as some scribes use *shulleþ* without necessarily using *willeþ*. I return to this interpretation of the Middle English facts below. First I will provide an outline of Old and Early Middle English verbal morphology and a survey of the dialectal distribution of the various plural endings.

5.3.2 Middle English verb morphology

Old English verbs are traditionally grouped into three broad inflectional classes, called strong, weak, and preterite-present. The language shares these classes with the other Germanic languages and hence they are also reconstructed for Proto-Germanic. Somewhat simplistically put, the inflectional classes differ in three basic ways: the formation of their past-tense forms, their past participles, and their conjugation in person and number. Strong verbs form their past tense by vowel gradation (*ablaut*), their past participles end in *-en*, and they have entirely different personal endings in the present and past indicative.²⁶ By contrast, weak verbs form their past tense by adding the affix *-(e/o)d-* (*-t-* after voiceless consonants) plus person and number endings; the same affix is found in the past participle (*-ed/-od/-t*). The 2SG has the same ending in the past as in the present tense. See Table 5.6 for examples; I have normalized ⟨ð⟩ to ⟨þ⟩ and added affix boundaries, but otherwise almost all of the forms are attested in the DOEC (some examples of *hælan* only with the prefix *ge-*).²⁷

Table 5.6 also gives an example of a preterite-present verb, the modal CAN. From the paradigm one may glean how the class got its name: the present indicative forms 1/3SG *cann* and PL *cunnon* (but not 2SG *canst*) are parallel to the past (preterite) in-

²⁵ The other forms which Warner mentions are WIT ‘know’, *unnen* ‘grant’ (← OE *unnan*, cognate of German *gönnen* and Dutch *gunnen*), and *ouen*. The last of these also has modal functions, but because of its rather complicated morphological history (it eventually ‘splits’ into *owe* and *ought*; *OED*, qq.v.), I decided to leave it out of this survey. It will come under scrutiny in another connection in Section 5.4, namely as an example of an ‘impersonal’ modal.

²⁶ In addition to the ablaut of the past-tense forms, many strong verbs have another kind of vowel alternation (*umlaut*) in their 2SG and 3SG PRS.IND forms. This is of lesser importance here, so for the sake of simplicity I have given the non-umlauting verb *drincan* as an example in Table 5.6. For an example of an umlauting verb, see *ic fare* ‘I go’, *ðu færst* ‘you[SG] go’, *he færð* ‘he goes’ in (8) on p. 109.

²⁷ Further information can be found in the numerous works covering OE morphology, e.g. Campbell (1959), Brunner (1965), Hogg (1992), Lass (1994), and Hogg & Fulk (2011). For a comparative Germanic perspective see also the recent comprehensive volume by Fulk (2018).

dicative forms of the strong verbs. Compare *cann/cunnon* and *dranc/druncon*. The received explanation for this parallel is that the preterite-presents are historically past-tense forms which were reinterpreted as having present-tense reference.²⁸

In addition to these three classes, Old English has a small number of ‘anomalous’ verbs, such as the copula *beon/wesan*, the suppletive verb *gan* ‘go’ (PST.1/3SG *eode*), and *WILL*, which will concern us here. This verb does not fit in any of the other classes. The PRS.IND.PL ending is *-aþ* like a regular strong or weak verb, but the 2SG has the form *wilt* which is parallel to some of the preterite-presents (e.g. *scealt* SHALL.2SG, *meaht* MAY.2SG), and the 3SG has the anomalous form *wile*. In the past tense it has a different stem vowel and the affix *-d-*. The paradigm is given in the last column in Table 5.6.²⁹

Table 5.6: Old English (West Saxon) verb classes

			STRONG	WEAK	PRET.-PRES.	‘ANOM.’
PRS	IND	1SG	drinc-e	hæl-e	cann-Ø	will-e
		2SG	drinc-st	hæl-est	can-st	wil-t
		3SG	drinc-þ	hæl-eþ	cann-Ø	wil-e
		PL	drinc-aþ	hæl-aþ	cunn-on	will-aþ
	SBJV	SG	drinc-e	hæl-e	cunn-e	will-e
		PL	drinc-en	hæl-en	cunn-en	will-en
	PST	1/3SG	dranc-Ø	hæl-d-e	cuþ-e	wol-d-e
		2SG	drunc-e	hæl-d-est	cuþ-est	wol-d-est
		PL	drunc-on	hæl-d-on	cuþ-on	wol-d-on
PST	SBJV	SG	drunc-e	hæl-d-e	cuþ-e	wol-d-e
		PL	drunc-en	*hæl-d-en	cuþ-en	wol-d-en
	PTCP		drunc-en	hæl-ed	cuþ	*wol-d
	INF		drinc-an	hæl-an	cunn-an	will-an
			‘drink’	‘heal’	‘know, can’	‘want, will’

As Table 5.6 shows, there were essentially two types of plural endings across the Old English verb classes, those ending in *-n* /n/ and those ending in *-þ/-ð* /θ/. The preterite-present class was the only one that had the *-n* variant in the present indicative; the strong verbs, weak verbs, and *WILL* all had *-þ/-ð*. It is these endings which will come under scrutiny in the following.

²⁸ Randall & Jones (2015) have recently challenged the received view, suggesting that the present-tense forms actually go back to a PIE stative formation, not to old past-tense forms (but cf. Miller 2019: 209 n.). This etymological question will not be of further concern here. On the historical development of the preterite-presents within Germanic, see Hogg & Fulk (2011: 306–308) and Fulk (2018: 316–323).

²⁹ As discussed in Section 5.2, the PTCP of *WILL* is not attested in the OE corpus. The PTCP of *CAN* is considered an adjective by Hogg & Fulk (2011: 308), but ‘plainly’ reflects an older participial formation.

The verb inflections found in Middle English texts differ in a number of ways from the system seen in Table 5.6. Some of these differences are due to phonological changes in Late Old English and Early Middle English, most importantly the coalescence of most unstressed vowels into /ə/. The loss of vowel distinctions meant that final *-eþ* and *-aþ* merged into *-eþ* and final *-en* and *-on* into *-en* (see Lass 1992: 77–78, 134–137). This final *-en* was often further reduced to *-e*. Other changes were analogical in nature. Most importantly in this context is the extension of the PST and SBJV plural ending *-en* to the PRS.IND paradigm in some dialects, mainly in the east and northwest Midlands. In southern and southwest Midland dialects the older system was retained, which meant that the PRS.IND endings were often identical in the 3SG and PL forms. The northernmost dialects show yet another development, where the ending *-s* was generalized across the paradigm, but subject to certain syntactic constraints (known as the ‘Northern Subject Rule’) with 1SG and PL subjects. Table 5.7 shows the outcomes of these changes in three broad dialect areas, the south and southwest Midlands (S/SWM), the east and northwest Midlands (EM/NWM), and the north (N); only the present-tense indicative endings are included.³⁰

Table 5.7: Old and Middle English PRS.IND endings (after Lass 1992)

	OE (WS)	ME		
		S/SWM	EM/NWM	N
1SG	-e	-e	-e	-Ø/-s
2SG	-(e)st	-(e)st	-(e)st	-s
3SG	-(e)þ	-(e)þ	-(e)þ	-s
PL	-aþ	-eþ	-e(n)	-Ø/-s

The distribution of the different PRS.IND.PL endings across the documents included in the LAEME corpus is shown in Figure 5.2 (p. 121).³¹ The red dots represent the *-eþ* ending (with spelling variants), the dark blue squares the ending *-en*, and the cyan blue triangles the Northern *-s*. The map also illustrates both the variation found in the surviving material—several sources show more than one of the variants—and the uneven distribution of the sources, with a substantial number of them coming from two relatively small areas in the southwest Midlands (Herefordshire, Worcestershire, and Gloucestershire) and, to a lesser extent, the east Midlands (western Norfolk, northern Essex, and present-day Cambridgeshire).

The map in Figure 5.2 suggests why plurals of the modals with *-eþ* are mainly attested in the south and southwest Midlands, as Warner observes: this is the area where *-eþ* was the predominant plural ending. In dialects where *-en* was extended

³⁰ I stress that Table 5.7 presents a greatly simplified picture and is only given for the purpose of illustration. Especially in the Midlands there is competition between different systems. Note also that many southern dialects have syncope in the 3SG forms, meaning that the 3SG and PL endings are kept distinct in many verbs. Compare in the *Ayenbite of Inwyte*: *þis bok spekeþ* ‘this book speaks’ [eme.ayenb, 165] and *we spekeþ* ‘we speak’ [eme.ayenb, 201].

³¹ The map in Figure 5.2 was created by combining the three relevant LAEME feature maps (nos. 01294201, 01294202, and 01294203).

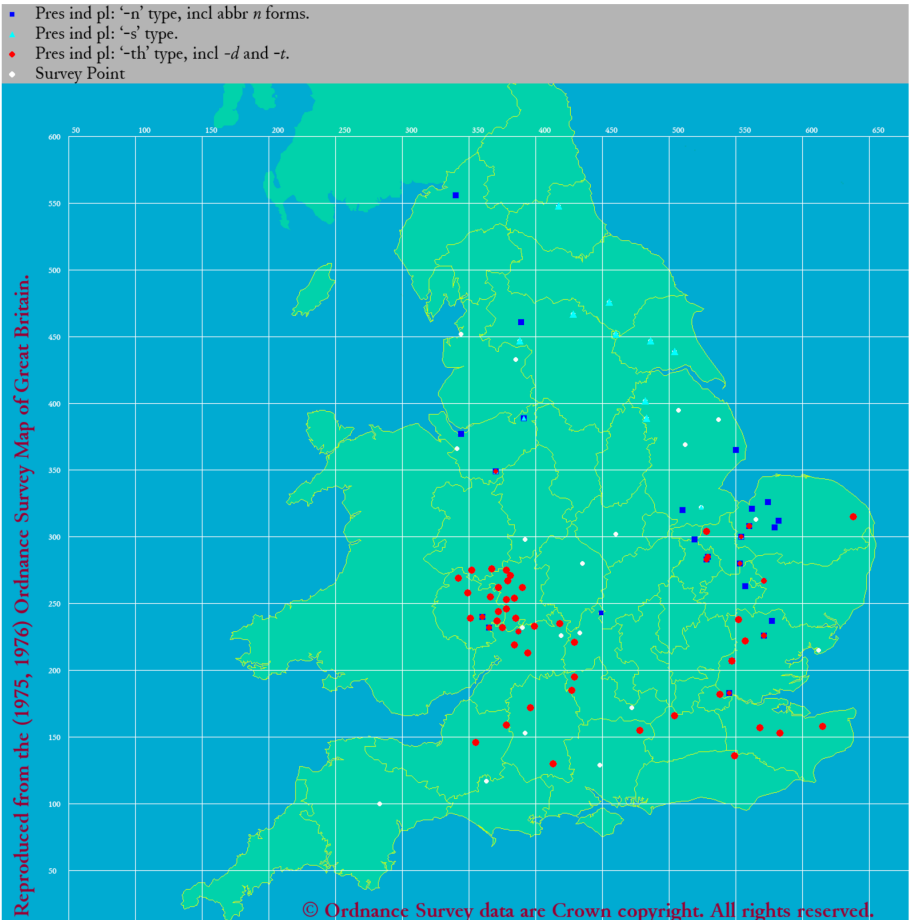


Figure 5.2: PRS.IND.PL forms (LAEME)

to the PRS.IND.PL, this was already the ending found in the preterite-presents, i.e. all of the modals except WILL.³² The most interesting question here is thus not why *-ep* was extended to some of the modals in this particular area, but why the modals were not affected in the same way. This will be explored in the following.

5.3.3 Survey of weak plural modals

The starting point for this survey was the Middle English material from my pilot investigation, which was all gathered from the PPCME2. This was checked for forms of CAN, MAY, and SHALL ending in *-þ* (or a spelling variant), but with very modest results. No relevant examples of MAY were found, and only three texts contained potential examples of the other two modals: the *Ayenbite of Inwyt* (cmayenb) of CAN, and the *Ancrene Riwe* (cmancriw; Cleopatra version) and the prose *Brut* (cmbrut; MS Rawlinson B 171) of SHALL. Because the manuscripts containing these texts were all surveyed by the editors of the LAEME and eLALME and because I consider these resources more reliable for morphological investigations, I decided to base my own investigation on these instead of the PPCME2.

In the LAEME I checked the lists of attested forms ('Item Lists') of the lexemes ('lexels' in LAEME parlance) in question and identified potentially relevant ones. I could then look up the forms in the individual texts in the corpus and generate a map of the attestations. In the eLALME, which is based on a questionnaire, I surveyed the relevant pre-defined dot maps and Item Lists.³³ The patterns of distribution are quite different between the two corpora. I will begin with the earlier data from LAEME.

Weak SHALL and CAN are both attested sporadically in the material in LAEME, SHALL more frequently than CAN. Weak MAY was not found. As Tables 5.8 and 5.9 show, weak SHALL is recorded in five different manuscripts in the corpus, whereas weak CAN is found in three. The provenance of the manuscripts is shown on the dot map in Figure 5.3.³⁴ The tables give the MED abbreviations of the texts along with the LAEME filenames and information about the manuscripts. The attestations are limited to western England, with the exception of a single Kentish manuscript with CAN, the *Ayenbite of Inwyt* also included in the PPCME2; I discuss this text further below. One manuscript contains examples of both weak SHALL and weak CAN; otherwise the two forms are recorded in different manuscripts. This may well be accidental, however, as many of the texts in LAEME are quite short.

In a few texts the attestations of weak SHALL are quite numerous, but in some cases this probably has to do with the style and subject matter. In narrative texts set exclusively in the past there are fewer relevant contexts than in, for instance, texts set in the present or texts containing more dialogue. A case in point is the South English Legendary (Cambridge, Corpus Christi College MS 145), which contains a number

³² Indeed, in some Midlands texts the change goes in the other direction, and the plural of WILL appears with *-en* instead of expected *-ep*. See LAEME, feature map no. 02350902.

³³ Namely SHALL *pl* (item no. 22-30), CAN *pl* (item no. 105-22), MAY *pl* (item no. 199-20). Unsurprisingly, all of the modals are surveyed in the atlas.

³⁴ Figure 5.3 was generated with the 'Create a Feature Map' function in LAEME by searching for the lexels SHALL and CAN with the relevant endings (*-þ*, *-ð*, and *-d*; with regular expressions in LAEME transcription: E[ydJ]).

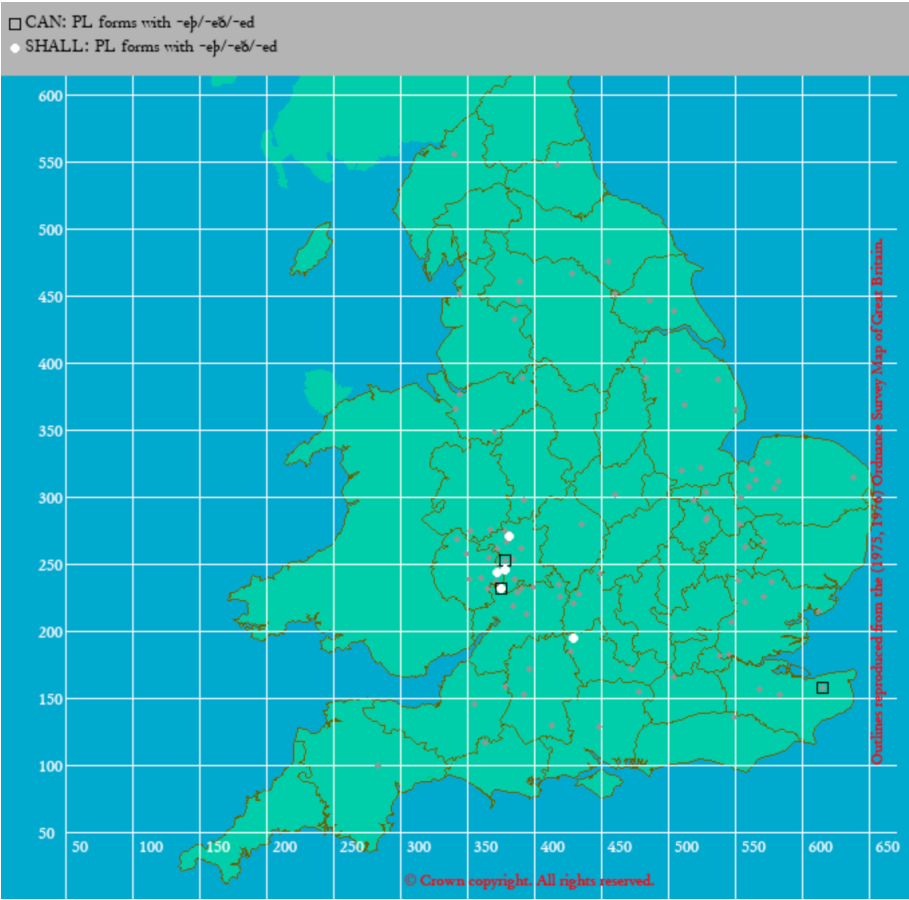


Figure 5.3: Weak CAN and SHALL (LAEME)

Table 5.8: Attestations of weak SHALL in LAEME

MED abbr.	LAEME file	Date	MS	Provenance	Att.
<i>SLeg.</i>	corp145selt	c. 1310–20	CCCC 145	NW Berks	20
<i>Doomsday</i>	digby86mapt	c.1275	Digby 86	NW Gloucs	1
<i>PMor.</i>	egpm2t	13th c.	Egerton 613	SW Worcs	1
misc.	jes29t	a.1300	Jesus College 29	E Herefords	11
<i>Lay.Brut</i>	layamonAbt	13th c.	Caligula A. ix	NW Worcs	9

of dialogues where characters discuss present or future events. This of course means that there are more contexts for a form like *ssolleþ* to occur, such as the two examples in (14) (transcription simplified slightly):

- (14) *Ʒe ssolleþ after seue monþes · Ʒse[o] a uair ile*
Ʒat abbey is Ʒcluped · Ʒat is hanne mani a myle
Ʒe ssolleþ be[o] mid holy men · Ʒis midwinter Ʒere
 ‘After seven months you are going to see a beautiful island called Abbey, which is many miles away from here; you are going to spend Christmas there with holy men.’ (LAEME, corp145selt)

Still, the fact that some of the manuscripts contain several examples of weak SHALL shows that the form is not merely accidental, but must have been regularly used by some speakers.

In contrast to SHALL, only three isolated instances of CAN were found, in the three texts listed in Table 5.9. To these we may add one other example from the *Ayenbite of Inwyt*—from a section of the text not included in the LAEME sample—and a few examples in texts in the CMEPV.³⁵ With the sole exception of the *Ayenbite of Inwyt*, the texts that can be localized with the help of the LAEME and eLALME are from the same general area as the examples of SHALL. (15) is an example from the LAEME corpus assigned to Gloucestershire. The example in (16) is from one of the versions of Trevisa’s translation of Higden’s *Polychronicon* (Oxford, St. John’s College MS H.1). It is not surveyed in the eLALME, but is almost certainly from the same area. The compilers of the PPCME2, which includes a sample of it, merely call it ‘Southern’.

- (15) *Ʒus hit goþ bitwenen hem two*
Ʒat-on seiþ let Ʒat-oþer do
Ne cunneþ hey neuere bilinnen
 ‘And so it goes between the two [sc. soul and body], the one says “don’t”, the other “do”; they cannot ever cease.’ (*Sayings St.Bern.*; LAEME, digby86mapt)

³⁵ Specifically, Trevisa’s *Polychronicon* translation (several MSS), *Piers Plowman* (C text, several MSS), one of the numerous versions of the *Prick of Conscience* (provenance unclear), and the South English Legendary (Ashmole 43, Gloucs; LALME LP 7170).

- (16) *disauauntage is þat now children of gramer scole conneþ na more Frensche þan can hir lift heele*
 ‘The disadvantage is that now children in grammar school know no more French than their left heel does’ (CMEPV, a.1387 Trev.Higd.)

Table 5.9: Attestations of weak CAN in LAEME

MED abbr.	LAEME	Date	MS	Provenance	Att.
<i>Ancr.</i>	neroart	a.1250	Nero A. xiv	W Worcs	1
<i>Sayings St.Bern.</i>	digby86mapt	c.1275	Digby 86	NW Gloucs	1
<i>Ayenb.</i>	ayenbitet	1340	Arundel 57	Kent	1

Some doubts may be raised about the two attestations in the *Ayenbite of Inwyt* (BL, Arundel MS 57). One of these examples is included in the sample in the LAEME corpus, and both are found in the PPCME2 and the surveys of forms in the *OED* (s.v. *can* v.¹) and *MED* (s.v. *connen* v.). They have thus clearly been noticed before. I quote the examples in (17)–(18) directly from Morris’s edition:

- (17) *And þis boc / is more ymad / uor þe leawede: þanne uor þe clerkes / þet conneþ þe writings.*
 ‘and this book is made more for the laypeople than for the clergymen, who [already] know the writings’ (Morris 1965a: 46)
- (18) *ase moȝe ysi / þo þet conneþ þe writinge onderstonde*
 ‘... as they may see that can understand the writing’ (Morris 1965a: 249)

At first sight these appear to be clear examples of CAN with a weak plural ending. However, as Wallenberg notes in his study of the vocabulary of the text, ‘in both cases *conneþ* is followed by a word that begins with *þ* (*þe*)’, leading him to conclude that ‘*conneþ* is accordingly only an accidental manifestation of sandhi’ (Wallenberg 1923: 60 n. 1). In her introduction to the text, Gradon (1979: 52) is more cautious: ‘*conneþ þe* is perhaps for *conne þe*’. As Gradon points out, the PRS.IND.PL is otherwise invariably spelt *conne* in the manuscript, and sandhi effects are quite frequent; on the other hand, this ‘intrusive’ *-þ* does not seem to occur in any other verb. The *Ayenbite of Inwyt* is a rare example of a holograph, a manuscript text surviving in the author’s own hand (see LAEME, source no. 291; Gradon 1979: 1). This seems to speak against an explanation in terms of dialect mixing and for the ‘sandhi’ interpretation; otherwise, the author must have had two variants of the plural of CAN. Unfortunately, since this is the only manuscript, I think the evidence will have to be regarded as inconclusive.

The Late Middle English material in eLALME presents a different picture: weak plurals of SHALL are found in a larger area, also including southern East Anglia and most of the southern counties, as illustrated on the dot map in Figure 5.4 (p. 127). This does not necessarily mean that the form was used in the spoken language in all locations on the map, only that it is recorded in documents originating from them.

These may in turn have been copied from exemplars originating elsewhere. Especially in the east Midlands the weak plural of *SHALL* appears to be recorded mainly in manuscripts which also use other variants. However, even in the ‘core’ area of weak *SHALL*, one occasionally finds variation. The example in (19) is from a manuscript (Cambridge, Selwyn College MS 108 L.1.) located in Herefordshire by the LALME editors (LP 7460). Note the use of *schulen* and *schulleþ* within the same sentence.

- (19) *þou schalt vnderstonde þat Poule wryteþ many epysteles to dyuerse men þat he turned to þe byleue, how þei schulen byleuen, & how þei schulleþ lyuen*
 ‘You should understand that Paul writes many epistles to different people that he turned to the faith, about how they are to believe and how they are to live’
 (CMEPV, c.1400 *Bible SNT*[1])

By contrast, weak *CAN* and *MAY* are not recorded in the eLALME at all. This suggests a divergent development: weak forms of the three modals (on *MAY* see the following paragraph) appear in the written record around the same time in southwestern England, but whereas *SHALL* spreads to a larger area and is well attested in Late Middle English, the weak plurals of *CAN* and *MAY* seem to have died out fairly quickly after they emerged. I consider the possible reasons for this divergence below.

In search of a lost plural: *moweþ*

Warner (1993: 101) notes that *MAY* is also recorded with a weak present plural ending, though ‘apparently less frequently’ than *SHALL* and *CAN*. The form indeed appears to be very infrequent. The *MED* (s.v. *mouen*), which Warner refers to, gives only two examples with the form *moweþ*; the *OED* records no instances; and as mentioned above, neither the LAEME and eLALME atlases nor the PPCME2 appear to contain any examples. I therefore decided to search for possible attestations of this form in a larger corpus. I searched my own custom-made corpus described in Chapter 4, the ICMEP (c. 9 million words), and the entire CMEPV repository (word count unknown, but more than 250 individual texts are included).³⁶ In total, the form *moweþ* (also attested as *moueþ* and *moueth*) was found in three texts in these collections, two of which are cited in the *MED* entry. Finally, a Google query revealed a single example in the (MEG-C), compiled at the University of Stavanger, which is available online. The references to these four examples along with the dating and geographical provenance are given in Table 5.10.³⁷

In (20) I give the example from the *Prick of Conscience* in the MEG-C. The sample in the corpus is rather short and the manuscript is otherwise unedited, so it cannot be ascertained if this is an isolated case. (21), from one of the versions of Robert of

³⁶ Forms queried: *moueþ*, *moueth*, *moued*, *moweþ*, *moweth*, and *moued* (the CMEPV search engine does not allow regular expressions). Most of the hits were false positives, either examples of the verbs *move* or *mow* or the noun *mouth*.

³⁷ Dating and geographical information from the LAEME, source no. 236 (*SLeg.*), and LALME, LP 7100 (*Glo.Chron.A*), LP 6980 (*PConsc.*), and LP 6860 (*PPl.C*).

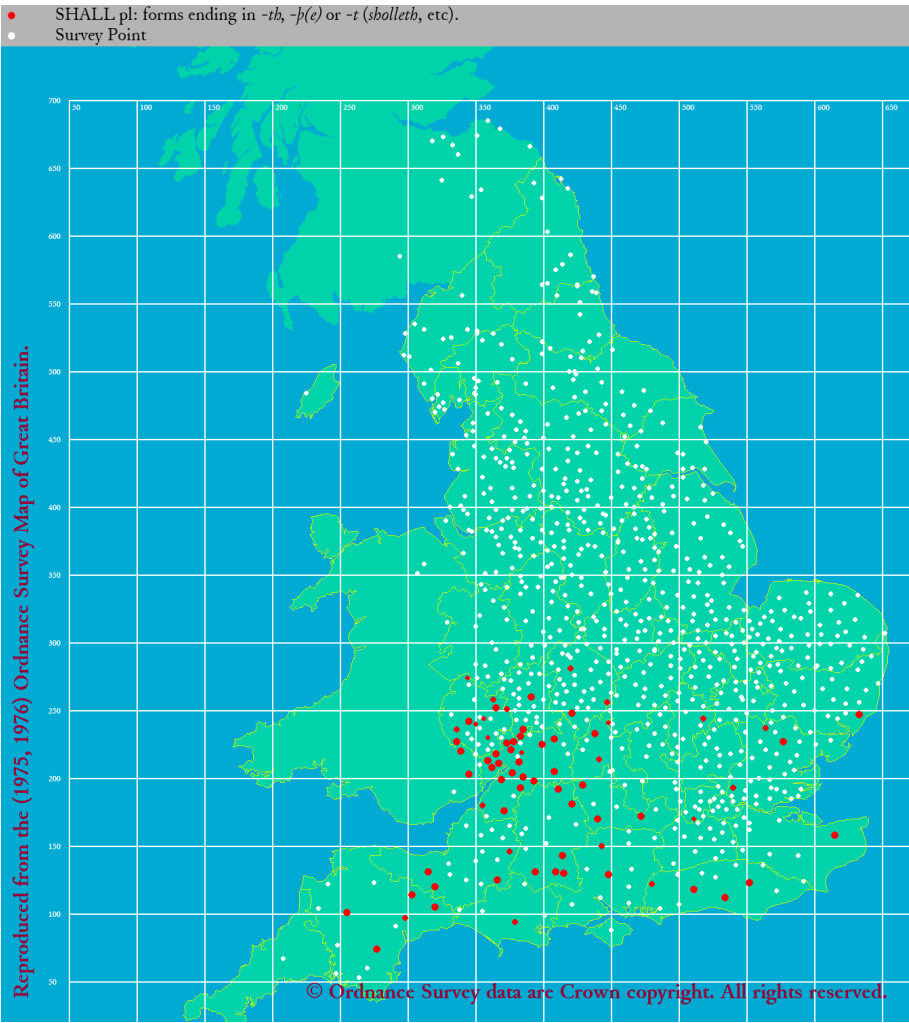


Figure 5.4: Weak SHALL (eLALME)

Table 5.10: Attestations of weak MAY

MED abbr.	Text	Date	MS	Provenance
<i>SLeg.</i>	SE Legendary	c. 1310–20	CCCC 145	NW Berks
<i>Glo.Chron.A</i>	Gloucester, <i>Chronicle</i>	c.1325	Caligula A. xi	Gloucs
<i>PConsc.</i>	<i>Prick of Conscience</i>	a.1400	Laud Misc. 601	Gloucs
<i>PPL.C</i>	<i>Piers Plowman</i>	a.1425	Cmb. Ff. 5. 35	Oxon

Gloucester's *Chronicle*, is certainly the only example in this text, which otherwise uses *mowe* throughout. As the example in (21) shows, it also has weak *ssolleþ* as the PRS.IND.PL form of SHALL.

- (20) *Ac þe skile whi he schal sitte þere*
Men moweþ finde bi þis sawe heere
 'And the reason why he shall sit there people may find in what is said here.'
 (*PConsc.*; MEG-C, file L6980)
- (21) *Þe ssepþurdes & þe ssep al so · ssolleþ to þe pine of helle ·*
As god heiemen of þe lond · robbeors felawes beþ ·
Poueremen þat hii moweþ ouer · hii huldeþ as 3e iseþ ·
 'The shepherds and the sheep, too, are going to the torment of Hell, when the highmen of the country are the companions of robbers. Poor men that they have power over, they hold [or seize], as you can see' [eme.robgo, 7212–7214]

The example from *Piers Plowman* in (22) is a variant reading from Skeat's edition of the C redaction of this text, which survives in more than fifty manuscripts. The reading *moweth* is from Cambridge University Library, MS Ff. 5. 35 ('F' in the edition). The manuscript is from the early fifteenth century, as indicated in Table 5.10, but the text itself may be from the mid-to-late fourteenth century.

- (22) *And buxumnesse and bost · aren euere-more at wratthe,*
And ayther hateþ oþer · and mowen [v.r. moweth] nat dwelle togederes.
 'And Humility and Pride are always at war; and either one hates the other, and they cannot live together.' (Skeat 1873: III, 284)

This is the only weak form of MAY mentioned in the apparatus, but because Skeat only gives select manuscript variants, it is uncertain if this is the only example in the manuscript text. It is not available in digital facsimile and appears to be unedited, so this example will have to stand isolated as it is.³⁸

³⁸ Note that the function of MAY does not appear to be decisive for the occurrence of the weak plural form. In (21) MAY is used in the primary-verb sense 'prevail, have power over' (on which see Chapter 7, Section 7.3.2), but in (20) and (22) it is clearly a secondary verb. This is unlike the development of a weak variant of MÅ, the cognate of MAY, in Middle Swedish (see Chapter 2, Section 2.3.3). In the Swedish case the preterite-present verb 'split' into a regularized variant for the primary-verb sense 'feel, be doing (well/poorly)' but kept its preterite-present morphology when used as a modal (Andersson 2008; see also Norde 2009: 137–138).

Thus, with examples found so far in only four manuscripts—of a lexeme which is by no means infrequent in Middle English—I think we can safely conclude that the occurrence of the weak plural form *moweþ* was very limited. One might even suspect that these are mere scribal errors, but here the provenance of the manuscripts must be kept in mind: the atlases locate all four in the bordering counties of northwestern Berkshire, Gloucestershire, and Oxfordshire. If these forms were only scribal errors, it would have to be accidental that they come from the same area as most of the attestations of weak CAN. I think a more likely interpretation is that this was a local innovation which for whatever reason failed to spread to a wider area. The fact that it occurs exactly once in the chronicle cited in (21) but is not otherwise used in the manuscript, suggests that it was copied into the extant version from the exemplar, but that the scribe did not otherwise use the form.

5.3.4 Explaining the distribution

Having surveyed the Middle English facts in detail, I now return to the question of interpreting them and their significance for the history of the modals. As already mentioned, Warner (1993: 101) considers the development of weak plural forms an indication that the modals were still part of the category ‘verb’ in Middle English. As we have seen above, however, the innovation is only recorded in southern and southwest Midlands English, and with CAN and MAY the attestations are very sporadic; only SHALL is found in a substantial number of manuscripts and across a wider area. The dialectal distribution of the forms fits with the general distribution of the present indicative plural endings. The southern and southwest Midlands dialects was where the West Saxon PRS.IND.PL ending *-eþ* survived the longest.

Warner mentions that the retention of the original non-preterite-present plural form *willeþ* in the same area may be part of the reason for the development of *shulleþ*, but that it cannot be the whole story: “in late Middle English manuscripts the innovating *shulleþ* is partly independent of *willeþ* in its distribution, in that the presence of *shulleþ* as a normal form in a manuscript by no means implies the presence of *willeþ*” (Warner 1993: 101). In a note Warner explains that at least ten of the linguistic profiles in LALME show a plural form of SHALL in *-eþ* along with a plural of WILL in *-e* or *-en* (Warner 1993: 101 n. 9). An example is seen in the following entry:

22-30 SHALL *pl*: schulle, schul, schulleþ, schol, chullen
 24-30 WILL *pl*: wolle
 (eLALME, LP 5510, Hampshire)

Warner’s point is that analogy with WILL can only partly explain the occurrence of *shulleþ*; in cases like LALME LP 5510, where the form *schulleþ* occurs alongside *wolle* (with loss of final *-n*), the source of the *-eþ* ending cannot have been WILL.

This interpretation, however, fails to take the nature of the written sources into account. With only very few exceptions where we have a text directly from the author’s own hand (such as the *Ayenbite of Inwyt* discussed above), texts went through successive stages of copying and adaptation. Because of the different scribal prac-

tices—some scribes copied *literatim*, others adapted the text to their own dialect, and yet others adapted some features and left others unchanged—even texts which can be localized to a specific area cannot be taken to represent the speech of any one individual directly. As discussed by Benskin & Laing (1981) and the LALME editors (see eLALME, ‘General introduction’), the same scribe may even change from one practice to another within the same text, for instance by copying *literatim* at the outset and gradually shifting to translation into their own dialect. In other words, the co-occurrence of two variants (e.g. *-eþ* in *SHALL* and *-en* in *WILL*) in a single document does not necessarily mean that any single individual had these two variants in his or her native dialect. Hence, the fact that some of the linguistic profiles in LALME contain *schulleþ* but not *willeþ* does not constitute evidence that some speakers had the former but not the latter in their native variety.

Analyzing the development of weak plurals as a result of the ‘verblike’ status of the modals also fails to account for the distribution observed above. If there was a general tendency towards more regular verb morphology in the modals, it is unexpected that weak *SHALL* is frequently attested and has spread to a large area in Late Middle English, whereas weak *CAN* and *MAY* are only sporadically found (and weak *MOT* not at all). I think the most likely explanation for this discrepancy between the individual modals is indeed a more local analogy *WILL* \mapsto *SHALL*. There is both a functional and a formal reason why *SHALL* might be more susceptible to this analogical influence than the other modals.

First, while *WILL* and *SHALL* evidently had different meanings, there seems to be some functional overlap already in Old English. The two verbs are both recorded with future–predictive and intention meanings (see e.g. Bybee & Pagliuca 1987: 112–114; Denison 1993: 304; Wischer 2008); compare also Ælfric’s use of the two in paraphrases of future expressions (Section 5.2.3). While this does not mean that the two were interchangeable, it implies that they were often found in similar environments. Second, and probably more importantly, a sporadic sound change in Early Middle English caused the plural forms of the two verbs to become more similar. In the West Saxon corpus they had the same stem vowel in the past tense (*wolde/scolde*), but different stem vowels in the present: *WILL* has the present (IND and SBJV) stem *wil(l)-*, while *SHALL* has the PRS.IND stem *sceal-* in the singular and *sceol-* or *scul-* in the plural (for details see Hogg & Fulk 2011: 303–305, 320–322; for the paradigm of *WILL* see also Table 5.6 above). In some dialects in Early Middle English, however, the stem vowel of *WILL* has been rounded, resulting in a stem variously spelt *wol-* and *wul-* (see map in Figure 5.5, p. 132).³⁹ This meant that in some dialects *WILL* and *SHALL* had the same stem vowel in the PRS.IND.PL (but never in the SG). As an example of such a system, Table 5.11 gives the PRS.IND paradigms of the five ‘core’ modals found in the older version of Laȝamon’s *Brut* (BL, Cotton MS Caligula A. ix; c.1200).⁴⁰ In this text, located in Worcestershire by the LAEME (source nos. 277 and 278), *sculleð*

³⁹ Map generated by combining LAEME feature maps 00129102, 00129103, and 00129104.

⁴⁰ The 2SG of *CAN* does not occur in the text. The forms were gathered by searching the text file from the CMEPV, included in my custom corpus as [eme.brutcali]. The unexpected 1SG form *wullen* is also found. The *MED* (s.v. *willen* v.1, ‘Forms’) calls this an error, but other 1/3SG forms with intrusive *-n* also occur in the text (see Iwasaki 1974).

and *scullen* both occur, the latter more so than the former (some instances of *scullen* may of course be subjunctive forms). The plurals of *SHALL* and *WILL* are consistently spelt with the same stem vowel. I would argue that this formal parallel is the most probable explanation for the more widespread occurrence of the weak plural ending in *SHALL*.

Table 5.11: PRS.IND modals in Laȝamon's *Brut* (Caligula version)

	WILL	SHALL	MAY	CAN	MOT
1SG	wulle	scal	mai	con	mot
2SG	wult	scalt	miht	—	most
3SG	wule	scal	mai	con	mot
PL	wulleð	sculleð/scullen	maȝen	cunnen	moten

To sum up this morphological investigation, I think we can safely conclude that there was no general tendency for the Middle English modals to develop regularized plural forms. The development was only possible in some dialects, namely those that kept the West Saxon inflections more or less intact, and the only modal which is commonly found with weak plural endings is *SHALL*. This is indeed quite frequently attested in southern and southwest Midland Middle English. This is in contrast to *CAN* and *MAY*, which are only very sporadically found with the weak plural ending, almost exclusively in a specific area in southwestern England, namely Gloucestershire and neighbouring counties. While this pattern of attestation may to some extent be due to the large amount of material surviving from this area, the fact that no examples are recorded by the eLALME suggests that this was indeed a restricted innovation which failed to gain traction. I have suggested that the reason for the 'success' of *sholleþ/shulleþ* was analogy with *WILL*, which had both closely related functions and an identical stem vowel in southwest Midland dialects.

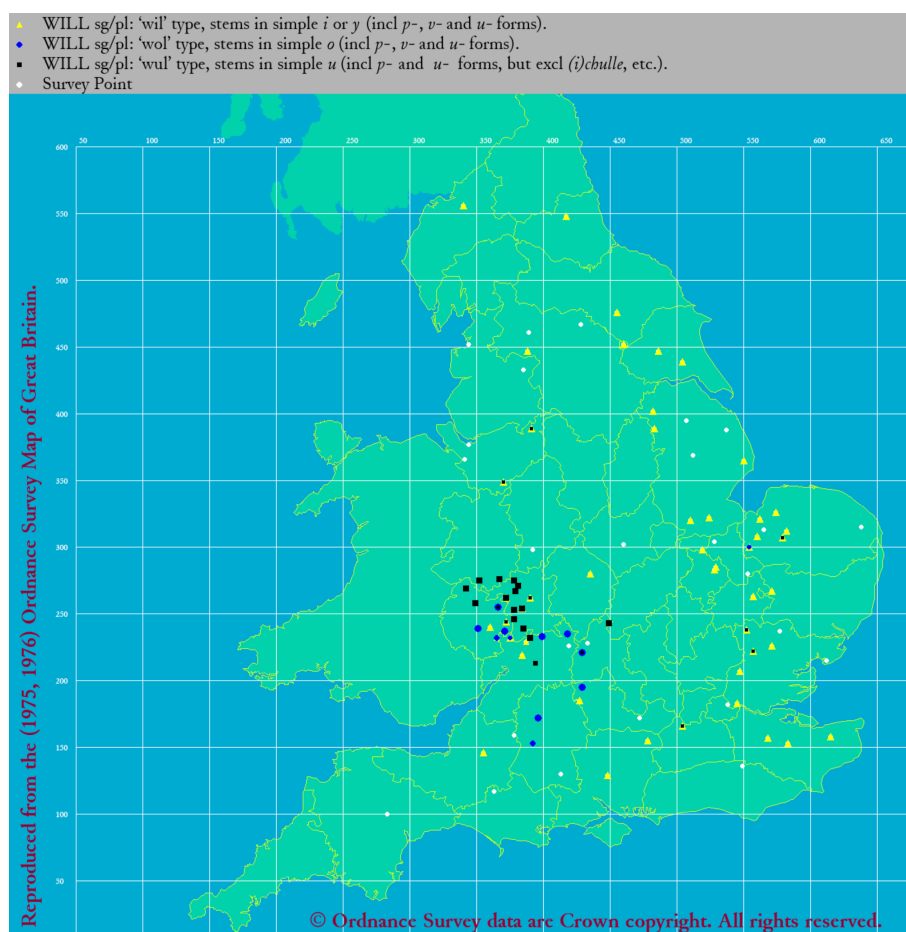


Figure 5.5: WILL: stem vowels (LAEME)

5.4 Impersonal modals

5.4.1 Old and Middle English impersonals

The remainder of this chapter deals with the development of what I will call ‘impersonal’ modals in Middle English. I begin by providing a summary overview of the properties of impersonal constructions in early English, after which earlier work on innovative impersonals in Middle English will be discussed. I will then present the results of a small study of three impersonal modals—*OUGHT*, *MOT*, and *BEHOVE*—and discuss the implications of and possible explanations for the observed developments.

The construction in question is exemplified in (23), repeated from (18) on p. 48. Here the only argument of the predication containing the modal form *must* is the oblique personal pronoun *vs*, not the nominative *we* as in Present-Day English; compare the Middle English example with the translation:

- (23) *ffyrst must vs crepe / and sythen go.*
 ‘First we must crawl and then walk.’ [nme.towneley, 103]

I will refer to this as the ‘impersonal’ use of the modal. The (pro)nominal argument of the modalized predication, i.e. *vs* in (23), will be referred to as the ‘experiencer’. Although this traditional label may not be the most accurate one for the semantic role in question (as acknowledged by Allen 1995: 250 n. 29), there is little risk of confusion as only one argument is involved in the case of the modals. It also serves to avoid the controversial term ‘subject’ (on which see below).

The literature on impersonal constructions in Old and Middle English is extensive. The monographs by van der Gaaf (1904), Wahlén (1925), Elmer (1981), Möhlig-Falke (2012), and Miura (2015) are entirely devoted to the subject. Other monographs which discuss impersonals include Lightfoot (1979), Allen (1995), and Loureiro-Porto (2009b), along with the dissertations by Butler (1980), Thornburg (1984), and Middeke (2018). Relevant journal articles and book chapters include McCawley (1976), Butler (1977a,b), Fischer & van der Leek (1983, 1987), Krzyszczyński (1984), Denison (1990a,b), Warner (1992), Allen (1986, 1997), Trousdale (2008), and Loureiro-Porto (2009a, 2010). Needless to say, I will not be able to do full justice to this rich literature in my overview here. Instead, I will briefly mention some of the key points of discussion in earlier studies and then focus specifically on works dealing with innovative impersonal constructions—in particular those expressing modality—in Middle English.⁴¹

⁴¹ In addition to the discussions outlined in this section, there is an ongoing debate about how impersonals ought to be classified into semantic subtypes, and whether such typologies are even worthwhile. Contributions to this literature include Wahlén (1925), Elmer (1981), Pocheptsov (1997), Möhlig-Falke (2012), and Middeke (2018). Denison (1990b: 122) considers such classification ‘Procrustean’. While I agree with Denison that there is no one right way to subdivide this semantic field, such classifications have an important role to play in comparative linguistic work; see e.g. Onishi (2001) for a cross-linguistic typology of non-canonical argument constructions.

The term ‘impersonal’ is almost universally recognized to be unfortunate and potentially misleading (see e.g. Wahlén 1925: 5; Visser 1963: §29; Allen 1995: 20–22; Loureiro-Porto 2009b: 45–46)—but it is also more or less universally used, probably owing more to tradition than to anything else. The use of the term in English in fact goes as far back as Ælfric, who in turn took it over from the Latin tradition (for examples in the *Excerptiones de Prisciano*, see Porter 2002: 192–196). The definition of ‘impersonal’ in Ælfric’s *Grammar* is given in (24):

- (24) *Sume word synd gecwedene INPERSONALIA, þæt synd butan hade. Hi habbað þone ðriddan had and synd ateorigendlice: IUUAT gelustfullað, STAT stent, CONSTAT swutol is.*

‘Some verbs are called *impersonals*, that is to say without person. They have the third person and are defective: IUUAT “delights in”, STAT “stands”, CONSTAT “is evident”’. [ÆGram, 206.4–206.5]

The Latin verbs referred to in (24)—like LICET discussed in Section 5.2.3—may all be used in a construction where the argument referring to a personal experiencer is in a non-nominative case, either accusative or dative, and the verb is obligatorily in the third person.⁴² Old English had a very similar construction, for instance with the verb *sceamian* ‘be ashamed’ (Bosworth–Toller, q.v.), as in (25) (also cited by Middeke 2018: 208). Here the verb occurs with a single argument, which is unambiguously marked in the dative case. In (26) *sceamian* occurs with an additional argument, in the genitive case, referring to the source of the shame; the participants experiencing the shame are expressed by a dative-marked pronoun. The ‘source’ argument may also be a prepositional phrase; on the question of nominative-marked source arguments, see below.

- (25) *Þa scam-ode þam munec-e*
then be.ashamed-PST.3SG DEM.M.DAT monk-DAT
‘Then the monk was ashamed’ [ÆLS (Martin), 1092]
- (26) *7 hi wær-on ða nacod-e. 7 him ðæs*
and 3PL.NOM COP.PST-PL then naked-PL and 3PL.DAT DEM.N.GEN
sceam-ode.
be.ashamed-PST.3SG
‘And they [sc. Eve and Adam] were naked then. And they were ashamed because of that.’ [ÆCHom I, 1, 183.140]

There have been a number of controversies regarding the linguistic analysis and historical development of examples like (25)–(26). One, already hinted at above, relates to the definition of ‘impersonal’ and the demarcation of the phenomenon. Some authors prefer to use terms like ‘quasi-impersonal’ for examples such as (25) and (26) where there is an argument referring to a human participant (e.g. van der Gaaf 1904;

⁴² This is what Ælfric means by the seemingly self-contradictory statement that the verbs are without person and have the third person. The point is that they lack the inflectional category ‘person’ by only allowing third-person forms. Note that, perhaps somewhat confusingly, the three Latin verbs chosen as examples in (24) also all have ‘personal’ uses with a nominative experiencer (see *OLD*, s.vv. *consto*, *iuuo*, *sto*).

Pocheptsov 1997). Under this view the only ‘true’ impersonals are those with no participants at all, such as weather verbs and other expressions of natural and atmospheric phenomena (i.e. ‘zero-place predicates’ in contemporary terminology), as with *geþunrian* ‘thunder’ in (27):

- (27) *Gif on frigedæg geþunr-að þonne getacn-að þæt nyten-a cwealm*
 if on Friday thunder-3SG then signify-3SG DEM.N cattle-PL.GEN death
 ‘If it thunders on a Friday, that signifies the death of cattle’ [Prog 1.2, 6]

Another issue of demarcation is whether examples like (28) and (29) belong to the class of impersonals. In (28) there is a nominative-marked argument (*þa word*), but as in the case of (25) and (26) it is the dative-marked argument which refers to a human participant.⁴³ In (29) the second argument is a complement clause and thus not marked for case.

- (28) *Dam wif-e þa word wel lic-odon*
 DEM.N.DAT woman(N)-DAT DEM.PL word[PL] well like/please-PST:PL
 ‘The woman liked those words very much’ or ‘Those words pleased the woman very much’ [Beo, 174]
- (29) *Him þuhte þæt he gesaw-e seofon*
 3SG.M.DAT seem/think-PST.3SG COMP 3SG.M.NOM see.PST-SBJV.3SG seven
ear weax-an on an-um healm-e full-e ⁊ fæger-e
 ear[PL] grow-INF on one-DAT straw-DAT full-PL and fair-PL
 ‘He thought [*or it seemed to him*] that he saw seven ears of grain growing on a straw, full and fair’ [Gen, 41.5]

Closely related to the question of defining ‘impersonal’ is the discussion about the notions ‘subject’ and ‘object’ and whether these are even applicable to all languages. The traditional approach is to define these grammatical roles with reference to morphology: the subject bears nominative case and triggers verb agreement, the direct object has accusative case, and so on. According to this approach, a clause like *him ðæs sceamode* in (26) is subjectless, as there is no argument with nominative case. In (28), on the other hand, there is a nominative-marked argument, and this is considered to be the subject. Some authors do not include such examples under the heading ‘impersonal’ (e.g. Fischer & van der Leek 1983; Mitchell 1985), whereas others consider them a separate subtype (e.g. Krzyszpień 1984). All seem to agree, however, that they are closely related to ‘true’ impersonals.

In recent decades, the traditional approach to syntactic roles has repeatedly been called into question. On the one hand, it has been observed that the non-nominative arguments in impersonal constructions—in Old English and other languages—often behave like nominative subjects syntactically (for arguments to this effect see Allen 1995: Ch. 2). On the other hand, because of the increased recognition of the existence

⁴³ Note that the plural noun phrase *þa word* is neuter and hence syncretic between nominative and accusative. It can quite safely be interpreted as nominative in (28), however, as it triggers plural agreement on the verb *licodon*.

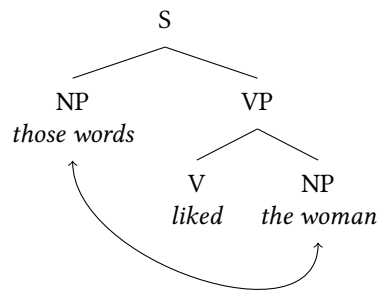
of ‘alternative’ alignment and agreement systems in the world’s languages, linguists have been forced to reconsider the connection between morphological marking and syntactic relations.⁴⁴ The conclusions differ, however. Some scholars have redefined the notion of subject in purely syntactic terms and concluded that *ðam wife* in (28) and *him* in (29) are ‘oblique’ or ‘non-canonical’ subjects. This is the approach adopted by, among others, Allen (1995) and Eythórsson & Barðdal (2005). Others have argued that syntactic labels like ‘subject’ and ‘object’ are not necessary for an adequate description of Old English, and that grammatical relations are more precisely described with separate reference to morphological marking, information structure, and semantic role. Under this view one might analyse *ðam wife* in (28) as dative-marked (morphology), topical (information structure), and referring to an experiencer (semantic role), thus deconstructing the traditional notion of ‘subject’. This approach has recently been applied to Old English by Middeke (2018).

Finally, another important debate concerns the development of these constructions after the Old English period. Present-Day English has no case marking on nouns and determiners, so an example like (28) cannot be translated into Present-Day English morpheme by morpheme. However, the construction seems to have disappeared altogether, even though it might still be theoretically possible with case-marked personal pronouns. A Present-Day English translation of (29) would have *he thought* or *it seemed to him*, not **him thought*. The traditional explanation, proposed by van der Gaaf (1904) and Jespersen (1894, 1949) and assumed to be correct in some form or other by many later authors (e.g. Mustanoja 1960; Lightfoot 1979; Elmer 1981; Krzyszczyński 1984), is that the loss of nominal case marking led to the reanalysis of the arguments in two-place predicates like (28). This hypothesis rests on the traditional analysis of Old English clause structure, according to which all nominative arguments were subjects and all non-nominative arguments were objects. Under this analysis the verb *lician* in (28) did not mean ‘like’, but ‘please’, so the most accurate Present-Day English translation of the example would be ‘Those words pleased the woman very much’. According to Jespersen’s influential account, first proposed in Jespersen (1894: 216–218) and later elaborated in Jespersen (1949: III, 206–213), the personal object in (28) and similar examples was often placed clause-initially because of ‘the greater interest taken in persons than in things’ (Jespersen 1949: III, 208). The grammatical roles were clear, however, as long as the language had unambiguous case marking. When the loss of nominal case marking in Middle English led to uncertainty about the grammatical roles, the ‘natural feeling’ (p. 209) caused the reanalysis of the personal argument as subject. A restatement of Jespersen’s analysis in generative terms is offered by Lightfoot (1979: 229–239), who considers the object-to-subject reanalysis primarily a result of changing word-order rules from Old to Middle English: because of the increasingly rigid SVO order, the constituents were in the ‘wrong’ order, and after nominal case marking was lost the language learner received

⁴⁴ The best known example of an ‘alternative’ alignment system is probably that of ergative-absolutive languages, where the sole argument of an intransitive verb (i.e. the subject in traditional terms) is marked in the same way as the patient argument of a transitive verb (i.e. the object). Transitive subjects have a designated case of their own, usually called the ergative. See Dixon (1979) for a classic treatment of this phenomenon. For a recent overview of the literature on alignment and subjecthood, see Malchukov (2018).

no morphological cues about the argument structure. Consequently, the underlying structure was reanalysed to match the surface structure and the two arguments as it were ‘switched’, as indicated by the arrow in (30).

(30) *The woman liked those words.*



Jespersen and Lightfoot indeed both speak of a ‘switching’ of the syntactic roles in Middle English. Others (Butler 1977a,b, 1980) have argued for a more gradual object-to-subject reanalysis where the oblique argument acquired subject-like characteristics step by step until finally receiving nominal case and becoming a ‘canonical’ subject. The reanalysis account has also been called into question, however, for instance in the work of Fischer & van der Leek (1983, 1987) and Allen (1986, 1995). Fischer & van der Leek (1983) point out that the ‘traditional’ explanation overlooks both the range of related constructions in Old English—the authors distinguish between ‘impersonal’, ‘cause-subject’, and ‘experiencer-subject’ constructions—and their various outcomes in later English.⁴⁵ Whereas some verbs, such as *like*, seem to have ‘switched’ their arguments and become experiencer-subject verbs, others have developed in different ways. For instance, in the verb *ail* (← OE *eglian* ‘ail, harm, trouble’) discussed by Fischer & van der Leek (1983: 363–365), the experiencer developed into a canonical object rather than a subject, leading to the ‘reverse’ argument structure

⁴⁵ The three types are illustrated in (31a)–(34). They correspond to Allen’s (1995) types ‘N’, ‘I’, and ‘II’, respectively (see Table 5.13 on p. 145).

of Present-Day English *like*. The main difference with Old English is that the experiencer can no longer be clause-initial; compare preverbal *him* in (31a) with postverbal *her* in (31b).⁴⁶

- (31) a. *Æfter þon læt him blod of þam hal-an hapoliþa-n*
 after DEM.INS let.IMP him.DAT blood of DEM.DAT healthy-DEF ?-DAT
in ofn-e þær him ne egle fyr.
 in oven-DAT where him.DAT NEG ail:SBJV fire[NOM]
 ‘After this, let blood of the healthy ? in an oven where the fire will not harm him.’ [Lch II (2), 51.1.6]
- b. *Leonora doubted that biscuits were much of a cure for what ailed her, but she bit into one meekly*
 (BNC, 1991 W_fict_prose)

However, Fischer & van der Leek also question whether there ever was any ‘switching’ of arguments in the case of *like* and similar verbs. As they point out, some of the verbs which occurred with dative experiencers are also attested with nominative experiencers already in Old English, suggesting that this construction was already available (Fischer & van der Leek 1983: 346–354; for a concise summary of the argument see also Fischer & van der Leek 1987: 82–84). An example, apparently first noted by Anderson (1986: 170–171), is the Old English verb *ofhreowan* ‘grieve, pity’, which is attested in all of the three constructions distinguished by Fischer & van der Leek. (32) is a ‘true’ impersonal with two oblique arguments. (33) has a dative experiencer and a nominative source argument.⁴⁷ In (34), finally, the experiencer argument is nominative-marked and the source is in the genitive.

- (32) DAT experiencer – GEN source
 7 þæs sceap-es untrumness-e him to ðam swiðe ofhreaw
 and DEM.GEN sheep-GEN infirmity-GEN him.DAT to DEM.DAT very pity.PST
 þæt he hit ofer his eaxl-a le-de 7 eft up to þære heord-e
 COMP he it over his shoulder-PL lay-PST and then up to DEM.F.DAT herd-DAT
 bær
 carry.PST
 ‘And the sheep’s distress grieved him so much that he laid it on his shoulders and carried it up to the herd’ [BenR, 27.51.16]

⁴⁶ The meaning of the noun *hapoliþa* in (31a) is obscure. Bosworth–Toller (s.v. *hapoliþa*) suggest ‘elbow joint’; for other suggestions see DOE (s.v. *hapo-liþa*). At any rate, the meaning of the passage as a whole seems clear enough: the man’s blood is to be let from the body part in question close to the fire in order to control the bleeding.

⁴⁷ In principle, *þæt astepede wif* could also be ACC because of the NOM–ACC syncretism in neuter nouns, but *ofhreowan* does not otherwise appear to be attested with ACC source arguments. The example given by Anderson (1986: 171) and Fischer & van der Leek (1987: 82) has the unambiguous NOM form *mægenleast*.

- (33) DAT experiencer – NOM source

7 he wæs eac to þam earmheort þæt him ofhreow
 and he COP.PST also to DEM.DAT tenderhearted COMP him.DAT DEM.N.NOM
 þæt astep-ed-e wif
 bereave-PTCP-DEF woman(N)[NOM]

‘And he was also so tenderhearted that he took pity on the bereaved woman’
 [LS 29 (Nicholas), 78]

- (34) NOM experiencer – GEN source

Hwæt þa se mæsse+preost þæs mann-es ofhreow
 how then DEM.M.NOM mass+priest(M)[NOM] DEM.GEN person-GEN pity.PST
 ‘And then the priest took pity on the man’ [ÆLS (Oswald), 262]

Fischer & van der Leek suggest that Old English impersonal verbs were in fact not inherently impersonal, but could enter into different constructions, as in the case of *ofhreowan* in (32)–(34). What happened during Middle English, under this view, was not a reanalysis of the impersonal construction as in (30), but simply its gradual obsolescence and replacement by the alternative constructions in (33)–(34).

Allen (1986) focusses on the history of a single impersonal verb, *like* (← OE *lician*; see [28] above for an example). Noting that this verb is only attested in the ‘cause-subject’ construction in Old English (termed ‘Type I’ by Allen), i.e. the type illustrated in (28) and (33), Allen argues that its history cannot just be one of loss of a constructional variant, but must involve a change in case assignment. However, Allen departs from the traditional conception of grammatical roles by considering the dative-marked experiencer argument the subject. This means that there was no ‘switching’ of subject and object in Middle English, since the experiencer argument was the subject all along. The major change, according to Allen, was not a reanalysis of argument structure, but a loss of the ability of verbs to assign dative case to their subjects (see especially Allen 1986: 401–405).

A further issue relating to the history of the impersonals is the causal link between the demise of the construction and the loss of nominal case marking. Allen (1995) discusses this issue at length. As she observes, the impersonal construction remained in use with personal pronouns for several centuries after the case distinctions were lost on nouns and determiners; in fact, it remained productive for most of the Middle English period, with new verbs being added to it at least until the end of the fourteenth century. A number of these were still in use well into the modern period, probably most prominently the collocation *me thinks/me thought* (OED, s.v. *methinks* v.). Other verbs are also found, such as *list* and even *like* (OED, qq.v.), though some of the early modern examples recorded by the dictionary may be deliberate archaisms. What seems clear enough in light of the Middle English situation is that language learners continued to acquire the construction after the loss of case marking on nouns and determiners. Even if the reduction of overt case distinctions may have contributed to the eventual obsolescence of the impersonal construction,

it is unlikely to have been the only or even the primary cause.⁴⁸ Although the story of English impersonals is thus ultimately one of loss, this is not the full picture. The Middle English situation will be discussed in the following section.

5.4.2 New impersonals in Middle English

The apparent productivity of impersonal constructions in Middle English has been pointed out by many contributors to the literature. It is in fact noted already by van der Gaaf (1904: 143–154), who discusses four verbs which developed impersonal uses in Middle English: the modals OUGHT and THARF—both inherited from Old English—and the Anglo-Norman loans *repenten* ‘regret, repent’ and *deynen* ‘deign, condescend’.⁴⁹ In addition to these verbs, van der Gaaf (1904: 143) also records a number of ‘anomalous, anti-grammatical constructions’ with verbs which in the author’s opinion were not supposed to be used impersonally. He records examples with MOT from Chaucer, the Towneley Cycle (see [23] above), and the *Gesta romanorum*. His example from Chaucer is also recorded in the *MED* entry (s.v. *moten* v.2, sense 8). I cite it here from one of the versions included in the CMEPV (Hengwrt MS; Furnivall 1868):

- (35) *Vs muste putte / oure good in auenture*
 ‘We have to put our goods in jeopardy.’ (Chaucer, *Canon’s Yeoman’s Tale*, l. 946)

Van der Gaaf attributes such examples to the ‘unsettled’ state of the language at the time, which was characterized by competition between different constructions:

The fourteenth and fifteenth centuries may, with regard to English syntax, be called a period of confusion. [...] Altogether the language was in an unsettled state [...] mistakes were occasionally made (van der Gaaf 1904: 143)

Although most contemporary scholars would probably avoid such value judgements, van der Gaaf’s somewhat cursory treatment of innovative impersonals still remains one of the most detailed accounts of the phenomenon. Histories of English syntax usually only mention it in passing, if at all (but see below for a few exceptions). For instance, Jespersen (1949: VII, 256) briefly points to examples of the pattern *us must*, but appears to interpret these as instances of *us* used as a nominative form. Mustanoja (1960: 436) devotes less than ten lines to the ‘transition from personal to impersonal

⁴⁸ In Present-Day Dutch a small number of parallel constructions, such as *mij dunkt* ‘me thinks’ and *mij lijkt* ‘it seems to me’, indeed still survive in spite of the lack of case marking on nouns and determiners. I owe this observation to Olga Fischer, who suggests that the stronger restrictions on preverbal material in English may partly explain the difference. I note in passing that similar constructions survived in Danish into the modern period long after the loss of nominal case distinctions (see e.g. *ODS*, s.vv. *grue*⁴, *længes*¹, *tykkes*¹; Heltoft & Nielsen 2019a: 156–158). A comparison of the fates of these constructions in the different Germanic languages might be a fruitful way to investigate the factors which caused them to become obsolete (or survive).

⁴⁹ In fact, van der Gaaf (1904) seems to deny that these four verbs became impersonal (‘they have even erroneously been called “impersonal”’, p. 146) although they were frequently used in the impersonal construction. As far as I can tell, this objection is purely terminological.

expression'.⁵⁰ Scattered remarks may be found in the works of Tellier (1962: 194, 209), Lightfoot (1979: 231), Plank (1984: 322–323), and Denison (1990b: 134–135; 1993: 71–72, 314–315). Visser (1963: §§ 1343, 1690, 1715, 1720) provides a useful collection of examples of modals used impersonally, but this has to be approached with some caution as he does not distinguish the construction from cases of 'transparency' to impersonal predicates.⁵¹ Warner (1993) is careful to make this distinction, but the most attention in the book is awarded to the 'transparency' phenomenon (see especially Warner 1993: 122–132). The development of impersonal modals in Middle English is mentioned in Warner's chapter on the category status of the modals as one of the examples of their continued 'verblike' properties in this period. Warner points to the development of impersonal constructions with *OUGH*T, *MOT*, and *THARF*, suggesting that this 'provides some evidence for a shared common status' (Warner 1993: 102) of the modals and the larger category of verbs in Middle English.

The recent study of Old English impersonals by Möhlig-Falke (2012) includes a short chapter on the fate of the construction in Middle and Early Modern English. Möhlig-Falke provides a tabular overview of some sixty impersonal verbs which are first recorded in Middle English (see Fig. 7.2 in Möhlig-Falke 2012: 209–211). The list is mainly based on information from the *MED* and *OED* and does not give any information about frequency or distribution according to text type or dialect area. However, Möhlig-Falke's notation does distinguish between verbs that are attested in the construction only in a single source and those that occur more than once. From this it emerges that about one third of the new impersonal verbs are *hapax legomena*, being recorded with an oblique experiencer only in a single manuscript. Of the remaining verbs the majority are native formations, some of which may be unrecorded as impersonals in Old English due to data gaps (as suggested for *agrisen* 'dread' by Allen 1995: 226). However, there are also ten Anglo-Norman and seven possible Old Norse loans on Möhlig-Falke's list, suggesting that the impersonal pattern indeed remained productive for new additions to the language.⁵²

The phenomenon of novel Middle English impersonals has arguably received the most attention in the work of Allen and Loureiro-Porto. Allen (1997) and Loureiro-Porto (2007, 2009a) focus on *BEHOVE*. Loureiro-Porto analyses the use of this verb in the *Ayenbite of Inwyte*, arguing that it is the only verb used to express necessity in this text. Allen (1997) points out—*contra* the received view (Elmer 1981; Bosworth–

⁵⁰ This should not be taken to reflect a lack of interest in the subject on Mustanoja's part. The main focus of Mustanoja (1960), which was only meant to be the first volume, was the part-of-speech system; the planned second volume never appeared.

⁵¹ See below for further discussion of this distinction. Curiously, Visser (1963) seems to suggest that the impersonal use of *OUGH*T developed partly in analogy with that of *MOT*, although the latter development is only dealt with cursorily in a single footnote (Visser 1963: §1690 n.). I think analogy was indeed at work here, but the material in the PPCME2 suggests that *OUGH*T and *MOT* developed impersonal uses around the same time.

⁵² Note, however, that some of the Old Norse etymologies are either uncertain or inaccurate. In spite of Möhlig-Falke's (2012: 212) claim—for which no source is given—that the verbs *irken* and *semen* 'both go back to ON personal verbs', the origin of *irken* 'dislike, be disgusted' is obscure (see Miura 2015: 8 n. 16) and has even been suggested to be Celtic (*MED*, s.vv. *irken* v., *irk*[e] adj.); further, if the ON source of *semen* is indeed *sóma* 'honour, befit', as the *OED* suggests (s.v. *seem* v.²), this is certainly attested impersonally (*ONP*, s.v. *sóma* vb.).

Toller, s.v. *be-hofian*; DOE, id.)—that *BEHOVE* is not recorded as an impersonal verb in Old English. The only attestations are from interlinear glosses or late copies of older texts. Allen suggests that the change of *BEHOVE* from a ‘personal’ to an impersonal verb happened in the twelfth century, when the first genuine attestations occur.

Allen’s (1995) monograph is probably the most detailed single treatment of early English case marking and argument structure. One of the central objectives of this book is to investigate the relation between the loss of nominal case marking and the changes in argument realization in the Middle English period. Allen devotes one chapter exclusively to impersonals (‘experiencer verbs’ in Allen’s terminology), but this construction is also treated at various points throughout the book. As Allen demonstrates, it was by no means marginal in Middle English, but in fact remained productive throughout the thirteenth and fourteenth centuries. Like Möhlig-Falke, Allen points out that a number of verbs, both inherited and borrowed, first appear in impersonal constructions during Middle English. On the other hand, some previously impersonal verbs start appearing with nominative experiencers, suggesting that the changes were not globally in one direction or the other, but affected different verbs in different ways. Allen also discusses the development of *OUGHT* at various points, noting that this appears to have been one of the most frequent innovative impersonals. In a small selection of examples from Chaucer with case-marked experiencers, this is oblique in about half of the instances (Allen 1995: 250).

Loureiro-Porto (2009b, 2010) presents the findings of a large-scale corpus study of necessity verbs in Old, Middle, and Early Modern English. This includes not just secondary (‘modal’) verbs, but also transitive verbs with clausal or (pro)nominal objects (as still found e.g. in Present-Day English *NEED*). The verbs investigated are *THARF* along with the rarer derived form *BETHARF*, *BEHOVE*, *NEED*, and *MYSTER*. The first of these is the most frequent ‘need’ verb in Old English, *BEHOVE* is more frequent in the Early Middle English material, and from Late Middle English onwards *NEED* is the most frequent of the verbs. The verb *MYSTER* is only attested in a few Late Middle English sources. To give an impression of the findings from Loureiro-Porto’s material, I reproduce the normalized frequency counts in Table 5.12, based on Table 2 in Loureiro-Porto (2010: 686).⁵³ The same data are visualized in Figure 5.6. These data will also, I hope, help make clear why I decided to look more closely at *BEHOVE* in this investigation, even though this verb is not usually included among the modals in histories of English.

Loureiro-Porto analyses both the semantic and syntactic development of the five verbs in Table 5.12, including their occurrence in impersonal constructions. As far as I am aware, no comparable study of impersonal uses of *OUGHT* and *MOT* has been carried out. Allen’s (1995) remarks on *OUGHT* are based on the attested examples and frequency counts from the works of Chaucer, but there is no investigation of *OUGHT* in a larger corpus. For these reasons, I thought it pertinent to investigate the occurrence of impersonal *OUGHT* and *MOT* in a Middle English corpus.

⁵³ I give only Loureiro-Porto’s normalized frequencies in Table 5.12; see Loureiro-Porto (2009b: 73, 114, 144; 2010: 686) for the absolute numbers. Note that the counts are of the overall frequencies of the five lexemes, not just the impersonal uses.

Table 5.12: ‘Need’ verbs, frequency per 100,000 words (after Loureiro-Porto 2010: 686)

	O1/2	O3/4	M1	M2	M3	M4	E1	E2	E3
THARF	19.35	11.49	10.74	3.38	1.91	2.58			
BETHARF	3.22	4.07	1.38						
NEED		0.10	0.69		19.68	18.59	10.52	17.18	19.02
BEHOVE	0.40	3.02	9.70	39.12	21.05	5.16	4.45	0.97	0.19
MYSTER						0.77			

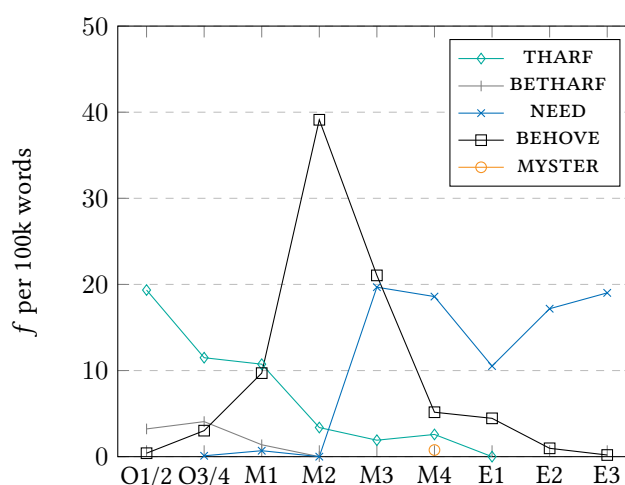


Figure 5.6: History of ‘need’ verbs (after Loureiro-Porto 2010)

In addition to OUGHT and MOT, I decided to investigate BEHOVE for a number of reasons. First, although the development of BEHOVE into a modal expression in Middle English has often been noted (see e.g. *OED*, s.v. *bus* v.; Tellier 1962: 209; Fischer 2007: 186–187; Möhlig-Falke 2012: 163; Miura 2015: 27–28), its history is usually not considered together with the ‘core’ modals.⁵⁴ Warner (1993: 102 n. 12) calls the development of the reduced form *bus* (*bos*) in some Late Middle English dialects ‘striking’, but only mentions it in this and one other endnote (1993: 148 n. 26). I have not found any mention of it in the work of Plank (1984), Goossens (1984, 1985, 1987a,b), Traugott (1989), or Traugott & Dasher (2002).

Second, one of Loureiro-Porto’s findings is that BEHOVE was predominantly used as an impersonal verb in Middle English, and since it is also one of the most frequent of the ‘need’ verbs in her material (as illustrated by Figure 5.6), one might suspect that the impersonal uses of OUGHT and MOT developed by analogy with this verb. How-

⁵⁴ This is unlike its Dutch cognate *hoeven* ‘need’ (from the still extant primary verb *behoeven*; on the loss of the prefix *be-*, see *EWN*, s.v. *hoeven*). As the examples in Section 5.4.3 will show, ME BEHOVE also differed from Present-Day Dutch *hoeven* in another respect, by not being restricted to negative polarity contexts.

ever, there is an important caveat to Loureiro-Porto's frequency counts presented in Table 5.12 and Figure 5.6: no breakdown of the attestations *per text* is given in either Loureiro-Porto (2009b) or Loureiro-Porto (2010), only per period in her corpus. In light of the modest number of surviving texts from Early Middle English—especially the M2 subperiod—it is quite possible that the apparent frequency peak in M2 seen in Figure 5.6 is more an artefact of the data than an indication of any real change. In fact, Loureiro-Porto (2009b: 119) mentions herself that the high frequency of BEHOVE in M2 'is mainly due to its numerous instances in one text, *Ayenbite of Inwyte*, where no other "need"-verbs are used'. From the discussion in another contribution (Loureiro-Porto 2009a: 265), it emerges that '69 out of the 81 examples' of BEHOVE in M2 are from this text. Where the remaining 12 examples come from is not stated. Because of this problem with 'term clustering' in some of the periods, I will give not only the overall frequency counts in the following section, but also the counts per text in a separate table. In this way it is possible to see whether variation is found primarily between different texts or also within texts (as in the case of OUGHT in Allen's material from Chaucer; see above).

Finally, although the studies by Allen (1995, 1997) and Loureiro-Porto (2009a,b, 2010) contain much valuable information, their findings on BEHOVE do not directly answer the main question I wish to address here, namely how frequently it was used as an impersonal *modal*, i.e. with a secondary-verb function. Allen (1995, 1997) includes no frequency information; moreover, she excludes the reduced form *bus* from her investigation. Both Allen and Loureiro-Porto use a classification of experiencer verb constructions based on Elmer (1981), shown here in Table 5.13. The EXPERIENCER (EXP) and THEME of the predicate are classified according to constituent type and case marking.⁵⁵ However, complement clauses and infinitival phrases are both grouped together as clausal themes under the types 'S' and 'Personal' (see Allen 1995: 86–87; Loureiro-Porto 2009b: 50–51). This makes their findings difficult to compare to OUGHT and MOT, which only occur with infinitival complements. In addition, the classification as it stands forces one to make a choice about the case marking of all non-clausal arguments, even though case marking in later Middle English is limited to personal pronouns. This is understandable enough, for the classification was originally proposed as a scheme for analyzing Old English impersonal constructions, but it makes it somewhat ill-suited for analyzing the Middle English situation. Instead, I will describe the type of theme and the case marking of the experiencer argument—if present—separately.

Impersonal modals vs. 'transparency' to impersonals

Before turning to the investigation of impersonal OUGHT, MOT, and BEHOVE, I wish to stress the distinction between the impersonal modals under scrutiny here and the 'transparency' to impersonal constructions discussed by Denison (1990a) and Warner (1992, 1993) (see Chapter 2, Section 2.2.2). Transparency to impersonal constructions

⁵⁵ As mentioned above, EXPERIENCER is used to refer to the participant for whom something is necessary or appropriate. The THEME refers to the object or state of affairs which is necessary or appropriate.

Table 5.13: Types of impersonals (after Allen 1995: Ch. 3)

	EXPERIENCER	THEME
Type N	OBL	GEN
Type I	OBL	NOM
Type II	NOM	GEN
Type S	OBL	clause
Type <i>hit</i>	OBL	<i>hit/pæt</i> + clause
‘Personal’	NOM	clause

involves cases where a modal combines with an impersonal predicate which determines the argument structure of the clause. In other words, the modal itself has no bearing on the case marking on the nominal constituents. In (36), for instance, repeated from (7a) on p. 25, the accusative case of the experiencer *hine* is assigned by the verb *gesceamian* ‘be ashamed’. We can say this with a high degree of certainty: *gesceamian* in Old English almost without exception takes an accusative- or dative-marked experiencer argument (accusative more commonly in earlier texts; see Middeke 2018: 223), whereas *SHALL* only occurs in this construction when its infinitival complement is an impersonal verb such as *gesceamian*. In other words, *SHALL* itself is not attested as an impersonal verb.

- (36) *hine sceal on domes+dæg gesceam-ian beforan God-e*
 him.ACC SHALL on judgement+day be.ashamed-INF before God-DAT
 ‘On Judgement Day he will have to stand ashamed before God’ [HomU 37, 161]

A parallel example with *MAY* from my investigation in Chapter 7 is given in (37). Here the dative case is assigned by the impersonal verb *gerisan* ‘suit, befit’ (Bosworth-Toller, q.v.) and *MAY* is transparent to the argument structure of this verb.

- (37) 7 *æfter his dæg-e ga þænne þæt land þam arcebisceop-e*
 and after his day-DAT go.SBJV then DEM.N land(N) DEM.DAT archbishop-DAT
Eadsige on hand swa gegod-od swa heom bam geris-an mage.
 E. in hand as furnish-PTCP as them.DAT both.DAT suit-INF MAY.SBJV
 ‘And after his death the property is to pass into the hands of the archbishop Eadsige, furnished [or stocked] such as may suit them both’ [Ch 1471, 5]

By contrast, the impersonal modals that appear in Middle English may occur with any type of predicate, such as *know* in (38), which is not otherwise attested in impersonal constructions. In (38) and similar examples, the oblique case is not assigned by the complement infinitive, but by the modal *OUGHT*:

- (38) *Me awghte to knowe þe Kynge he es my kydde lorde*
 ‘I ought to know the king; he is my noble lord’ (CMEPV, *Alliterative Morte Arthure* [Thornton MS, c.1440], l. 3509)

Most scholars working on the subject are well aware of this difference (see e.g. Allen 1995: 225–226; Loureiro-Porto 2009b: 99–100; Möhlig-Falke 2012: 81), and one can usually infer whether a modal is used impersonally or ‘transparently’. For instance, because *SHALL* and *MAY* only ever occur with oblique experiencers when another impersonal predicate is involved, these are analysed as cases of transparency.⁵⁶ On the other hand, *OUGHT* is never transparent to impersonal constructions in Old and Early Middle English, and most of the impersonal uses recorded in Late Middle English are not with impersonal predicates. Here we can be quite certain that the case of the experiencer argument is determined by *OUGHT*.

As Fischer (2007: 186–188 and p.c.) has pointed out, the modals used impersonally in Middle English have an important characteristic in common with the transparent modals, namely the lack of a canonical agentive subject. In the case of impersonal modals such as *OUGHT*, the modal selects an oblique experiencer argument; in the case of modals used ‘transparently’, the semantic role and case of the subject are determined by the complement infinitive. For a few of the Middle English modals, most notably *THARF*, it is indeed not always possible to say with certainty which of the two constructions one is dealing with. In cases where the complement infinitive is not otherwise found in impersonal constructions, such as the infinitive *follʒhenn* ‘follow’ in (39), it is reasonably certain that the case of the experiencer argument (*3uw*, 2PL.OBL) is assigned by *THARF*:

- (39) *Ne þarrf 3uw nohht nu follʒhenn me*
 ‘You need not follow me now.’ [eme.ormulum, 12886]

By contrast, whenever the complement infinitive is itself found as an impersonal verb, it is not possible to determine with certainty whether the oblique experiencer is due to *THARF* or the complement; an example of this is given in (40). This is one of the examples of ‘impersonal’ uses of *THARF* cited by Visser (1963: §1343) and has often been given as an example of this construction (*OED*, s.v. *thar* | *tharf* v.; *MED*, s.v. *thurven* v.; Bemposta-Rivas 2019: 143). This is misleading, however; as Warner (1993: 126) points out, both of the complement verbs *gramen* ‘worry’ and *shamen* ‘be ashamed’ (*MED*, qq.v.) may themselves be used impersonally in Early Middle English, and hence ‘it is not possible to tell whether the impersonal construction belongs to the finite verb, to the infinitive, or to both’ (Warner 1993: 126).

- (40) *þanne ne þarf us noðer gramien, ne shamien*
 ‘Then we neither have to worry nor be ashamed’ (PPCME2, cmtrinit, 69.964)

Loureiro-Porto (2009b) remarks on the distinction between examples like (39) and (40), but does not seem to distinguish between the two types in her statistics. For the investigation in the following section I decided to adhere to Warner’s general approach and keep the two types distinct; as it turned out, however, this was quite

⁵⁶ I thus agree with Warner (1993: 102 n. 12) that the examples of *MAY* ‘[i]n impersonal constructions’ in the *MED* (s.v. *mouen* v.3, sense 9) are misleading. The dictionary fails to mention that all of the complement infinitives (e.g. *offinken*, *liken*, *agrisen*) are themselves impersonal.

straightforward, since no likely cases of transparency were found in my material with OUGHT, MOT, and BEHOVE. The examples to be discussed in the following are thus ‘truly’ impersonal uses of the modals, i.e. parallel to (38) and (39).

5.4.3 Three impersonal modals

I now turn to the impersonal uses of OUGHT, MOT, and BEHOVE in Middle English. The three verbs were all investigated in the same corpus and in a similar way. For my purposes here I decided to limit myself to the PPCME2. This is not the largest available corpus of Middle English (compare Chapter 4, Section 4.2.3), but because it is enriched with syntactic annotation and part-of-speech tagging, it allows a more accurate search with only a very limited amount of noise in the concordances (see the discussion in Section 4.3). For all examples of OUGHT, MOT, and BEHOVE extracted from the corpus, I classified the case marking (if any) on the experiencer argument. This meant identifying all experiencers expressed by personal pronouns, checking whether these were nominative or oblique, and noting whether the case could have been assigned by the complement infinitive, i.e. whether it was a case of the ‘transparency’ described above. For BEHOVE, which also occurs with (pro)nominal and clausal complements, I of course also noted whether the complement was infinitival or belonged to one of the other types. Finally, I noted whether OUGHT occurred with a *to*- or \emptyset -infinitive.

I used the syntactically annotated PPCME2 files, which were searched with CorpusSearch (Randall 2005). The program and search method have already been described in Chapter 4; the texts included are listed in Table A.2 in Appendix A. The forms of MOT and OUGHT could easily be extracted by querying all modal nodes (MD*) for the relevant forms.⁵⁷ In the case of BEHOVE, which is not analysed as a modal in the corpus, I used the `make_lexicon` function to make a list of all verbs (VB*) and checked all forms beginning with *b-* for potential hits.⁵⁸ All nodes containing examples of these forms were then extracted and exported to a spreadsheet. These concordances were annotated with the information mentioned above: the type of theme, the case of the experiencer argument if relevant, and so forth.

Frequency of attestations

Before presenting the different construction types, I give the overall frequencies of the three items in Table 5.14. The absolute frequency (*n*) and the normalized frequency per 100,000 words (*f*) are given for each of the four subperiods. The ‘total’ column gives the total number of examples analysed. The normalized frequencies per period are visualized in Figure 5.7.

⁵⁷ This means that uses of OUGHT in the older sense ‘owe’ have not been included. These are tagged as verbs (VB) in the corpus. It is unclear from what point in time OUGHT and *owe* ought to be analysed as separate lexemes, but the use of the old PST form *ought* with present reference is at least found as early as the 13th c. (OED, s.v. *ought* v., sense 7).

⁵⁸ The relevant forms were identified with the help of the surveys of forms in the MED (s.v. *bihoven* v.), the eLALME (item 87), and Loureiro-Porto (2009b: 236–240).

Table 5.14: OUGHT/MOT/BEHOVE, absolute and normalized frequencies (PPCME2 data)

	M1		M2		M3		M4		TOTAL
	<i>n</i>	<i>f</i>	<i>n</i>	<i>f</i>	<i>n</i>	<i>f</i>	<i>n</i>	<i>f</i>	
OUGHT	65	22.9			64	15.7	52	12.7	181
MOT	167	58.7	3	3.2	226	55.4	162	39.7	558
BEHOVE	32	11.3	17	18.1	66	16.2	24	5.9	139

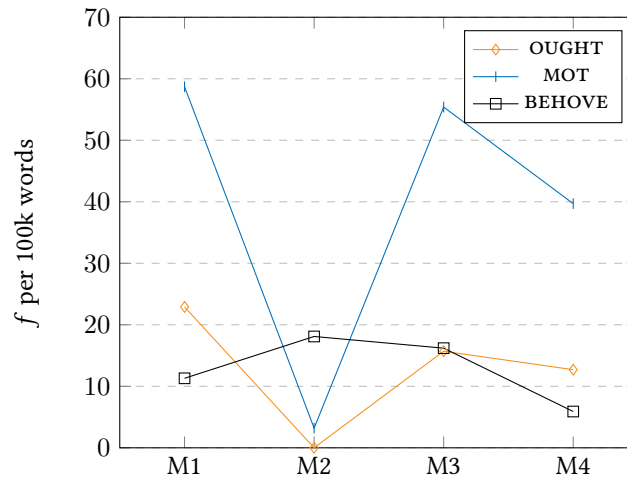


Figure 5.7: Three modals in PPCME2: frequencies per 100,000 words

The data in Table 5.14 and Figure 5.7 provide a clear example of Rissanen's 'mystery of vanishing reliability' (see Chapter 4): if we were to trust the PPCME2 counts, OUGHT completely (and MOT almost) disappeared from the language in the M2 period, before being as it were resurrected in M3. No comparable decline is observed in BEHOVE. On the other hand, there is no fluctuation in the frequency of BEHOVE like that observed in Loureiro-Porto's material (compare Figure 5.7 with Figure 5.6 above). These differences are a cautionary example of the limitations of diachronic corpora when only a few surviving texts are available. As already noted above, the high frequency of BEHOVE in M2 in Loureiro-Porto's material is due to a single text, the *Ayenbite of Inwyt*. As far as I can tell from Loureiro-Porto's discussion, this text was included in her corpus in its entirety. In the PPCME2, on the other hand, only a sample of the *Ayenbite of Inwyt* along with a few shorter texts from the same manuscript are included. The only other texts in the M2 period in the PPCME2 are five short sermons known as the 'Kentish Sermons' because of their provenance (cmkentse; MS Laud Misc. 471, c.1275) and a prose translation of the Psalter (cmearlps; Add. MS 17376,

c.1350); see the PPCME2 documentation for details.⁵⁹ The Kentish Sermons contain two instances of MOT, the sample from the *Ayenbite* a single example. For reasons which must remain uncertain, the translator or translators of the prose Psalter never use(s) OUGHT, MOT, or BEHOVE in any context where these might have been possible.⁶⁰ What I think is certain enough is that the unexpected distribution of OUGHT and MOT in the PPCME2—and of BEHOVE in Loureiro-Porto's material—reflects the lexical preferences of a small number of texts rather than an actual change in the M2 subperiod. With this caveat about the reliability of the PPCME2 material in mind, I now turn to the findings on themes and experiencers.

Types of theme

As for the theme, BEHOVE occurs with several types: complement clauses, *to*-infinitives (including variants with *for to* and *at*), \emptyset -infinitives, and nominal objects. The same patterns are found in Loureiro-Porto's (2009b) material. By contrast, OUGHT and MOT are secondary verbs which never occur with direct objects or complement clauses. As shown in Table 5.15, OUGHT is found with both \emptyset - and *to*-infinitive complements, though the latter type is more common. The complementation patterns of MOT are well known and consist almost exclusively of \emptyset -infinitives (see also Chapter 8), so I did not make a separate count of these. I have included 'ellipsis' as a separate category in Table 5.15. These are generally instances of post-verbal ellipsis in Warner's (1993) terms, but in a few cases with BEHOVE this was less certain, so I did not count them with the infinitive types.

Table 5.15: Themes of OUGHT and BEHOVE

	OUGHT	BEHOVE
\emptyset -infinitive	25	36
<i>to</i> -infinitive	144	27
NP object		23
COMP		46
Ellipsis	11	7
TOTAL	180	139

In total, 63 instances of BEHOVE in the material have a \emptyset - or *to*-infinitive complement. Both of these types are attested in all four periods. Complement clauses are also found in all four periods, nominal object in all except the problematic M2 period (on which see above). Given the low overall figures I refrain from making any claims

⁵⁹ Available on the PPCME2 CD-ROM or online at <https://www.ling.upenn.edu/hist-corpora/PPCME2-RELEASE-4/index.html> (last accessed 28 May 2020). Note that the documentation online at the time of writing is for the fourth release of the corpus, whereas I used the second release for this investigation. However, the metadata for the M2 texts are identical.

⁶⁰ By contrast, a query with CorpusSearch for forms of SHALL returns 1,097 hits from *cmearlps*, more than one tenth of all instances of this modal in the entire PPCME2. The text contains 40 examples of WILL, 13 of MAY, 2 of CAN, and none of THARF.

about diachronic tendencies. What the material does allow us to say is that BEHOVE is attested throughout Middle English with four different complementation patterns. As we will see in the following, a similar degree of variation is not found in the case of the experiencer argument.

Table 5.16: BEHOVE, themes per period

	INF			NP	COMP	Ellipsis
	<i>to</i>	Ø	TOTAL			
M1	3	2	5	14	9	4
M2	3	8	11		4	2
M3	18	17	35	6	24	1
M4	3	9	12	3	9	
TOTAL	27	36	63	23	46	7

Case of the experiencer

As already mentioned, most of the case distinctions inherited from Old English were lost during the Middle English period. Case on nouns and determiners eventually disappears altogether. The only remnant is the old genitive singular ending *-s*, which is reanalysed as an adnominal clitic (as mentioned in Chapter 2; see also Norde 2009: 172–179 and references there). By contrast, the personal pronouns except 3SG.N (*h*)*it* keep a distinction between nominative and oblique throughout the Middle English period (and most of them of course until the present day). The distinction between the oblique cases ACC and DAT is lost early in the north and later in the southernmost dialects (see Allen 1995: Ch. 5). A few of the texts in the corpus, such as the *Ayenbite of Inwyte* and the Kentish Sermons mentioned above, still keep it. The experiencer of BEHOVE is invariably dative in the few texts that maintain the distinction. I will use the term ‘oblique’ (OBL) for all non-nominative forms in the following.⁶¹

The personal pronouns which I have considered to show a case distinction are listed in Table 5.17. In addition to these, I found an example of a case-marked noun phrase in a single text, one of the twelfth-century Lambeth Homilies. Here the form *þan alden* ‘the old man’ occurs, with the oblique determiner *þan* (← OE DAT *þam*). The nominative form *þe* occurs several times on the same folio (*þe alde*, *þe wisa mon*, *þe biscop*; see the edition by Morris 1969: 109), so this scribe clearly maintained the distinction. This was the only example of an unambiguously case-marked noun phrase in the material.

A few words on potentially ambiguous and syncretic pronominal forms are in order. First, a relatively common nominative form in Middle English is the indefinite pronoun *me* ‘one’ (← OE *man*; see Chapter 1, p. 10). This is often not distinguished in

⁶¹ Allen (1995) opts for a different terminology, labelling all oblique forms in ME ‘dative’ because they generally go back to the OE dative forms (e.g. *hym/him* ← OE DAT *him*). I prefer the more general term ‘oblique’, but this is a purely terminological choice and does not imply any disagreement with Allen’s analysis.

Table 5.17: Case-marked pronouns in Middle English

	NOM	OBL
1SG	<i>ich, ic, y, i</i>	<i>me</i>
2SG	<i>þu, þou, thou</i>	<i>þe, the</i>
3SG.M	<i>he</i>	<i>hym, him</i>
3SG.F	<i>heo, ha, ȝeo, sho, she</i>	<i>hir, hur</i>
1PL	<i>we</i>	<i>us</i>
2PL	<i>ȝe, ye</i>	<i>ȝou, you</i>
3PL	<i>hi, þai, thei</i>	<i>hem, þaim, them</i>

spelling from the 1SG.OBL form. The immediate context usually makes it clear whether one is dealing with the one or the other, but in a few cases I had to determine it by checking the edition for additional context or the form of the indefinite pronoun in the manuscript.

Second, the original nominative form *ȝe* (*ȝe*) has of course been replaced by *you* in Present-Day English. The forms are usually kept distinct in Middle English texts and well into the Early Modern English period, but beginning in the late fifteenth century *ȝou* is occasionally recorded for *ȝe* (Allen 1995: 210–211). As noted by Allen and the *MED* (s.v. *you* pron., senses 6b, 6c), some of these are most likely misreadings for *þou*, but others may be genuine examples of *ȝou* used as the nominative form. However, in all examples with *ȝou/you* in my PPCME2 material this is clearly the oblique form, *ȝe/ȝe* being used for the nominative in the same text.

Finally, another instance of encroachment of an oblique form on the terrain of the nominative is the replacement of *we* by *us*. The old oblique form is used for the nominative in some (chiefly Northern) dialects of English, and this could potentially have been developing already in Middle English. However, the *OED* records no clear examples of this use before the nineteenth century, and the single example of ‘nominative’ *us* in the *MED* (s.v. *us* pron., sense 6) is, in fact, with *must*; see (41). This is almost certainly an instance of an impersonal modal rather than nominative *us* several centuries before this is otherwise attested; compare the expected NOM form *we* elsewhere in the example:

- (41) *ȝif we wil ben sekyr at þe laste doom and comyn sekyrliche aforȝ oure souereyn iuge [...] us must demyn wel ourself in þis world.*
‘If we want to be safe at the last judgement and come with a safe case before our sovereign judge ... we must judge well ourselves in this world.’ (a.1500 *Dives & P.* [Htrn 270] 2.239)

On the basis of these considerations I conclude that the personal pronouns in Table 5.17 can be reliably analysed as either nominative or oblique in the period. I have taken care to ensure that nominative *me* ‘one’ was kept distinct from oblique *me* ‘me’.

The results concerning the marking of experiencer arguments are presented in three separate tables. I begin with OUGHT in Table 5.18. The first column gives the number of experiencers not marked for case, the second and third columns the number of nominative and oblique experiencers, respectively. These figures give a clue as to how the impersonal construction could remain in use after nominal case marking had disappeared: more than half of the experiencer arguments in the PPCME2 are case-marked pronouns, suggesting that OBL experiencers were frequent enough for language learners to acquire the construction; see Allen (1995: 99–102, 224–232) for a detailed discussion of this issue. (42)–(43) give two examples of oblique experiencers, one with *him*, the other with *vs*:

- (42) *and þe Britons were cristen: wel auȝt him þan ham forto helpe, so as þai weren of on law*
 ‘and the Britons were Christians; and so he ought to help them, since they were of the same law [sc. faith]’ (PPCME2, cmb Brut 3, 942.839)
- (43) *Right wel aughte vs for to loue & worscipe, to drede & serue such a lord*
 ‘We very much ought to love and worship, to fear and serve such a lord’ (PPCME2, cmmandev, 2.24)

As Table 5.18 also shows, impersonal OUGHT first appears in the M3 period (1350–1420). It would thus seem to be an innovation of the late fourteenth century, but in light of the complete absence of OUGHT from the M2 part of the corpus, this hypothesis would have to be tested against other texts from this period. However, Möhlig-Falke’s (2012: 210) survey of *MED* and *OED* data reveals a similar picture. In the two dictionaries impersonal OUGHT is recorded from the late fourteenth to the late fifteenth century.

Table 5.18: OUGHT, experiencers per period

	– case	+ case		
		NOM	OBL	TOTAL
M1	75	65		65
M2				
M3	58	41	23	64
M4	38	33	19	52
TOTAL	171	139	42	181

Allen (1995: 250 n. 30) notes that oblique experiencers in her material from Chaucer appear to be especially frequent in *as*-clauses with post-verbal ellipsis (e.g. *as hem ought*). I have not been able to detect any such tendency in the PPCME2 data. There are seven examples similar to *as hem ought*, but six of these are from the two Chaucer texts in the corpus. It may thus be an idiosyncrasy, but this would have to be checked in a larger collection of examples.

Table 5.19 presents the results for MOT; the organization of the table is the same as in Table 5.18. As it clearly shows, oblique experiencers are much less commonly attested with MOT than with OUGHT. Only 4 out of 340 examples in the corpus where the case distinction is realized have an oblique experiencer argument. Two of the examples are from the same text as (42) above, the early fifteenth-century prose version of the *Brut* (also mentioned in Section 5.3.3). In both of them MOT combines with the necessity adverb *nedes*, as shown in (44). A closer investigation of the text, which is only included in the corpus in excerpts, might reveal if this is a general tendency; however, as (45) with NOM *he* shows, even if there is a tendency, this was not without exceptions:

- (44) *and now moste me nedes seche here þat is in an oþere lande*
 ‘And now I must necessarily look for her who is in another country’ (PPCME2, cmbrut3, 19.560)
- (45) *him come vppon a stronge sikenesse, þat nedes he moste dye*
 ‘He was afflicted by a severe illness, so that he necessarily had to die’ (PPCME2, cmbrut3, 92.2766)

Another example of impersonal MOT, from *The Commonplace Book of Robert Reynes* (Bodleian Library, Tanner MS 407), is given in (46):

- (46) *He þat schuldyn letyn man or woman blood, hym must ben avysyd of iiii poyntes*
 ‘Whoever is to let a man or woman’s blood, he needs to be aware of four things’ (PPCME2, cmreynes, 160.140)

This is the only example in my material which could possibly be a case of ‘transparency’, where the case of the oblique experiencer *hym* is assigned by the verb *avysen* and kept in the passive. However, I think this is more likely to be an instance of impersonal MOT for two reasons. First, the example is from a very late Middle English text, dated ‘towards end of 15th cent.’ by the eLALME (‘Index of sources’, Bodleian Library, Tanner 407). This is long after the ‘indirect’ passive—where a core argument in the dative retains its dative case in the passive—ceased to be productive; according to Allen (1995: 365–372) this happened in the early thirteenth century. Second, I do not in fact think that *ben avysyd* in (46) should be analysed as a periphrastic passive. When used transitively, the verb *avysen* means ‘instruct, advise, counsel, direct’ (MED, s.v. *avisen* v., sense 7); in (46), however, the meaning of *avysyd* is not ‘instructed’ or ‘advised’, but rather ‘aware, attentive’ (see MED, s.v. *avisen* v., sense 3 for examples of similar uses). This is thus more likely an adjectival use than a periphrastic passive. For these reasons I think it is justified to consider (46) an example of impersonal MOT.

The figures for BEHOVE are shown in Table 5.20. Because of the differences between this verb on the one hand and OUGHT and MOT on the other, the data are presented in a slightly different way than in the previous two tables. The first column shows

Table 5.19: MOT, experiencers per period

	– case	+ case		
		NOM	OBL	TOTAL
M1	45	122		
M2	1	2		2
M3	122	101	3	104
M4	50	111	1	112
TOTAL	218	336	4	340

the number of instances without an experiencer argument, a rather frequent pattern in the corpus. Here the only argument is the theme and BEHOVE can usually be paraphrased as ‘be necessary’. An example from the *Ancrone Riwe* is given in (47).

- (47) *To þe uttere fondunge bihoueð pacience. þʰ is þolemodschipe. to þe inre wisdom & gastlich strengðe.*
 ‘Against the outer temptation patience is necessary, that is the ability to endure; against the inner, wisdom and spiritual strength.’ (PPCME2, cmancriw-1, II.138.1832)

The three other columns show the patterns with an experiencer argument. Here too BEHOVE differs from OUGHT and MOT: if the experiencer argument can show the NOM–OBL distinction, it is invariably oblique. In two cases the experiencer argument is a prepositional phrase. In (48) I give an example with an oblique experiencer; in (49) the experiencer is expressed by a prepositional phrase.

- (48) *Wha-sa will hafe þe lyfe with-owteen corupeyone in þe Ioy of heuen, hym byhoues kepe his lyfe þat es dedly with-owtten corrupcion of body.*
 ‘Whoever wants to have the life without corruption in the joy of Heaven, he needs to keep his life that is mortal without any corruption of the body.’ (PPCME2, cmedthor, 27.292)
- (49) *bote certes, to me byhoueþ gret bysynesse and eke trauayle forto make hool þat was to-broke*
 ‘But certainly, I need much diligence and also hard work to make whole that which was broken asunder.’ (PPCME2, cmaelr3, 54.883)

In the above discussion I have stressed the danger of basing generalizations about an entire language or language period on small corpora, where the idiosyncracies of a few texts may skew the results. In the case of the PPCME2, this is especially critical for the M2 period (1250–1350), from which very little prose survives. For this reason I will also list the frequencies of nominative and oblique experiencers per text in the corpus; see Tables 5.21 and 5.22 (pp. 156–157). For OUGHT and MOT all case-marked experiencers are included, for BEHOVE only case-marked experiencers of secondary-verb uses (i.e. only the types ‘Ø-infinitive’ and ‘to-infinitive’ in Table 5.15 above).

Table 5.20: BEHOVE, experiencers per period

	– EXP	+ EXP		
		– case	PP	OBL
M1	6	2		24
M2	13			4
M3	35	11	2	18
M4	10	1		13
TOTAL	64	14	2	59

These figures are of course very low for almost all of the individual texts, but they do give an impression of the distribution of the examples across the corpus. What they also demonstrate is the significant in-text variation in the Late Middle English (M3 and M4) material: the three texts containing examples of MOT with OBL experiencers also have examples with NOM; and with only a single exception, all texts with OBL experiencers of OUGHT also have examples with NOM experiencers.

As for the functions of impersonal OUGHT and MOT, one generalization which the data allow us to make is that these patterns only occur when the modals express necessity. This may be either deontic–moral necessity (‘ought, should’) or one of the dynamic subtypes (‘need to, have to’) discussed in Chapter 3. In the case of OUGHT, this is in contrast to its primary-verb meaning ‘owe’. I did not include this in the corpus search, but it is clear from the *MED* entry (s.v. *ouen* v.) that the meaning ‘owe’ is not attested in impersonal uses. One of the examples from my corpus search, given in (50), conveniently shows the distinction between personal ‘owe’ (with NOM *we*) and impersonal ‘ought’ (with OBL *vs*); for further discussion of this particular text, see the following paragraph.

- (50) *De ferthe vertue or thewe es ‘ryghtwysenes,’ þat es, to zelde to all men þat we awe þam, For to do to ilke a man þat vs awe to doo*
 ‘The fourth virtue or moral point is justice, that is to give to all men that which we owe them, to do to every man that which we ought to do’ (PPCME2, cm-gaytry, 11.141)

In the case of MOT, the material is more limited. The four impersonal examples that were found all clearly have necessity meaning. Three are unambiguously dynamic (including [44] and [46] cited above); one might also allow a deontic–moral interpretation. However, the four examples are all from the Late Middle English period when MOT was generally used as a necessity modal (see the semantic investigation in Chapter 8), so impersonal MOT in the PPCME2 data occurs with the same meanings as the personal variant in the same period. This of course does not mean that there were no differences, only that the limited material does not allow us to detect them. In Chapter 8 (Section 8.3.4), by contrast, I will discuss a Northern Late Middle English text, *An Alphabet of Tales* [nme.alpha], which does appear to show a systematic dif-

Table 5.21: Case-marked experiencers per text (PPCME2 periods M1–M3)

		OUGHT		MOT		BEHOVE
		NOM	OBL	NOM	OBL	OBL
M1	cmancriw	16		25		
	cmhali	2		5		
	cmjulia	1		4		
	cmkathe	1		2		
	cmlamb	12		30		
	cmmarga	1		15		
	cmorm			13		
	cmpeterb	1		3		
	cmsawles	2		2		
	cmtrinit	16		8		4
	cmvices ₁	13		15		
M2	cmayenb			1		2
	cmkentse			1		
M3	cmaelr ₃	2				
	cmastro			1		
	cmbenrul	15				3
	cmboeth	2		9		1
	cmbrut ₃	1	3	9	2	
	cmcloud					2
	cmctmeli	6	8	10	1	1
	cmctpars	3	11	8		
	cmedvern			4		
	cmequato			1		
	cmhorses			3		
	cmmandev	2	1	4		
	cmntest					5
	cmpolych			4		
	cmpurvey	10		1		
	cmwycser			9		1

Table 5.22: Case-marked experiencers per text (PPCME2 period M4)

	OUGHT		MOT		BEHOVE
	NOM	OBL	NOM	OBL	OBL
M4	cmaelr4	2	4		1
	cmcapchr		5		
	cmcapser		1		
	cmedmund				
	cmedthor	2	4		1
	cmfitzja		1		
	cmgaytry		9		1
	cmgregor		7		
	cmhilton		1		
	cmjulnor	1	1		2
	cmkempe	4	1	35	
	cmmalory	16	1	38	1
	cmmirr	1	36		
	cmreynar	3	9		
	cmreynes		6	1	
	cmrollep	1	1		
	cmrolltr	2	3		1
	cmroyal	1			
	cmsiege		5		
	cmvices4				2

ference between the two variants: here NOM experiencers appear whenever MOT has its older possibility meaning ‘may’; the impersonal variant is apparently only used when it means ‘must’.

The data from PPCME2 also do not allow any firm conclusions about dialectal differences. The OBL pattern with OUGHT is attested in texts from both the East and West Midlands and the Northern dialect areas. That it was not found in any Southern texts in the corpus might just reflect the low number of texts from this area. Again, this does not compel us to conclude that there were no systematic differences, only that the PPCME2 material does not reveal them. The basic textual ‘unit’ of the corpus is the edited text, which may come from manuscripts written by more than one scribe. Moreover, because of the copying practice discussed in Section 5.3.4, texts may contain several linguistic ‘layers’ reflecting the use of successive scribes. While there may have been a degree of variability in the language of some scribes, the observed variation may be due in large part to this textual ‘layering’. One way to investigate this question would be to use the LAEME corpus (or a similar resource, such as the MEG-C), where the scribal hand, not the edited text, is the basic textual unit. For the development of oblique experiencers, which seems to happen only in the late fourteenth century, the LAEME corpus may be slightly too early, however. Another—possibly even more promising—avenue for future work would be to investigate the language of individual texts which are considered to represent single scribal dialects. In the case of the PPCME2 data on OUGHT, one text is particularly interesting, namely a sermon by the Yorkshire monk John Gaytryge (cmgaytry), found in the fifteenth-century Thornton manuscript (Lincoln Cathedral Library MS 91, c.1440); for other examples from the same manuscript, see (38) and (50) above. This sermon is the only exception to the generalization that oblique experiencers with OUGHT always co-occur with nominative ones in the same text. In this rather short text, which is included in its entirety in the corpus, nine examples of OUGHT with an oblique experiencer were found, but none with nominative; see (51)–(52) for two examples.

- (51) *The Seuend article þat vs awe to trowe es vppe-rysyng of flesche and life with-owtten Ende.*
 ‘The seventh article [of faith] that we have to believe is resurrection of the flesh and eternal life.’ (PPCME2, cmgaytry, 3.27)
- (52) *Ane es ryghthe sayeyng and carpyng of þe wordes þat hym awe for to say þat gyffes þis sacrament*
 ‘One thing is the correct pronunciation and utterance of the words that he who delivers this sacrament has to say.’ (PPCME2, cmgaytry, 8.78)

If other text witnesses with such consistent usage can be found, it may be possible to map the dialectal variation, if any, in more detail. The sermon by John Gaytryge is not localized by the LALME editors but is clearly of Northern provenance. Whether this is a coincidence or the use of impersonal modals was more frequent in the north of England would certainly be interesting to investigate.

5.4.4 Explaining the development

Unfortunately, the PPCME2 material is also rather too limited to make any definite pronouncements on the causes of the change. However, the data do warrant at least three generalizations. First, as mentioned in the preceding paragraph, OUGHT and MOT only occur with oblique experiencers when they have necessity meaning. Second, whereas OUGHT and MOT are only found in the impersonal construction in the fourteenth- and fifteenth-century texts in the corpus, impersonal BEHOVE is attested throughout the period. Third, whereas OUGHT and MOT are always more frequently found with nominative experiencers, BEHOVE only occurs with oblique experiencers.

Allen (1997) suggests that BEHOVE developed into an impersonal verb by analogy with semantically similar impersonal verbs inherited from Old English. The two most frequent such verbs in Middeke's (2018) material are (GE)BYRIAN and (GE)DAFENIAN (DOE, qq.v.), of which the former survived throughout the Middle English period, apparently mainly in Northern and north Midland dialects (see MED, s.v. *biren* v.). Impersonal BEHOVE first appears in twelfth-century material and is well attested in the thirteenth century, as in (53), also cited by the MED (s.v. *bihoven* v.). As we have seen above (see Table 5.16), its use as a secondary verb is attested from the same period; an example of this is given in (54). Both (53) and (54) are from the early thirteenth century.

- (53) *Danne ðu ðus hauest ðine luue te gode, ðanne behoueð ðe ðat ðu bie wel warr þat tu luuiþe ðine nexte*
 'When you thus have your love to God, then you also have to take care that you love your neighbour.' (PPCME2, cmvices1 39.459)
- (54) *On fuwuer wise us bihoueð turnen to him; on heorte. on festene. on wope. on meninge.*
 'In four ways we need to turn to him: in the heart, in fasting, in weeping, and in lamentation.' (PPCME2, cmtrinit 63.855)

In addition to BEHOVE and the Middle English reflex of (GE)BYRIAN (see MED, s.v. *biren* v.), a few other verbs may be relevant here. One is THARF, which begins to appear in impersonal constructions around the same time as BEHOVE. An example from a late twelfth-century text was cited in (39) on p. 146. However, as discussed in Section 5.4.2, this verb appears to have become very infrequent already in Early Middle English (see Loureiro-Porto's figures in Table 5.12), so this may be less obvious as an analogical model. Another, perhaps more promising candidate for analogical influence, is the verb NEED. This also attested in impersonal constructions in Middle English, as discussed by Loureiro-Porto (2009b: 181–185) and Fischer (2015: 140–145), though apparently less often as a secondary verb than with nominal themes.

The earliest examples of *NEED* as a secondary verb recorded in the *MED* (s.v. *neden* v.2, sense 1b) are from the late fourteenth century. It is apparently frequently found in the writings of John of Trevisa; see (55) for an example.⁶²

- (55) *Him nedip to knowe complexions, vertues, and worchinges of medicynable pinges.*
 ‘He needs to know the constitutions, properties, and effects of [different] medicaments.’ (a.1398 *Trev.Barth.(Add 27944) 102b/a)

The earliest examples of impersonal *OUGHT* and *MOT* recorded by the dictionaries are from about the same time, from the mid-to-late fourteenth century. This is in accord with the PPCME2 material. I have pointed out above that the PPCME2 data from the early fourteenth century are rather unreliable, but because the *OED* and *MED* also include attestations from verse texts, the dictionary entries are almost certainly based on more substantial data. The earliest clear example of impersonal *OUGHT* is given in (56). It is from a manuscript (York, Borthwick Inst. MS R.I.11) dated 1357 and assigned to Yorkshire by the eLALME (LP 116).⁶³ The earliest unambiguous example of impersonal *MOT*, recorded by both the *OED* (s.v. *must* v.¹, sense 3.c) and *MED* (s.v. *moten* v.2, sense 8), is given in (57). It is from a holograph, the preaching book of a Norfolk friar named John of Grimestone, and can hence be located in time and space with more certainty than is usually the case (see eLALME, LP 4041).

- (56) Middle English (1357)
Our euen-cristen alswe augh us to loue
Un-to that ilk gode that we loue us selven
 ‘Our fellow Christians also we have to love, to the same benefit that we love ourselves’ (CMEPV, *Lay folks’ catechism* [Yk-Borth R.I.11] 264–265)
- (57) Middle English (1372)
On rode i hange for mannys sake,
Bis gamen alone me must pleyze.
 ‘On the cross I hang for the sake of mankind; this plan I must fulfil alone.’
 (*Maiden & moder* [Adv. 18.7.21]; cited from *MED*, s.v. *game* n.)

The material does not allow any hard and fast conclusions, but based on the dates of first attestation I would hypothesize the analogical development outlined in Table 5.23: *BEHOVE* developed impersonal uses by analogy with existing verbs in the

62 The *MED* dates the text a.1398, but the MS may be slightly later; see the entry in the *MED* bibliography, Seymour (1992), and the BL catalogue (link in Appendix B).

63 Both the *MED* (s.v. *ouen* v., sense 4d) and *OED* (s.v. *owe* v., sense 7) record an earlier instance of impersonal *OUGHT*, from the *Physiologus* in BL, MS Arundel 292 (a.1300, provenance uncertain):

(i) *De hertes hauen anoðer kinde | Dat us o3 alle to ben minde*
 ‘Deer have another characteristic which we ought all to be mindful of’ (Wirtjes 1991: 10, ll. 230–231)

This is almost certainly an example of the ‘transparency’ discussed in Section 5.4.2; *OUGHT* otherwise takes a *NOM* experiencer throughout the poem (compare *we o3en* on the same page, l. 249), and the adjective *minde* ‘mindful’ takes an *OBL* experiencer in the language of the scribe: *Oc he arn so kolde of kinde | Dat no golsipe is hem minde* ‘But they [sc. elephants] are so cold by nature that they do not care for any lasciviousness’ (ll. 429–430).

twelfth century, as documented by Allen (1997). In some dialects at least, the Old English verb (GE)BYRIAN survived and may have served as a model for the analogy as well; the role of THARF was probably more marginal. This in turn influenced the development of OUGHT, MOT, and possibly also NEED, in the fourteenth century. The ellipses indicate that other verbs and constructions may have influenced the developments as well. This sketch of the development is obviously speculative and probably impossible to verify with any certainty. It may, however, serve as a starting point for future investigations. These, I would suggest, ought to look more carefully at the patterns of variation in fourteenth-century texts, especially from manuscripts which can be located in space and time with some confidence.

Table 5.23: Impersonal modals: tentative development

OE		12th c.		14th c.
(GE)BYRIAN	→	BIREN	→	BIREN
(GE)DAFENIAN	↦	BEHOVE	→	BEHOVE
...		(THARF?)	↦	OUGHT
		...		MOT
				(NEED?)

In addition to the developments of individual Middle English verbs, it would also be most interesting to investigate how the Middle English situation compares to other languages with similar constructions. As a number of authors have noted, languages with impersonal constructions—usually termed non-canonical subject constructions in the cross-linguistic literature—often use these to express modal meanings (e.g. Onishi 2001: 31–33; Fischer 2007: 186–188; Friedman & Joseph 2018: 41–43), but exactly which meanings differ. Friedman & Joseph note that many languages of the Balkan area use impersonal constructions to express both possibility and necessity; the same holds for Japanese, according to Onishi (2001: 32). Several languages appear to restrict the use of the construction to expressions of necessity, however. Onishi mentions Icelandic and Bengali, both of which have impersonal predicates glossed ‘need’ but none with the meaning ‘can’. Some of the Finnic languages also belong here, as discussed by Sands & Campbell (2001: 269–274) and Kehayov (2017: 170–174). On the basis of the material presented above, Middle English would appear to fall into this category as well. Possibility modals are only ever found with oblique experiencers when they are ‘transparent’ to the argument structure of the complement predicate, whereas impersonal necessity modals, as we have seen, are quite well attested. Future cross-linguistic studies might reveal if this is the more typical state of affairs and, if so, how it develops diachronically.

5.5 Conclusions

Three developments have been investigated in this chapter which have all been taken as indications of the ‘verblike’ status of the modals in Middle English. In contrast to Warner (1993), whose main concern is the implications of the developments for the category membership of the modals, I have been concerned mainly with documenting the changes in more detail and attempting to account for them. Although I have argued for different interpretations of some of the facts, the chapter as a whole should not be seen as an attempt to supplant Warner’s careful and detailed work, but to supplement it.

As for the three developments in question, I have suggested that only two of them constitute actual language change. The first, the development of new non-finite forms, has been argued to be a pseudo-change, as it were, that is an apparent change which only appears to have occurred because of the nature of the surviving material and more general developments in the grammar of the language. I have argued that we have no good evidence for the absence of non-finite forms of the modals in question in Old English. Even when more or less direct metalinguistic statements do exist, namely in Ælfric’s *Grammar*, these are equivocal, and closer consideration of the Latin facts and the aims of the text in some cases make other interpretations appear more likely. While this may seem disappointing to syntacticians who would like to use the text for grammaticality judgements by an Old English speaker, I maintain that the *Grammar* is still a most valuable linguistic resource which has much to teach us yet about how the differences between Latin and Old English were perceived and taught in the eleventh-century schoolroom. Concerning the appearance of non-finite forms in the Middle English material, I have argued that the size of the surviving corpus and the general developments in the grammatical system must be taken into account, and that a focus solely on attestations and non-attestations of individual modal forms makes us lose sight of the bigger picture. Not only is the Middle English corpus several times larger than the Old English one, the increasing use of periphrastic TMA expressions means that there are more contexts for non-finite forms to appear. A small study of the material in the YCOE and PPCME2 confirmed the suggestion by Fischer & van der Wurff (2006) and Fischer (2004, 2007) that the overall frequency of infinitives and past participles increases in the Middle English period. These two facts in combination increase the likelihood that forms like *inf mouen* and *PTCP wold* are recorded.

By contrast, the second change—the spread of regularized inflections in the present indicative plural—has been argued to be a genuine morphological innovation. Based on material from the LAEME and eLALME atlases and a number of corpora, it can be shown to affect *SHALL*, *CAN*, and *MAY*, though not nearly to the same extent: whereas the change is only sporadically attested in *CAN* and *MAY*, mainly in texts from the southwest Midlands, it is found in *SHALL* in many more texts and across a wider area. In eLALME this largely coincides with the area where the West Saxon present indicative plural ending *-eþ* was maintained. I have argued that the cause of the spread of

this innovation in *SHALL* was analogy with *WILL*, which shared both functional and formal properties with *SHALL*, perhaps most importantly the same stem vowel in the present plural in southwest Midland dialects.

Finally, the third change was surveyed on the basis of the PPCME2. I investigated the occurrence of impersonal uses of two of the preterite-present modals, *OUGHT* and *MOT*, and the verb *BEHOVE*, which develops modal functions in the Middle English period. It was shown that *BEHOVE* was used with oblique experiencers throughout Middle English, whereas the pattern was very rare in *MOT* in the PPCME2 material. In Late Middle English *OUGHT* takes up an intermediate position: in the M3 and M4 periods, 42 out of 116 instances with a case-marked experiencer had OBL case. While Denison's (1993: 134) characterization of these impersonal modals as 'sporadic' may thus be valid for *MOT*, it is not quite accurate in the case of *OUGHT*. I have pointed out that the system with impersonal necessity expressions but 'personal' possibility modals has parallels in other languages of the world and suggested that it would be worthwhile to compare the Middle English situation more systematically to other languages with similar constructions.

I have also illustrated some of the problems connected with the use of small and unbalanced corpora. In the PPCME2 material *OUGHT* and *MOT* were almost completely absent in the M2 period (1250–1350), whereas *BEHOVE* is much less frequent in this period than Loureiro-Porto's (2009b) data suggest. This was shown to be due to the lexical idiosyncracies of the few texts that make up this period in the corpus. Significant variation was also found within the texts in the corpus. In fact, only a single text with impersonal *OUGHT* had this variant to the exclusion of the one with a nominative experiencer. I have suggested that it might be valuable to look more closely at such texts in the future in order to investigate what determined the variation.

CHAPTER 6

Reconsidering the history of DARE

But as all things vnder heauen do in length of
tyme encline vnto alteration and varietie, so
do the languages also, yea such as a not mixed
with others that vnto them are strange and ex-
trauagant, but euen within themselues do these
differences grow and encrease

— Richard Verstegan (1605), *A Restitvtion of
Decayed Intelligence*

6.1 Introduction

This chapter investigates the development of the verb DARE from Old to Early Modern English. This verb has played an important role in the literature on grammaticalization and degrammaticalization, and its morphosyntactic behaviour in the history of English has been documented in a number of studies. Because fairly detailed descriptions are already at hand, I decided not to carry out a quantitative investigation of DARE, and the focus of the chapter will be less on describing its morphosyntactic development than on interpreting and explaining the observed changes—although the historical developments will of course be illustrated with relevant examples. These are drawn from the historical dictionaries, the DOEC, the custom-made Middle English corpus also used for Chapters 7 and 8, and the EEBOCorp in the case of Early Modern English. The central questions I will attempt to answer are the following:

1. Has DARE developed from a more to a less auxiliary status in the recorded history of English, i.e. is it a case of ‘de-auxiliation’ or degrammaticalization?
2. When and under what circumstances did the transitive use of DARE (as in *I dare you*) develop?

The chapter begins with a literature review, first of analyses of DARE in Present-Day English (Section 6.2.1), then of earlier work on its history (Section 6.2.2). The following sections then reconsider the evidence and the interpretation of it, first in relation to the function and grammatical status of DARE in Old English (Section 6.3) and then to some of the changes observed in the Middle and Early Modern English periods: the interaction between DARE and the modal THARF in Middle English (Section 6.4.1), the dating and explanation of the appearance of *to*-infinitive complements (Section 6.4.2), and the development of the transitive use of DARE (Section 6.4.3). An important argument on a more general level will be that the observed changes are best explained with reference to analogy, whereas an account of DARE in terms of grammaticalization or degrammaticalization fails both to explain the changes and adequately describe the status of DARE in earlier English. These points are summed up in the concluding Section 6.5.

6.2 Earlier literature

6.2.1 DARE in Present-Day English

As briefly mentioned in Chapter 1, DARE shows variation in a number of respects in Present-Day English, occurring both in ‘auxiliary’ and ‘full-verb’ constructions as traditionally defined (see p. 12). Two examples from the BNC are given in (1). In (1a) DARE has no third-person singular ending, takes a \emptyset -infinitive, and has postposed negation (i.e. the ‘N’ in the NICE properties). In other words, it seems to behave just as a modal like CAN or MUST (compare *can’t go*, *mustn’t go*, etc.).¹ In (1b), on the other hand, DARE has the 3SG ending -s like other verbs and takes a complement *to*-infinitive.

- (1) a. *The older woman [...] says she’s missing her bingo, but daren’t go to her old club*
(BNC, 1985 W_non_ac_soc_science)
- b. *No one else dares to speak to the Lady Prioress like that*
(BNC, 1992 W_fict_prose)

¹ The negation in (1a) is even enclitic to DARE, a construction only available to some of the items exhibiting the NICE properties. Note, however, that it is the position of the negation rather than the cliticization which is considered a NICE property. The form *mayn’t*, for instance, is rejected by many speakers and returns only 7 hits in the BNC; *daren’t* is only slightly less marginal in this corpus, with 178 hits (compare this to 15,216 instances of *won’t* and 29,757 instances of *can’t*). See the *OED* (s.v. *not*, adv.) and references there for the cliticized form.

The major reference grammars of Present-Day English are well aware of this variation, and all of them note that DARE does not fit perfectly into either the group of ‘core’ modals or the larger class of ‘full’ or ‘main’ verbs. At least two variants of DARE have to be distinguished, with the properties shown in Table 6.1.

Table 6.1: Variable properties of Present-Day English DARE

	AUXILIARY	MAIN-VERB
3SG form	<i>dare</i>	<i>dares</i>
Complement	\emptyset -infinitive	<i>to</i> -infinitive
NICE properties	✓	—

The grammars handle this variation in different ways. Quirk et al. (1985: 138–139) classify DARE as a ‘marginal’ modal alongside NEED, USED *to*, and OUGHT because it can be used both as an auxiliary and a main verb; compare (1) and Table 6.1. As an auxiliary it inflects like a modal, takes a \emptyset -infinitive complement, and exhibits the NICE properties; as a main verb it has the regular 3SG form *dares*, takes a *to*-infinitive, and requires *do*-support, i.e. it does not exhibit the NICE properties. The auxiliary use is said to be restricted to non-assertive contexts and to be rare in both American and British English, though more so in the former. However, it is also mentioned that ‘blends’ between the constructions occur, so that DARE can occur, for instance, with *do*-support, a ‘main-verb’ property, plus a \emptyset -infinitive, an ‘auxiliary’ property.

In a way similar to the description in Quirk et al. (1985), Biber et al. (1999) classify DARE among the ‘marginal’ auxiliaries, which may behave either as auxiliaries or full verbs. The auxiliary pattern is said to be ‘extremely rare and largely confined to BrE [British English]’ based on corpus findings (Biber et al. 1999: 484). The authors do not directly discuss the existence of ‘blends’ between the auxiliary and full-verb constructions, but hint at it in the discussion of negation, where they note that DARE with *do*-support may occur with either the \emptyset - or the *to*-infinitive, as in their examples in (2):

- (2) a. *They don’t dare do a thing.*
 b. *I didn’t dare to mention Hella.*

(Biber et al. 1999: 163)

Huddleston & Pullum (2002) opt for a slightly different analysis by not recognizing a ‘marginal’ auxiliary category with variable morphosyntax. Instead, they distinguish between two separate lexemes: auxiliary DARE and full-verb DARE. The two examples of DARE in (1) above thus represent two different lexemes. At the same time, however, the authors speak of a ‘blurring’ of the auxiliary–full-verb distinction in DARE (Huddleston & Pullum 2002: 109–111), suggesting that the two-lexeme analysis is not quite as elegant as it may appear. The somewhat unsatisfying result is that some instances of DARE are not readily classified within the system, as the authors acknowledge: ‘there are places where it is impossible to determine whether *dare* is modal or lexical’ (Huddleston & Pullum 2002: 110). One attractive aspect of

Huddleston & Pullum's treatment is that they discuss the relation between DARE and modality explicitly, classifying its meaning as a kind of dynamic modality: DARE 'means essentially "have the courage"—a matter of the subject-referent's disposition' (Huddleston & Pullum 2002: 196). In the terms introduced in Chapter 3, one might classify the meaning of DARE as a type of participant-inherent dynamic modality, albeit of a different kind than, for instance, the ability meaning of CAN: whereas participant-inherent CAN expresses the ability of the subject referent to realize the state of affairs, DARE expresses that the subject referent has the courage necessary to realize it.

This description of the meaning of DARE is very similar to the one given by Palmer (1990: 111–112), who considers it a subtype of dynamic possibility, and the one offered in Dixon's (2005) 'semantic' grammar of Present-Day English: DARE indicates 'that the subject had enough courage to do something' (Dixon 2005: 187). Unlike Palmer, Dixon does not explicitly discuss the relation between this meaning and modality, but classifies DARE as a secondary verb, i.e. a verb which takes another verb as its complement (see Chapter 1, Section 1.3.4 for this term). He notes that there are two 'patterns of syntactic behaviour', one 'lexical' and the other auxiliary (Dixon 2005: 76). As in Quirk et al. (1985), the auxiliary pattern is said to be ('almost') restricted to nonassertive contexts, i.e. questions and negatives. There does not seem to be any mention of blends or blurring between the two patterns.

Based on these descriptions there seems to be general agreement that DARE has two prototypical patterns of behaviour, even if language users do not always adhere strictly to these two prototypes. One, the 'auxiliary' pattern, exhibits the NICE properties, has no *-s* in the 3SG, and takes a \emptyset -infinitive complement. The other, the 'main-verb' pattern, has *do*-support and 3SG *-s* and takes a *to*-infinitive. An obvious problem with this picture is that 'blends' between the two patterns seem to be much more common than the reference grammars suggest: in three corpora of British, American, and Canadian English, Duffley (1992: 2) finds that about 40% of the examples combine *do*-support or other 'lexical' features with the \emptyset -infinitive (see also Duffley 1994 for an attempt at explaining these 'blends'). Unfortunately, Duffley does not give the absolute figures, but as a later investigation by Taeymans (2004a: 109–111) shows, the 'blends' are indeed very common at least in British English. Of 1,172 examples of DARE in the written component of the BNC, 321 (27.4%) occur in 'blends'; in the spoken component the share is even larger (77 'blends' out of 219 examples, i.e. 35.2%).²

Another question concerns the possible functional, dialectal, and stylistic differences between the patterns. On the one hand, some authors have attempted to account for the difference between \emptyset - and *to*-infinitive use in semantic terms, arguing that DARE with the \emptyset -infinitive expresses 'non-reality' (Duffley 1992: 13) or a more 'external' meaning than DARE with the *to*-infinitive (Dixon 2005: 188). On the other

² Taeymans's 'blend' type includes instances where DARE takes a \emptyset -infinitive and is either nonfinite (*does dare*, *would dare*, etc.) or has the 3SG ending *-s* (see Taeymans 2004a: 102). Duffley does not define his 'blend' category explicitly, but it is clear from the examples (see Duffley 1992: 4–6) that it corresponds more or less exactly to the category distinguished by Taeymans (who, however, appears to be unaware of Duffley's [1992, 1994] work).

hand, the available literature also suggests that there are significant differences between varieties of English, with the auxiliary type being more common in British English than in other varieties. Biber et al. (1999: 164) suggest that auxiliary DARE is ‘probably obsolescent’ in American English, whereas Krug (2000: 201) concludes that ‘in British speech the behaviour of DARE (TO) is still very much akin to that of the central modals’.³

Finally, an issue which has received relatively little attention in the literature is the status of the transitive use of DARE, which is evidently different from the patterns described so far. Here DARE has the meaning ‘challenge, goad, talk into doing’ and occurs either with a noun phrase object alone, as in (3a), or with a following *to*-infinitive, as in (3b):

- (3) a. *I did it because some of the older boys at school dared me!*
(BNC, 1983 W_fict_prose)
- b. *she moved over to the wall, where a sofa seemed to dare her to sit on it*
(BNC, 1993 W_fict_prose)

Although it is discussed less often, there can be little doubt that the pattern in (3) would be classified as a main-verb use of DARE according to the approaches mentioned in this section, i.e. not as an auxiliary. Huddleston & Pullum (2002: 110) do so explicitly, giving *I dare you to say that to his face* as an example of a ‘lexical’ use, but focus on the auxiliary pattern in the remainder of the relevant section.

No matter the exact analysis, it is clear from the literature surveyed here that DARE shows variation in Present-Day English. One might perhaps expect that a situation with competing morphosyntactic patterns would move towards one of the alternatives and, as it were, finish the S-curve trajectory, as in the development of the modals envisaged by Allan (1987) (see Figure 2.2 on p. 22). However, if the competing patterns in Present-Day English are indicative of language change in progress, DARE appears to be changing rather slowly. As I will discuss in the following, the morphosyntax of DARE has been variable for at least the past four centuries.

6.2.2 Diachronic development

That there have been diachronic changes to DARE has been recognized for a long time. Writing in the late nineteenth century, Sweet (1892: §1480) observes that DARE has almost completely lost its original past-tense form *durst* in the spoken language, ‘where the literary *I durst not interrupt him* is represented by *I did not dare to interrupt him*’. In addition, Sweet points to the development of the transitive sense ‘challenge’—see (3) above—in the modern period. Jespersen (1949: v, 173–178) collects numerous examples of the varying use of \emptyset - and *to*-infinitives in Early and Late Modern English

³ On British English see also Taeymans (2004a). In another paper Taeymans (2004b) compares the British and American situations by looking at DARE in the BROWN family of corpora, but the numbers are too low to provide any reliable evidence: on average there are only 33 examples of DARE per corpus (see Table 1 in Taeymans 2004b: 220). On other varieties of English worldwide there is the contribution by Lee & Collins (2004) on Australian and Hong Kong English, but since they rely on acceptability judgements rather than corpus data, their findings are not directly comparable to the other studies cited here.

texts, also noting in passing that DARE has developed towards the ‘normal’ verbs by taking the 3SG ending *-s*, in contrast to the endingless Old English form *dear(r)* (Jespersen 1949: v, 173).

The morphological characteristics of DARE in Old English are well described thanks to the *DOE* and the historical grammars. The paradigm in Table 6.2 is based on the *DOE* entry (s.v. *dearr*) and Hogg & Fulk (2011: 302–303). The only form which does not appear to be attested in the *DOEC* is the PST.SBJV.2SG form **dorste*. As the table shows, DARE belonged to the class of preterite-presents, with an endingless PRS.IND.1/3SG form and the PRS.IND.PL ending *-on* (rather than *-ap*; see Chapter 5).

Table 6.2: Paradigm of Old English DARE

	PRS		PST	
	IND	SBJV	IND	SBJV
1/3SG	dear(r)	durre/dyrre	dorste	dorste
2SG	dearst	durre/dyrre	dorstes(t)	*dorste
PL	durron	durren/dyrren	dorston	dorsten

The syntactic behaviour of DARE in Old English is covered briefly in the surveys by Callaway (1913: 79–83) and Visser (1963: §§ 1355–1364). Mitchell (1985) does not treat it, presumably because he considers it to fall outside of the domain of syntax proper (see Chapter 2, p. 17). However, it has since been discussed at greater length by Molencki (2002) and Tomaszewska (2014). The prevailing opinion is that Old English DARE occurs almost exclusively with \emptyset -infinitive complements and has a number of other properties normally associated with the modals, such as the possibility of occurring with post-verbal ellipsis, as in (4). (On the question of *to*-infinitives after DARE in Old English, see below.) It is also attested in conjunction with other modals, as in (5), which some commentators have considered another ‘modal-like’ property (see Molencki 2002: 369; Tomaszewska 2014: 67).

- (4) *Se ðe forstolen flæsc find-eð ⁊ gedyrn-eð, gif he dear, he mot mid*
 DEM.M REL steal:PTCP meat find-3SG and conceal-3SG if he DARE he MOT with
að-e gecyð-an þæt he hit ag-e
 oath-DAT proclaim-INF COMP he it own-SBJV
 ‘Whoever finds stolen meat and conceals it, he may, if he dare, swear with an
 oath that he owns it’ [LawIne, 17]
- (5) *þæt syndon þa ðe nellað oððe ne cunnon oððon ne durren*
 that COP:PL DEM.PL REL NEG:WILL:PL OR NEG CAN:PL OR NEG DARE:PL
folc wið synn-a gewarn-ian and synn-a gestyr-an
 people against sin-PL.GEN warn-PL and sin-PL.GEN divert-INF
 ‘Those [sc. bad priest] are the ones who will not or cannot or dare not warn
 people against and lead them away from sin’ [WPol 2.1.1, 123]

It is clear from the record that several morphosyntactic changes have happened to *DARE* since Old English, some of which have been taken as evidence for a ‘counterdirectional’ change from more to less auxiliarized status, i.e. as an indication of degrammaticalization. In the literature at least six different developments in *DARE* have been noted:

1. The apparent development of a less ‘bleached’ meaning of *DARE* in Middle and Modern English compared to Old English (Beths 1999; Tomaszewska 2014).
2. The confusion in Middle English of *DARE* and the verb *THARF* ‘need’, which eventually becomes obsolete (Molencki 2005).
3. The appearance of *to*-infinitives after *DARE* instead of the older \emptyset -infinitive pattern (Nagle 1989; Beths 1999; Schlüter 2010).
4. The occurrence of *do*-support with *DARE* where the core modals have the *NICE* properties (Warner 1993; Beths 1999).
5. The appearance of weak-verb, i.e. regular, morphology, with *PRS.3SG dares* instead of earlier *dare* and *PST dared* instead of earlier *durst* (Reed 1981; Nagle 1989; Beths 1999; Schlüter 2010).
6. The development of transitive *DARE*, as in (3) above (Reed 1981; Nagle 1989; Warner 1993; Beths 1999).

According to Warner (1993), *DARE* begins to occur with *do*-support in the seventeenth century, and the transitive pattern also develops in the Early Modern English period. Warner considers this a ‘lexemic split’ between more verb-like and more auxiliary-like uses and takes it to be an indication of ‘a sharpening of the distinctness of modals’ as a separate category (Warner 1993: 203). According to Warner, the increased formal and structural coherence of the category of modal auxiliaries forced the full-verb uses of *DARE* to become more clearly distinct from the auxiliary ones. A similar interpretation was also suggested in Reed’s (1981) dissertation on the Early Modern English modals, where a ‘new weak verb’ *dare/dared* (Reed 1981: 236) is said to have split from the older preterite-present, and by Nagle (1989: 95), who suggests that *DARE* began to ‘gravitate’ away from the modal group towards the end of the Middle English period.

Beths (1999) appears to have been the first to suggest that the ‘split development’ of *DARE* is an exception to the alleged unidirectionality of grammaticalization. Beths argues on both morphosyntactic and semantic grounds that *DARE* was an auxiliary in Old English: it did not occur with noun phrase objects, it was morphologically irregular, and in many cases it had a ‘bleached’ meaning. This auxiliary status was maintained through Middle English until Early Modern English, when ‘more verbal characteristics, including full verb morphology, appear in rapid succession’ in the sixteenth century (Beths 1999: 1094). At the same time, the ‘auxiliary’ variant of *DARE* continued to develop in the same (expected) direction as the other modals, leading to the present-day situation with the variation between more and less auxiliary-like patterns (as discussed in Section 6.2.1 above).

Beths's analysis has been referred to and accepted by a number of scholars in the grammaticalization literature (Andersen 2008; Schlüter 2010; Tomaszewska 2014), but also called into question. In a discussion of possible counterexamples to the unidirectionality hypothesis, Traugott (2001) argues that the history of DARE merely shows changing frequencies of the different patterns rather than a clear case of degrammaticalization. According to Traugott, the 'main-verb' use with the *to*-infinitive did not develop out of the use with the \emptyset -infinitive, but is always attested in the data; it was just marginal in the earlier periods and then became more frequent in Early Modern English (see Traugott 2001: 9). Haspelmath (2004: 34) and Norde (2009) both accept Traugott's account and reject DARE as a case of degrammaticalization. Norde, referring to both English DARE and similar claims made about Danish *turde* (see Chapter 2, Section 2.3.3), argues that since the observed changes are purely formal and more and less 'auxiliarized' variants have always been available, these verbs do not count as valid cases of degrammaticalization (see Norde 2009: 121–122, 136–137). According to Norde's definition of this notion, the less grammaticalized variant has to develop out of the more grammaticalized one diachronically:

In degrammaticalization, 'less' grammaticalized functions must be shown to derive from 'more' grammaticalized functions. If they continue, or develop out of, a less grammatical function that had always been around, however marginalized, the change will not qualify as a case of degrammaticalization. (Norde 2009: 122)

This is also the position of Haspelmath (2004), who uses the term 'retraction' to describe a situation where a more grammaticalized function becomes less frequent and gives way to a less grammaticalized function that has always been in the language. Notably, though, both Haspelmath and Norde rely on Traugott's account, which does not actually present any evidence that DARE was used with *to*-infinitives before Early Modern English. Beths in fact explicitly states that it was not. I will return to the issue of *to*-infinitives in Section 6.4.2.

In a corpus study of Early and Late Modern English data, Schlüter (2010: 305) reaches the opposite conclusion to Traugott (2001), arguing that there is 'fairly consistent evidence of the de-auxiliarization' of DARE. The formal features which Schlüter considers characteristic of full-verb status—regular morphology and complementation with the *to*-infinitive—both develop in Early Modern English and gradually become more frequent. In addition, Schlüter finds that the overall frequency of DARE decreased in the period, which is not expected for an item undergoing grammaticalization: 'a decreasing use of auxiliary forms and a proportionately increasing use of full verb forms along with an overall reduction in numbers is indicative of a clear process of de-auxiliarization' (Schlüter 2010: 320).⁴

⁴ For a similar appeal to discourse frequency as an indicator of grammaticalization, see Taeymans's (2004a) contribution on PDE. As far as I can tell, neither of these authors considers the possibility that the changing frequencies may reflect pragmatic or stylistic changes in the data rather than grammatical changes to DARE itself.

6.2.3 Interim summary

As the above survey suggests, *DARE* in both earlier and Present-Day English has been researched and discussed extensively and has been interpreted in different ways. Some have analysed it as a ‘split’ modal with an auxiliary and a main-verb variant, whereas others have stressed the fuzzy boundaries and high frequency of ‘blends’ between the different variants. On the diachronic development, several authors have described it as an example of a development from a more to a less ‘auxiliarized’ status, but others have argued that *DARE* does not qualify as an instance of degrammaticalization or ‘de-auxiliarization’.

Because a number of descriptive accounts of *DARE* in earlier English are already available (e.g. Molencki 2002, 2004; Schlüter 2010, along with copious examples in Visser 1963) and the general contours of its history are well known, I decided not to carry out a quantitative study of *DARE*, but instead focus on the interpretation of the developments that have been observed. I consider most of the diachronic changes mentioned above (p. 171) to be well established, even if the dating of some of the innovations is necessarily somewhat uncertain.

The remainder of the chapter discusses four of the six observed changes listed above: the alleged change from more to less ‘bleached’ semantics, the formal interaction with *THARF* in Middle English, the appearance of *to*-infinitives, and the development of transitive *DARE*. The first of these I will contest, whereas I consider the other three established in the data. However, I will argue that none of the observed changes are indications of a decreasing grammatical status, but that *DARE* does not provide a good example of grammaticalization either. Instead, I will suggest that an analogy-based approach to language change can account straightforwardly for all of the observed changes.

6.3 *DARE* and other ‘courage’ verbs

6.3.1 Old English ‘courage’ verbs

One characteristic of *DARE* in early English which has been taken as evidence of auxiliary status is its co-occurrence in Old English with other ‘courage’ verbs, such as *gedyrstlæcan* ‘venture, be bold, presume’.⁵ An example from Ælfric is given in (6). The Present-Day English translation is from Beths (1999: 1081):

- (6) *Hwa dear nu gedyrstlæcan þæt he derige þam folce*
 who *DARE* now dare? COMP he harm:3SG.SBJV DEM.DAT people:DAT
 ‘Who would now dare to harm these people.’ [ÆHomM 14, 306]

Beths (1999: 1081) claims that this kind of co-occurrence ‘is characteristic of verbs undergoing grammaticalization and is an indication of the bleaching of the (lexical) meaning of the verb’. Tomaszewska (2014: 70) also takes such attestations as indica-

⁵ An earlier version of Section 6.3 appeared as part of the paper ‘The status of Old English *dare* revisited’ (Gregersen 2017a).

tive of semantic bleaching, and in her textbook Los (2015: 112) writes that *dare* appears to have been ‘so bleached of lexical content’ that examples like (6) are quite common in Old English. Similarly, in a discussion of the status of modals in Old English, Loureiro-Porto writes, ‘It is clearly redundant to say *who dares to dare?*, so the presence of the second *dare* must be due to the semantic void of the pre-modal **durran*’ (Loureiro-Porto 2009b: 69).

I believe a closer semantic analysis reveals that Old English DARE was not redundant in examples like (6), and that it was functionally distinct from other ‘courage’ verbs like *gedyrstlæcan*. Consequently, (6) and similar examples do not provide evidence of an especially ‘bleached’ semantics in Old English, but have the sense of DARE which is still the usual one in Present-Day English, ‘have sufficient courage’. I will compare the Old English pattern where DARE combines with another ‘courage’ verb with a similar pattern in Present-Day Danish, where the two verbs *turde* ‘dare’ and *vove* ‘dare, venture’ are used together. I do not thereby intend to suggest that the Old English and Present-Day Danish patterns are parallel in all respects, only that the combination of two ‘courage’ verbs need not imply exact synonymy.

In the Old English record, DARE is far from the only verb with a meaning having to do with courage. At least five different weak verbs, from three different roots, are attested with meanings like ‘dare, venture, be bold’: *gedyrstigan*, *(ge)dyrstlæcan*, *(ge)neðan*, *geþristian*/*apristian*, and *(ge)þristlæcan*.⁶ Some of them are attested both with and without the prefix *ge-*, as indicated by the brackets. It is not clear to what extent these verbs were used interchangeably, or whether different dialects had different preferences, but their frequencies in the surviving material differ considerably. In the DOEC the form *apristian* is attested only twice, while *gedyrstlæcan* occurs c.70 times.⁷ The different ‘courage’ verbs are listed in Table 6.3 along with the relevant lemmas in Bosworth–Toller and the DOE and the approximate frequencies in the DOEC. Where DOE entries were available, the frequency counts are taken from those; in the other cases I searched the DOEC for possible forms. Thus, it cannot be ruled out that some attestations were overlooked.

The final column in Table 6.3 indicates the verbs that are attested as complements of DARE in the DOEC. There are three such verbs, all of them with the prefix *ge-*, namely *gedyrstlæcan*, *geþristlæcan*, and *geneðan*. These are also the three most frequently attested verbs in the table.

⁶ Beths (1999: 1081) and Tomaszewska (2014: 68) both consider *gedyrstlæcan* and *geþristlæcan* to be variants of the same verb, but they are actually derived from different roots, *dyrst-* and *þrist-*. The former also forms the basis of OE *dyrstig* ‘bold’ and ultimately goes back to the same PIE root as DARE (LIV, s.v. **dʰers-* ‘Mut fassen’). The latter is related to another OE adjective, *þriste* ‘bold’, and German *dreist* ‘bold, impudent’, which according to Kluge–Seebold (s.v. *dreist*) is derived from the same root as German *drängen/dringen*, Old English *þringan* ‘press, push’ (LIV, s.v. **trenk-* ‘drängen’).

⁷ The actual frequency of *gedyrstlæcan* in the DOEC is even higher, with c.125 attestations. However, this is partly due to its high frequency in a single text, the OE Rule of St Benedict, which is included in the corpus in more than one version. If only one version [BenR] is included in the count, the frequency of *gedyrstlæcan* falls to c.70.

Table 6.3: Old English ‘courage’ verbs

	Bosworth–Toller	DOE	Att.	+ DARE
DYRST-	ge-dyrstigan	ge-dyrstigian	7	
	dyrst-læcan	dyrst-læcan	11	
DYRST+LÆC-	ge-dyrst-læcan	ge-dyrst-læcan	70	✓
	neðan		12	
NED-	ge-neðan		21	✓
	ge-þristian		3	
PRIST-	a-þristian	a-þristian	2	
	þrist-læcan		2	
PRIST+LÆC-	ge-þristlæcan		49	✓

The three ‘courage’ verbs which co-occur with *DARE* are all attested with complement clauses and directional expressions. An example with *geþristlæcan* and a complement clause is given in (7). An example with *geneðan* and a directional expression (*on þam eorðscræfe*) is given in (8).⁸

(7) COMPLEMENT CLAUSE

Ne eac sceal nan mon geþristlæcan þæt he aht stīplic-es
 NEG also SHALL no person venture:INF COMP he anything harsh-GEN
spræc-e ongean his abbod
 say-SBJV against his abbot

‘Furthermore, no one should be so presumptuous that he will say anything harsh to his abbot’ [BenR, 3.16.2]

(8) DIRECTIONAL EXPRESSION

Se geneþeð to ærest eal-ra on þam eorð+scræf-e
 DEM.M venture:3SG to first all-GEN.PL into DEM.DAT earth+cave-DAT

‘It ventures into the grave first of all’ [Soul II, 112]

⁸ I gloss all of the three ‘courage’ verbs as ‘venture’ in the following, as this seems to be the PDE verb which most often fits the contexts. As my translations indicate, however, there are many other possible paraphrases in PDE.

In addition, I have found noun phrase arguments after *gedyrstlæcan* and *geneðan*—see (9) for an example—and infinitives (with or without *to*) after *gedyrstlæcan* and *gepristlæcan*.⁹ (10) gives an example with *gedyrstlæcan* and a *to*-infinitive.

(9) NOUN PHRASE

ne he nan þing furðor ne gedyrstlæce, þonne him from his
 nor he no thing further NEG venture:SBJV than him.DAT by his
abbod-e beboden sy
 abbot-DAT instruct:PTCP COP.3SG.SBJV
 ‘Nor should he undertake [*or presume to do*] anything else than what he is
 instructed by his abbot’ [BenR, 62.111.20]

(10) INFINITIVE PHRASE

He gedyrstlæhte to ganne upon ðære sæ þurh crist
 he venture:PST to walk:INFL on DEM.F.DAT sea(F) through Christ
 ‘He dared [*or ventured*] to walk on the water with the help of Christ’
 [ÆCHom II, 28, 227.197]

The three verbs are found both in assertive contexts, such as in (8) and (10), and non-assertive contexts, e.g. (7) and (9). This already suggests that there may have been a linguistic ‘division of labour’ between these verbs on the one hand and DARE on the other, for as Molencki (2002: 371–373) observes, DARE in Old English appears to have been restricted to non-assertive contexts. Furthermore, while there are a few isolated attestations of DARE without an infinitive, according to the DOE, more than 90% of the attestations are with Ø-infinitives.

I believe a comparison with another Germanic language, Present-Day Danish, may shed more light on the Old English situation, for it seems to show a very similar distribution of different ‘courage’ verbs. While the fact that a living language like Present-Day Danish and an earlier language stage like Old English show a similar pattern does not prove that a given analysis is correct, it can at least be used to argue that the analysis in question is possible.

6.3.2 Comparison with Danish

Just like Old English, Present-Day Danish has more than one verb expressing courage or audacity. The two verbs I will discuss here are the preterite-present verb *turde* ‘dare’ and the weak verb *vove* ‘venture, dare, be bold’, which are sometimes used

⁹ Toller *Supp.* (s.v. *ge-neþan*, sense II.c.) suggests that there is also an isolated example of *geneðan* with an infinitive. The variant reading *geneðe* is given from a version of the *Dialogues* of Gregory the Great where another version has DARE + INF. However, cross-checking it with the edition (Hecht 1900: 12) and a facsimile of the MS reveals that this is coordinated with a form of DARE and that there is a lacuna in the MS. The damaged word is probably *ne* ‘nor’, but since this is a conjecture the exact analysis of the example must be regarded as uncertain: ‘þæt séne durre | [.]e ne geneðe béon pisdomes lareop oðres monnes’ (BL, Cotton MS Otho C. i/2, f. 4^v), ‘that he does not dare [*nor venture to*] be the teacher of wisdom to another’.

together in the combination *turde vove*.¹⁰ Like Old English *DARE*, Danish *turde* seems to be used primarily with infinitives in non-assertive contexts, while *vove* is also used in assertive contexts, and occurs with infinitives, with direct objects (e.g. *vove livet* ‘risk one’s life’), and reflexively with directional adverbs (e.g. *vove sig ud* ‘venture out’). To the best of my knowledge, there are no published linguistic studies on the meaning and use of these two verbs. In the following I rely on data from KorpusDK, searches on the internet, and my own linguistic intuitions.

A small-scale search in KorpusDK confirms the general profile of the two verbs sketched in the preceding paragraph. Of 50 randomly selected instances of *vove*, all of the three types ‘infinitive phrase’, ‘noun phrase’, and ‘reflexive + directional’ are found, as shown in Table 6.4; two examples had no complement and were classified as ‘intransitive’ (e.g. *geniet, der vover* ‘the genius who has courage’). By contrast, of 50 random examples of *turde*, almost all have an infinitive complement.¹¹ Only two exceptions were found, both of which were classified as noun phrases. In both of these, however, the noun phrase clearly refers to a state of affairs, as in (11):

- (11) *Og konkurrenc-en på landbrugs+produkt-er er alt for stærk til at*
and competition-DEF on agriculture+product-PL COP far too fierce for COMP
Vestbredden og Gaza vil få nogen_som_helst fortrinsret. Det tør
West.Bank:DEF and G. will get.INF any privilege that dare
og vil EF ikke.
and will EC NEG
‘And the competition concerning agricultural products is far too strong for the West Bank and Gaza to get any special treatment. The European Community does not dare or want that [sc. to happen]’ (KorpusDK, 1987 *Weekendavisen*)

Table 6.4: Danish ‘courage’ verbs: complement types

	<i>turde</i>	<i>vove</i>
Infinitive phrase	48	19
Noun phrase	2	20
REFL + directional	—	9
Intransitive	—	2
TOTAL	50	50

¹⁰ In spite of appearances Danish *turde* is not directly related to English *DARE*. *DARE* and its West Germanic cognates are ← PGmc **durzan-* (EDPG, q.v.; see also EWN, s.v. *durven*), which is not attested in Scandinavian. Danish *turde* (the ⟨d⟩ is purely orthographic) is ← ON *þora* (de Vries, q.v.), of uncertain etymology. ‘Die erklärungen schwanken’ according to de Vries, but the initial consonant and the single medial -r- preclude a derivation from **durzan-*.

¹¹ Two types were excluded from the concordances: the idiomatic combination of *turde* and *sige* ‘say’, e.g. *jeg tør nok sige* ‘I dare say’ and *det tør siges* ‘you don’t say’, and the collocation of *turde* and *vove* (on which see below). In both of these, of course, *turde* takes an infinitive complement.

On the face of it, the two verbs would appear to occur in the same types of clauses. I divided these into the four categories shown in Table 6.5: negated clauses of any kind vs. assertive, subordinate, and interrogative clauses.¹² As the table shows, the two verbs are attested in all four clause types, although *turde* seems to be less frequent in assertive main clauses, with only 3 occurrences. A closer look at these reveals that they are in fact quite atypical: all three examples contain the polarity-sensitive particle *godt*, which is used to contradict a potential counterargument (see Hansen & Heltoft 2011: 1090–1091); an example is given in (12). This particle has in fact been argued to function as a kind of negation of an implicit negation (Jensen 1997: 156). In other words, even the few apparent assertive examples of *turde* could possibly be analysed as negative polarity contexts.

- (12) *Martin Eriksen [...] har kun vær-et i branch-en i et år=s*
 M. E. has only COP-PTCP in field-DEF.C in INDF.N year(N)=GEN
tid, men han tør godt lægg-e navn til sin kritik
 time but he dare godt put-INF name to REFL.POSS.C criticism(c)
 ‘Martin Eriksen ... has only been in this line of work for about a year, but he is not afraid of stating his criticism in his own name’ (KorpusDK, 1990 *Det fri Aktuelt*)

Table 6.5: Danish ‘courage’ verbs: clause types

		<i>turde</i>	<i>vove</i>
Negated		33	9
Non-negated	Assertive	3	18
	Subordinate	11	22
	Interrogative	3	1
TOTAL		50	50

The examples from KorpusDK suggest that while *turde* and *vove* clearly belong to the same semantic field, their usage differs: *vove* allows a wider range of complement types and occurs without any restrictions in assertive main clauses. It often seems to have a connotation of risk or boldness, as in (13), whereas *turde* merely expresses

¹² The type ‘negated’ includes both negated main and subordinate clauses. The type ‘assertive’ includes non-negated main clauses. ‘Subordinate’ includes non-negated subordinate clauses of various types, such as conditional, relative, and complement clauses.

the presence of the necessary courage for a certain course of action, as in (14). Indeed, changing *turde* in (14) to a form of *vove* would slightly alter the meaning of the example to ‘... that she risked crying’ (or ‘hazarded to cry’).

- (13) *Det er år-et=s først-e lun-e aften, så vi vover at*
 it COP year-DEF.N=GEN first-DEF warm-DEF evening so we venture:PRS to
spis-e udenfor
 eat-INF outside
 ‘It’s the first warm evening of the year, so we take a chance and eat outside’
 (KorpusDK, 1990 *Berlingske Tidende*)
- (14) *Nogle syntes det var godt at hun turde græd-e*
 some think:PST it COP.PST good.N COMP she dare:PST cry-INF
 ‘Some people thought it was good that she dared [or had the courage] to cry.’
 (KorpusDK, 1992 *Det fri Aktuelt*)

One dictionary glosses *turde* ‘have the necessary courage, not be afraid to do something’ and *vove* ‘risk, venture, allow oneself to do something’ (*ODS*, qq.v.; my translations). As the translations of (13) and (14) suggest, *turde* means that the necessary courage for an action is present, while *vove* means something to the effect of ‘perform an action which is somehow risky or audacious’. One could describe this difference in the terms used in Table 6.6.

Table 6.6: Meanings of *turde* and *vove*

<i>turde</i> x	‘have enough courage to do x’
<i>vove</i> x	‘do x, which is risky/audacious’ or ‘risk x’
<i>turde vove</i> x	‘have enough courage to do x, which is risky/audacious’ or ‘have enough courage to risk x’

As Table 6.6 suggests, when the two verbs are used together in the expression *turde vove*, their meanings are combined, and it does not seem to me that *turde* here is semantically ‘bleached’ in any meaningful way. For instance, while (15) without *turde* would still express a lack of courage on the part of the City of Copenhagen, the use of *turde* makes explicit that it is for this reason that they will not take a chance:

- (15) *Ikke mindst af den grund ville det vær-e befri-ende, hvis*
 NEG least for DEM.C reason(c) will:PST it COP-INF relieve-PROG if
København=s Kommune turde vove at lad-e ny-e, frisk-e
 Copenhagen=GEN Municipality dare:PST risk-INF to let-INF new-PL fresh-PL
og forstandig-e arkitekt+øjne giv-e hver deres bud
 and intelligent-PL architect+eye:PL give-INF each their suggestion
 ‘Not least because of this, it would be of relief if the City of Copenhagen
 dared to take a chance and let new, intelligent architects have a fresh look
 and each give their suggestion’ (KorpusDK, 2001 *Jyllands-Posten*)

The compositionality is even clearer in cases like (16), where *vove* is used transitively. Taking out *turde* here would mean that people actually risked their own skin; with *turde*, the example only says that they had the courage to potentially do so:

- (16) *Der var nogen, der turde vove skind-et for frihed-en*
 there COP.PST someone REL dare:PST risk:INF skin-DEF.N for freedom-DEF.C
 ‘There were people who had the courage to risk their own skin for freedom’
 (KorpusDK, 1991 *Berlingske Tidende*)

In light of these observations from Present-Day Danish, I will suggest in the following that the Old English patterns with *gedyrstlæcan*, *gepristlæcan*, and *geneðan* were similar, and that DARE retained its usual meaning even when it was used with these other ‘courage’ verbs. While the verbs were obviously semantically close, just like Present-Day Danish *turde* and *vove*, they were not used in exactly the same way. The verb DARE was used to express a certain mental state—‘have enough courage to do x’—whereas the other three verbs had meanings like ‘do x, which is risky/audacious’. The verbs *gedyrstlæcan* and *gepristlæcan* seem to have been used primarily to express excessive boldness or presumption, while *geneðan* primarily expressed risk.

6.3.3 Co-occurrence patterns in Old English

In order to get a fuller picture of the Old English situation I searched the DOEC and found exactly 10 examples of DARE followed by another ‘courage’ verb: four with *gepristlæcan*, three with *geneðan*, and three with *gedyrstlæcan* (also given in the DOE, s.v. *gedyrstlæcan*, sense 2.e). In one of the attestations *geneðan* is followed by a dative object, and in one *gepristlæcan* occurs with an infinitive; see (19) and (20) below. The remaining eight examples are with complement clauses, such as in (17) and (18).

The example in (17), repeated with more context from (6) above, is mentioned by Beths (1999: 1081) and Los (2015: 112), both of whom gloss *gedyrstlæcan* ‘dare’. But the meaning in the context does not seem to me to be simply ‘Who would now dare to harm these people’, the translation suggested by Beths. The example is from Ælfrics’s retelling of the Book of Esther, from a dialogue after King Ahasuerus has executed Haman for plotting against the Jews. His rhetorical question is, I think, best translated, ‘Who would now dare to be so bold [*or foolhardy*]’, underscoring the impudence and stupidity of trying to hurt the Jews when one knows the fate of

Haman. In other words, *DARE* and *gedyrstlæcan* have different functions here, and *DARE* is not redundant or ‘bleached’, but retains its usual meaning. Compare Beths’s translation cited above with my suggestion in (17):

(17) COMPLEMENT CLAUSE

Se cyning þa andwyrð-e þære cwen-e þus and eac
 DEM.M king then answer-PST DEM.F.DAT queen.DAT thus and also
Mardocheo swiðe mildelice: Aman ic aheng and his æht-a
 Mordecai.DAT very kindly Haman I execute.PST and his possession-PL
þe betæh-te. Hwa dear nu gedyrstlæcan þæt he der-ige
 2SG.DAT hand.over-PST who DARE now venture:INF COMP he harm-SBJV
þam folc-e
 DEM.DAT people-DAT

‘The king then answered the queen and Mordecai very kindly: “I have executed Haman and handed over his possessions to you. Who would now dare to be so foolhardy that he would harm that people [sc. the Jews]?”’
 [ÆHomM 14, 303–306]

Another example with a complement clause is seen in (18), where *gedyrstlæcan* is supported by the degree marker *to þam* ‘to that extent’. Again, *gedyrstlæcan* expresses more than just ‘dare, have enough courage’, and seems to me to be used with a pejorative sense of impudence or presumption.

(18) COMPLEMENT CLAUSE

{*Witodlice þa lareowas þe us lar of com, hi bododan þam hæðenum and þam*
hetelum ehterum and heora lif sealdon for Godes geleafan;}
ac we ne durran nu to þam gedyrstlæcan þæt we Cristen-um
 but we NEG DARE:PL now to DEM.DAT venture:INF COMP we Christian-DAT
cyning-e oððe Cristen-um folc-e God-es bebod-a and
 king-DAT or Christian-DAT people-DAT God-GEN command-PL.GEN and
God-es will-an secg-an
 God-GEN will-OBL say-PL

‘{Verily, the teachers that our knowledge came from preached to the pagans and the evil persecutors, and gave their lives for their faith in God;} but we do not now dare to be so impudent that we will relate God’s commands or will to a Christian king or Christian people.’ [ÆHom 19, 183]

In the example in (19), *geneþan* is used with a dative object with the meaning ‘risk, put at stake’, similarly to the use of Danish *vove* in (16). The verb *dorste* in (19) expresses whether the necessary courage for this action was present:

(19) NOUN PHRASE

Selfa ne dorste under yð-a gewin aldr-e geneþan
 himself NEG DARE.PST under wave-PL.GEN turbulence life-DAT venture:INF
 ‘[Unferð] himself did not dare to put his life at stake under the turbid waves’
 [Beo, 1468]

Finally, in (20) *geðristlæcan* is followed by a \emptyset -infinitive, i.e. the usual complementation pattern of DARE. Again, however, there appears to be a semantic distinction between the two verbs. King Alfred writes that he did not ‘dare to presume’ or ‘dare to take the liberty’ to write down many of his own laws. The verb *geðristlæcan* expresses the excessive boldness and arrogance of such an action rather than just having enough courage to do it—this meaning is, again, expressed by a form of DARE:

- (20) INFINITIVE
Forðam ic ne dorste geðristlæcan þara min-ra awuht fela
 therefore I NEG DARE.PST venture:INF DEM.PL.GEN my-PL.GEN at.all many
on gewrit sett-an, forðam me wæs uncuð hwæt þæs
 in writing put-INF because me.DAT COP.PST unknown what DEM.N.GEN
ðam lic-ian wolde ðe æfter us wær-en
 DEM.PL.DAT please-INF WILL:PST REL after us COP.PST-PL.SBJV
 ‘I did not dare to take the liberty to put down in writing many of my own
 [laws], since it was unknown to me what of it would please those that are to
 come after us’ [LawAfEl, 49.9]

If these readings are correct, it means that the semantics of DARE in contexts like those in (17)–(20) does not differ from ‘prototypical’ uses like the one in (21), where the meaning is also ‘have enough courage to do x’:

- (21) *ic ne deor beo-n min-um fæder ungehyrsum*
 I NEG DARE COPB-INF my-DAT father[DAT] disobedient
 ‘I do not dare to disobey my father’ [LS 7 (Euphr), 105]

However one prefers to analyse Old English DARE, I hope to have shown here that its co-occurrence with the ‘courage’ verbs *gedyrstlæcan*, *geþristlæcan*, and *geneðan* does not provide evidence that it had ‘bleached’ semantics in Old English compared to its use in Present-Day English. From a functional point of view the Old and Present-Day English are in fact very similar, with Old English DARE expressing the notion of sufficient courage discussed in Section 6.2.1. This, of course, does not mean that there have been no changes to DARE at all, only that there seem to be no good semantic reasons for assuming a more ‘auxiliarized’ status of DARE in Old English than today.

6.4 After Old English

I now turn to three of the developments that have been observed in DARE after the Old English period. They are discussed in rough chronological order: the interaction between DARE and THARF is found in the Middle English record, the development of the *to*-infinitive pattern seems to have begun at the very end of the Middle English period, and the transitive use of DARE is apparently first attested in Early Modern English.

6.4.1 *DARE* and *THARF*

One well-known development concerning *DARE* in the Middle English period is its ‘confusion’ or interaction with the modal *THARF* ‘need’, which has been noted in several works (*OED*, s.v. *dare* v.¹; *MED*, s.v. *durren* v.; Visser 1963: §1343; Loureiro-Porto 2009b: 71–72) and discussed at greater length by Molencki (2005). As far as I know, no one in the literature has interpreted this development in terms of grammaticalization or degrammaticalization, and there seems to be little doubt that it was mainly due to the phonological similarity of the two verbs. I wish to discuss it here along with its West Germanic parallels, however, because my suggestion in Section 6.4.3 will be of a similar nature, hinging on the formal similarity between two linguistic items. The fact that *DARE* was susceptible to confusion with *THARF* not just in English, but across the West Germanic family, suggests that such a development is not as exceptional as it might appear.

The Old English verb *THARF* ‘need’ was inherited from Proto-Germanic and belonged to the same inflectional class as *DARE*, the preterite-presents (see Molencki 2002: 364–366; Fulk 2018: 317–323, and references there). Unlike the *DARE* etymon, which is attested only in Gothic and West Germanic, *THARF* is found in all the older Germanic languages. The inflectional paradigm in Old English was similar to that of *DARE* (for which see Table 6.2, p. 170), but the two were clearly distinct verbs at this stage: *DARE* has an initial stop, *THARF* an initial dental fricative /θ/ (variously spelt ⟨þ⟩ or ⟨ð⟩) plus a stem-final labiovelar fricative /f/. See Table 6.7 for the inflectional paradigm of *THARF* in Old English. As in the case of *DARE* this is based primarily on Hogg & Fulk (2011), supplemented by searches in the DOEC (the *DOE* entry for *THARF* has not yet been published). The spelling with ⟨þ⟩ represents both ⟨þ⟩ and ⟨ð⟩.

Table 6.7: Paradigm of Old English *THARF*

	PRS		PST	
	IND	SBJV	IND	SBJV
1/3SG	þearf	þurfe/þyrfe	þorfte	þorfte
2SG	þearft	þurfe/þyrfe	þorftes(t)	*þorfte
PL	þurfon	þurfen/þyrfen	þorfton	*þorften

The formal and semantic properties of *THARF* in Old and Middle English are investigated in detail by Loureiro-Porto (2009b: 55–108). In Old English the verb was almost exclusively used in negative contexts (‘need not, do not have to’), as in (22), from the Old English translation of Exodus:

- (22) *ic wille eow forlæt-an 7 ge ne þurfon her leng wun-ian.*
 I WILL:1SG 2PL.ACC let-INF and 2PL NEG *THARF*:PL here longer remain-INF
 ‘I [sc. Pharaoh] will let you go and you will not have to remain here any longer.’ [Exod, 9.28]

In the Middle English period THARF becomes increasingly rare and is eventually replaced completely by NEED (see Figure 5.6 on p. 143). Some have considered the disappearance of THARF a result of its confusion with DARE. According to Visser, the final *-f* was often dropped from THARF in Middle English, leaving the stem *þar-*, *þor-*, *þur-*, which could easily be confused with *dar-*, *dor-*, *dur-*. Visser (1963: §1343) gives examples of ‘confused’ uses from the period c.1200 to c.1425. The *MED* (s.v. *durren* v., *thurven* v.) also has attestations from the thirteenth to the fifteenth century. The confusion goes both ways: forms with initial *d-* are found with the meaning ‘need’ instead of expected ‘dare’, as in (23), and forms with *þ-/th-* are found with the meaning ‘dare’ rather than ‘need’. Compare the quotation from one version of the legend of St Brendan in (24a) with the version in my Early Middle English corpus in (24b).

- (23) *Þe see geþ him al aboute · he stond as in an yle ·*
Of fon hii dorre þe lasse doute · bote hit be þorȝ gyle
Of folc of þe sulue lond · as me haþ iseye ȝwile
 ‘The sea goes all around it [sc. England]; it stands as an island. Enemies they need to worry less about, unless it is because of deceit of people of the same land, as has been seen sometimes’ [eme.robgo, 3–5]
- (24) a. *Let ous habbe oure felawe [...] For we ne thore oure maister i-seo er we him habbe i-brouȝt*
 ‘Let us have our fellow ... For we dare not see our master before we have brought him’ (*South English Legendary*, MS Harley 2277; *MED*, s.v. *thurven* v., sense 8)
- b. *Lat us habbe ore felawe, ant to helle leden him sone.*
For we ne dorren ore mayster i-seo, are we him habben i-brouȝt.
 ‘Let us have our fellow and take him to Hell at once. For we dare not see our master before we have brought him.’ [eme.seleg, 236]

Such uses do not appear to be restricted to one particular geographical area. The *MED* entries contain examples from East Midlands, West Midlands, and Southern manuscripts.¹³ While the phonemes /d/, /ð/, and /θ/ were generally kept apart in Middle English, there are a number of well-known examples of sporadic lenition of /d/ in high-frequency words.¹⁴ And in some areas, most prominently the southeast, the development /ð/ → /d/ is attested in a number of function words (Samuels 1972: 95). The confusion between forms like *dar* and *þar* thus fits a more general tendency in Middle English. Molencki (2005: 152–153) also suggests that the meaning and use of DARE and THARF may have contributed to the confusion. The two verbs were both predominantly used in non-assertive contexts, and according to Molencki, there are a number of early attestations, e.g. in the *Ormulum* [eme.ormulum], where both DARE

¹³ There is also at least one example from a manuscript of Northern provenance in the *MED* entry, from a version of the *Cursor Mundi* (Göttingen, Universitätsbibliothek, MS Theol. 107). The eLALME locates this in Yorkshire. The southwestern counties (Devon, Somerset, and Gloucestershire) seem especially well represented among the examples cited in the *MED*; whether this is coincidental or not ought to be investigated.

¹⁴ Such as *mother*, *father*, and *weather* (OED, qq.v) ← OE *modor*, *fæder*, and *weder*.

and *THARF* appear with ‘secondary’ modal meanings which may have been difficult to distinguish. However, it is clear from Molencki’s discussion that he regards the phonetic overlap as the main cause of the confusion of the verbs—the potential semantic overlap just ‘furthered’ the process (Molencki 2005: 153). On the later disappearance of *THARF*, Molencki writes that this happened both because of the confusion with *DARE* and because *THARF* was an ‘odd man out’ morphosyntactically, because it had become impersonal by Late Middle English (as discussed by Loureiro-Porto 2009b: 98–100; see Chapter 5). Thus *THARF* died out, ‘whereas its synonym *need* survived as a better candidate, because it was phonetically and semantically distinct and took nominative subjects, thus readily going over to the class of personal verbs’ (Molencki 2005: 157).¹⁵

West Germanic parallels

The cognates of *DARE* and *THARF* are attested across the older West Germanic languages, but their fates differ. Molencki (2005: 158) very briefly summarizes the developments in three of them: Dutch, (High) German, and West Frisian.¹⁶ The changes are surveyed on the basis of etymological dictionaries and reference works, but only a few forms—and no examples in context—are cited. In order to make the comparison more explicit I will summarize the developments here with the help of diagrams like Figure 6.1, which shows the development of *DARE* and *THARF* from Old to Modern English. The dashed lines represent the interaction or confusion between the two verbs in Middle English. The line representing *THARF* ends to indicate the eventual obsolescence of this verb. Such diagrams are of course only very crude simplifications of complex linguistic developments spanning several centuries, but as long as this is kept in mind they should, I hope, help clarify the similarities and differences between the languages. In addition to the three languages mentioned by Molencki I will discuss another, lesser known, West Germanic language, which shows that confusion between *DARE* and *THARF* was not the only possible outcome.

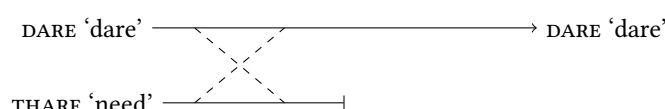


Figure 6.1: *DARE* and *THARF* in English

¹⁵ Loureiro-Porto (2013) suggests a different explanation for the disappearance of *THARF*, namely that it was a result of the replacement of the noun *þearf* by the noun *neod* in the 12th c. This replacement, in turn, was triggered by the decreasing morphological productivity of *þearf*. However, Loureiro-Porto’s argument against the ‘confusion’ hypothesis, that the verbs *DARE* and *THARF* were probably not homonymous in all forms (Loureiro-Porto 2013: 35), does not seem all that convincing: evidently there was also confusion between the verbs in forms that were not homonymous (e.g. *þerftou* for *darstþov*; *MED*, s.v. *thurven* v., sense 8), and there also seems to have been analogical levelling between the paradigms—the *MED* also gives forms like *þST þerste/þorste* instead of expected *þorfte*.

¹⁶ Molencki only refers to the situation in Middle Frisian and in ‘modern times’ (Molencki 2005: 158) without specifying which modern Frisian language is meant. However, it is clear from the forms and references that only modern West Frisian was surveyed, not any of the East or North Frisian languages.

A development closely mirroring the English one is found in West Frisian, where the cognate of THARF was lost, and the cognate of DARE (INF *doare*, PRS.1/3SG *doar*) survives with its original meaning ‘dare’. In Old Frisian both verbs are attested, the DARE etymon in the expected form (PRS.1/3SG *dor/dur*) and the cognate of THARF with occasional loss of the stem-final consonant: *thorf/thor* or *thurf/thur*. The examples in (25) are from the same manuscript, the fifteenth-century Codex Unia (which survives only in a seventeenth-century transcription by the philologist Franciscus Junius; the original itself is lost):

(25) Old West Frisian (15th c.)

- a. *tha worden se so sere forfered fan there grislika*
 then become:PST:PL they so very afraid of DEM.F.DAT awful:DEF
bere th(et) nemma ne libba ne dorste er Moyses
 commotion(F) COMP nobody NEG live:INF NEG DARE.PST before Moses
fan tha birghe com
 of DEM.M.DAT mountain(M):DAT come.PST
 ‘Then they were so terrified of that awful commotion that no one dared to remain there until Moses came back down from the mountain’
- b. *and thi ther nenne decma ne undfocht, thi ne thor*
 and DEM.M REL no:M.ACC tithe(M) NEG receive.3SG DEM.M NEG THARF
nenne thianist duan
 no:M.ACC service(M) do.INF
 ‘And whoever does not receive any tithes, he does not have to do service’
 (MS Junius 49 [‘Codex Unia’]; Sytsema 2012)

However, Hofmann–Popkema (s.v. *dura*) also mention ‘brauchen’ as a recorded meaning of the DARE etymon in Old Frisian, suggesting that there may have been some interaction. I have not been able to find any studies investigating this, so the diagram in Figure 6.2 must be regarded as somewhat tentative. In any case, the THARF etymon seems to have died out by the nineteenth century, as neither Dykstra (*Friesch Woordenboek*) nor the *WFT* mentions it.

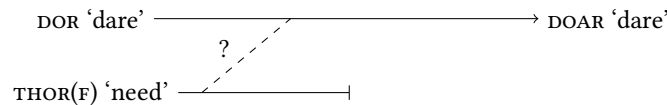


Figure 6.2: Cognates of DARE and THARF in West Frisian

In contrast to West Frisian, Sölring, one of the North Frisian languages, has kept the cognates of DARE (*dört*) and THARF (*tört*) as separate lexemes (see Lasswell 1998: 157, 164). Both are irregular and have Ø-marked past-tense forms, but judging from

the examples in Lasswell's grammar they are kept distinct. Molencki's (2005: 158) categorical assertion that the confusion of the DARE and THARF etyma 'affected all the Germanic languages' is thus inaccurate.

(26) Sölring (North Frisian)

- a. *En hi dōrt det ek sii tö di Skuulmaister*
and he DARE that NEG say.INF to the schoolmaster
'And he didn't dare tell it to the schoolmaster' (Lasswell 1998: 321)
- b. *Em tört di Düüwel ek röp, hi kumt fan salev*
one THARF the devil NEG call.INF he come:3SG of self
'You don't need to call the devil, he'll come of his own accord' (Lasswell 1998: 253)

DOR 'dare' —————→ DÖRT 'dare'

THOR(F) 'need' —————→ TÖRT 'need'

Figure 6.3: Cognates of DARE and THARF in Sölring

In High German the state of affairs is rather different.¹⁷ Only the cognate of THARF (PRS.3SG *darf*, INF *dürfen*) survives to the present day. The cognate of DARE—PRS.3SG *ge)tar*, INF *ge)turren* (usually with the prefix *ge-*)—died out in the early modern period and was replaced by *wagen* 'dare, venture' (see Ebert et al. 1993: § M 141–142). As is well known, however, the meaning of *dürfen* has changed from 'need' to 'may' (Fritz 1997: 10–11, 111–112; see also Chapter 8). In the earliest sources its use is similar to that of Old English THARF (AWB, s.v. *thurfan*):

(27) Old High German

- Er uuëiz ðia tougeni des herzen. bediu nedarf er*
he knows DEM.F.ACC secret(F) DEM.N.GEN heart(N):GEN by.that NEG:THARF he
frâgen
ask:INF
'He knows the secrets of the heart; about this he does not need to ask'
(Notker, Psalm 43; Tax 1979: 151)

However, there evidently was interaction between the two verbs in German as well. Fritz speaks of 'das *turren/dürfen*-Problem' because the development 'noch nicht befriedigend erklärt ist' (Fritz 1997: 111). In the Early New High German period one

¹⁷ I only consider the development in standard High German here, but note in passing that there is much variation across spoken dialects (see Fritz 1997: 79–81). Fritz mentions the use of *dürfen* in the older sense 'need' in Swabian and Swiss German (e.g. Swabian *Dersch es bloß sage* 'Du brauchst es nur zu sagen', p. 80).

finds examples like (28), where the form is that of *dürfen* but the meaning that of *(ge)turren*, and (29), with the opposite state of affairs: in (29) the meaning is that of *dürfen* but the form clearly that of *(ge)turren*, including the prefix *ge-*.

- (28) Early New High German (1599)

auß Forcht der Hispanier dorfft kein Jndianer mit vns
 from fear DEM.PL.GEN Spaniard[PL] THARF:PST no Indian with us
reden
 speak:INF

‘for fear of the Spaniards no Indian dared to speak with us’ (Raleigh.
America 1, 27; quoted from *FWB*, s.v. *dürfen*, sense 3)

- (29) Early New High German (late 15th c.)

Zu mercken, daz zu Osternach am Perg und im dorffe nymant
 to note:INF COMP at O. on:DAT hill and in:DAT village:DAT nobody
schencken getar on laub der herschafft
 pour:INF DARE without permission DEM.F.GEN lordship(F)

‘And note that no one in Osternach on the hill or in the village is allowed to
 serve alcohol without the permission of the lord’ (BAdW 1902: 525; *FWB*, s.v.
geturren, sense 2)

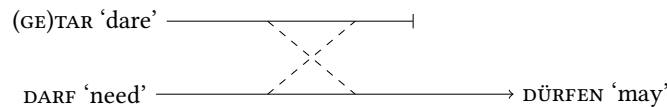


Figure 6.4: Cognates of DARE and THARF in High German

In (standard) Dutch, finally, yet another outcome is observed. Here the two verbs have merged entirely: Present-Day Dutch *durven* 'dare' has the form of the THARF etymon but the meaning of DARE. As discussed in the historical dictionaries (*MNW*, s.vv. *dorren*, *dorven*; *WNT*, s.v. *durven*; *EWN*, id.) this is already attested in the Middle Dutch period, when the cognates of THARF (*durven/dorven* 'need') and DARE (*dorren* 'dare') began to be confused. In the early modern period the form *durven* replaces *dorren* in the sense 'dare', and the meaning 'need' is taken over by the verb *hoeven*, the cognate of English *BEHOVE* (see p. 143, n. 54). According to the *WNT* and *EWN*, the primary cause of the merger was formal: because of analogical changes the past-tense forms of *durven/dorven* and *dorren* had become identical in Middle Dutch (PST.1/3SG *dorste*) and hence there was already a partial overlap. However, just as in the German and English cases either verb is attested with the expected meaning of the other. In Middle Dutch the cognate of DARE is found with the meaning 'need', as shown in (30);

for additional examples see *MNW*, s.v. *dorren*¹, sense 2). The diagram in Figure 6.5 shows the developments in a simplified manner, with the solid line representing the eventual merger of the two verbs.

(30) Late Middle Dutch (late 15th c.)

Wi en dorren jaghers noch honden duchten

we NEG DARE:PL hunter:PL nor hound:PL fear:PL

‘We [sc. Reinaert and Tibert] need not fear either hunters or hounds’

(*Reinaert de Vos* [Brussels, KB 14601], quoted from *MNW*, s.v. *dorren*¹)

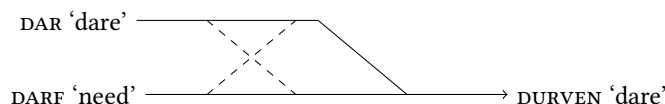


Figure 6.5: Cognates of DARE and THARF in Dutch

To sum up this brief survey of the West Germanic developments, we have seen that the interaction between DARE and THARF was by no means limited to early English, but happened in at least three other West Germanic languages. Importantly, however, the languages considered here all show more or less divergent developments, attesting to the multiple possible outcomes of the change. If it is of significance that most of the languages have lost one of the lexemes, it is no less significant that they have not done so in exactly the same way. Only West Frisian appears to show a development closely resembling the English one. In German it was the other verb that died out, whereas in Dutch the two of them merged. I will return to this type of change in the discussion of ‘multiple-source’ constructions further below.

6.4.2 The appearance of *to*-infinitives

Another central question in the history of DARE is when and how the use with a *to*-infinitive complement developed.¹⁸ The *to*-infinitive pattern is commonly considered less ‘auxiliarized’ than the \emptyset -infinitive pattern (see Section 6.2.1), and if the former can be shown to have developed out of the latter, this might mean that DARE has developed from a more to a less auxiliarized item. This is indeed how the history of DARE has been interpreted by a number of scholars (e.g. Beths 1999; Schlüter 2010; Bemposta-Rivas 2019). However, there has been some disagreement both about when *to*-infinitives are first attested, and how the development is to be interpreted. I will consider the first of these questions in this section and return to the other issue in the discussion in Section 6.5.

It is generally agreed that DARE only took \emptyset -infinitive complements in Old English and that *to*-infinitives appear only towards the very end of the Middle English or the beginning of the Early Modern English period. Mitchell (1985: §996) includes

¹⁸ An earlier version of Section 6.4.2 appeared as part of the paper “The status of Old English *dare* revisited” (Gregersen 2017a).

DARE among the verbs that only take \emptyset -infinitives in Old English, and Mustanoja (1960: 530) reports no *to*-infinitives in his Middle English material.¹⁹ However, it has also sometimes been assumed that *to*-infinitives are occasionally recorded in the Old and Middle English material. In Traugott's (2001: 8) unpublished paper this view is ascribed to Beths (1999), although no examples are given. Beths himself in fact states that *to*-infinitives only appear in Early Modern English (see Beths 1999: 1103). On the other hand, a number of examples have indeed been suggested in the literature, but as I will show in this section, most of these do not stand up to closer scrutiny.

In a recent study of DARE in Old English, Tomaszewska (2014: 68–69) writes that while the verb usually occurs with the \emptyset -infinitive, *to*-infinitives are occasionally found. Four potential examples from the DOEC are suggested, all of them with *to* but without the usual inflectional ending *-e*, e.g. *to genealæcean* instead of the expected *to genealæceanne* 'to approach, to come closer'. While such 'uninflected' *to*-infinitives are certainly attested in Old English (though more frequently in poetry than prose; Hogg & Fulk 2011: 224), I believe alternative interpretations are preferable for all four examples. In two of them, given here in (31) and (32a), *to* is a postposition following a pronoun. The verb *genealæcan*, as in (31), can occur with either an object or an adpositional phrase with *to*, and the supplement to Bosworth–Toller explicitly mentions that *to* can occur postpositionally (e.g. *He hym to genealæhte*; Toller *Supp.*, s.v. *ge-nealæcan*).

- (31) *þa ne dorste he him to genealæce-an*
 then NEG DARE.PST he him.DAT to approach-INF
 'then he didn't dare come closer to him' [GD 2 (H), 14.132.9]

¹⁹ Callaway (1913: 82) reports a single inflected infinitive without *to* in the OE Rule of St Benedict: ... *and hi nan man gegremianne dyrre*. This is evidently not an infinitive ending, but the preverbal negation *ne* with a missing word boundary. The DOEC compilers correct the example to *and hi nan man gegremian ne dyrre* [BenRApp, 1.135.4] 'and no one dares to provoke them'.

In (32a), similarly, *to* is not the infinitive particle, but a postposition following the pronoun *him*. Compare the parallel example in (32b), with the finite form *teo* makes it clear that *to* cannot be the infinitive particle (for additional examples of the collocation *teon/geteon to*, see Toller *Supp.*, s.v. *geteon*, sense IV.4).

- (32) a. *Hu mæg oððe hu dear ænig læwede man him to geteo-n þurh*
 how MAY or how DARE any lay person him.DAT to draw-INF by
ricceter-e crist-es wica-n?
 force-DAT Christ-GEN office-ACC
 ‘How can or dare any layman seize [*lit.* draw to himself] Christ’s
 duties/office by force?’ [ÆCHom II, 45, 344.300]
- b. *Se ðe hit him to teo, syll-e six-a sum ðone*
 DEM.M REL it him.DAT to draw.SBJV give-SBJV six-GEN some DEM.M.ACC
að
 oath(M)
 ‘Whoever is going to seize it [*sc.* escaped cattle] is to give this oath as one
 of six [*i.e.* with five others]’ [LawDuns, 8.1]

On her third example, given here in (33), Tomaszewska (2014: 69) writes that *teonan don* ‘seems to be a periphrastic (more emphatic) variant of the simple verb’, apparently suggesting that *teonan* is a verb with *do*-support. However, *teonan* is a nominal form, the dative singular of the *n*-stem *teona* ‘damage, harm, hurt’ (Bosworth–Toller, s.v. *teona*). The expression *to teonan*, which is attested 17 times in the DOEC, means ‘in harm, to someone’s detriment’, and *to* is a preposition.

- (33) *þætte yfl-e men ne dorston nanwyht to teona-n do-n for*
 COMP wicked-PL person.PL NEG DARE.PST:PL nothing to harm-DAT do-INF for
hyra egsa-n
 3PL.GEN fear-DAT
 ‘... so that wicked people did not dare do anything wrong [*lit.* in harm]
 because of fear of them’ [HomS 1 (Verc 5), 80]

The fourth and last example may initially appear more convincing. Tomaszewska quotes the short fragment in (34), which appears to have the infinitive *to swerian* following the plural verb *durran*:

- (34) ... *swa hi durran to swerian*
 [LawNorthu, 57.2]

Such short text fragments out of context can be misleading, however, and some more context reveals that *to* is in fact a verbal particle; compare the gloss and translation in (35). Liebermann, the editor of the Anglo-Saxon laws, even includes *toswerian* as a particle verb in his glossary to the laws (Liebermann 1903: II, s.v. *toswerian* ‘beschwören’).

- (35) 7 we will-að þæt man nam-ige on ælc-on wæpengetac-e II
 and we WILL-PL COMP person appoint-SBJV in each-DAT wapentake-DAT two
 triw-e þegn-as 7 æn-ne mæssepreost, þæt hi hit
 trustworthy-PL thane-PL and one-M.ACC priest COMP they it
 gegader-ian 7 eft agif-an, swa hi durran to swer-ian
 gather-PL and then pay-PL as they DARE:PL to swear-INF
 ‘And we wish that two trustworthy thanes and one priest be appointed in
 every wapentake, so that they will collect and hand it [sc. the Rome penny]
 over such as they dare swear to’ [LawNorthu, 57.2]

The pattern also occurs elsewhere in the Anglo-Saxon laws. Compare the example in (36), where the particle *to* is placed before the finite verb *woldon*; hence, it is clear that it cannot be the infinitive particle:

- (36) 7 oðer is þæt gewitnessa ne most-an stand-an, þeah hi ful
 and second is COMP witnesses NEG MOT.PST-PL stand-INF though they fully
 getreow-e wær-on 7 hi swa sæd-an swa hi to woldon
 truthful-PL COP.PST-PL and they so spoke-PL as they to WILL.PST:PL
 swerian
 swear:INF
 ‘And the second thing is that witnesses were not allowed to count although
 they were fully trustworthy and spoke such as they would swear to’
 [LawVAtr (D), 32.2]

To conclude, none of the four examples suggested for Old English actually contains the infinitive particle *to*. It thus seems that the generalization in Mitchell (1985: §996) that Old English DARE is only attested with the \emptyset -infinitive still holds.

However, DARE did begin to occur with the *to*-infinitive eventually, as the Present-Day English situation surveyed in Section 6.2.1 clearly shows. The question is when this pattern is first attested. Visser (1963: §1358) states that ‘[n]o instances have been found earlier than the beginning of the 17th century’ and cites an example from 1619, but this is only with reference to finite forms of DARE in non-negated contexts. In later paragraphs (see §§ 1359, 1367, 1368) Visser gives a number of examples from the sixteenth century, mostly from verse texts, like the example in (37) (also in *OED*, s.v. *dare* v.¹, ‘Forms’ 8.β):

- (37) *They sholde not have durst the peoples vyce to blame*
 (1509 Barclay *Shyp of Folys* [Pynson] f. lxxxvi)

Visser (1963: §1366) also gives the fifteenth-century example in (38), which has been repeated in the literature several times (Beths 1999: 1094; Traugott 2001: 9; Molencki 2005: 149; Los 2015: 119).

- (38) *That none of youre officers roialle, nethir hir debitees or commissioneris, shalle darre..to take no bribe*
(c.1475 *Bk.Noblesse* [Roy 18.B.22] 72)

Presumably Visser found this example in the *MED* (s.v. *commissioner* n.), where, crucially, part of the sentence is omitted. A look in the edition of the text reveals that *darre* is in fact followed by a Ø-infinitive, *doo* in (39):

- (39) *And that none of youre officers roialle, nethir hir debitees or commissioneris, shalle darre doo the contrarie to take no bribe, rewarde, or defalke the kingis wagis*
'And that none of your royal officers, nor their deputies or commissioners, shall dare do the contrary and take no bribe or reward or deduct from the king's wages' (Nichols 1860: 72)

Molencki (2005: 149) cites another fifteenth-century example, given here in (40), from Julian of Norwich's *Revelations of Divine Love* (BL, Additional MS 37790; c.1450):

- (40) *And I desired as I durste to hafe sum mare open declarynge wharewith I myght be hesyd in this*
'And I desired as far as I dared to have some more open declaration with which I could be eased in this respect' [Ime.julnor, 61]

Here, however, *as I durste* is a parenthetical, and *to have* is the complement of *desired* rather than *durste*: 'I desired, as far as I dared, to have ...'. This way of expressing humility occurs elsewhere in the *Revelations*, as in (41), with the infinitive marker *for to*:

- (41) *I abade with reuerente drede, ioyande in that I sawe & desyrande as y durste for to see mare*
'I remained in reverent awe, taking joy in what I saw and desiring, as far as I dared, to see more' (Beer 1978: 46)

Beths (1999: 1094) points to another example, *dyrst* in the second clause in (42), which the *MED* (s.v. *durren* v., sense 1.b) dates before 1500:

- (42) *I dare wele say, | To do the to deth they had not dyrst*
'I dare well say, to put you to death they would not have dared' (a.1500 *Man yff thow* [Cai 174/95] 39–40)

Note that this is a verse text and that the infinitive is preposed. In such contexts, practically all of the modals are occasionally found with *to*-infinitives in Middle English, where there was a general tendency to mark the infinitive with *to* when it was fronted. Ohlander (1941: 65–66) gives examples with CAN, MAY, MOT, WILL, and SHALL, such as *yow to haten shal I nevere* (Chaucer, *Troilus* v. 1079). Thus, the example in (42) does not tell us much about DARE specifically, but rather about fronted infinitives in Middle English more generally.

The first prose attestation in the *OED*, which Beths (1999: 1094) also mentions, is from a letter from the University of Oxford dated 1529 (*OED*, s.v. *dare* v.¹, ‘Forms’ 8.y):

- (43) *They have dared to break out so audaciously*
(1529 Turner *Select. Rec. Oxf.* [1880] 65)

This is the earliest example that I have found in the reference works where the occurrence of *to* cannot be ascribed to metrical considerations or fronting of the infinitive. However, it may in fact be antedated by several decades, although the occurrences are very sporadic. I was alerted to this by the study of ‘marginal’ modals in the Paston Letters by Matsuse (2009), who points out an isolated example of *dare* with *for to* in a letter by Margaret Paston.

- (44) *And that they seyde they durst not for to take uppon hem for to be bonden*
‘And that they said that they did not dare to take upon themselves to be bound [to pay a debt]’ (Margaret Paston to John Paston, 20 May 1465; Davis 1971: 301)

Searching the ICEL corpus of letters failed to return any additional examples, as did a search in the ICMEP. Further searches in the CMEPV revealed a single one from a fifteenth-century manuscript, given in (45).²⁰

- (45) *& all that wer(e) ther had mervell ther of and wer(e) aferd of him, so that vnneth any durst to have to doo with him aft(er).*
‘And everyone there wondered greatly at this and were afraid of him [sc. the Black Knight] so that hardly anyone dared to have dealings with him after this.’ (CMEPV, c.1460 *Ipom.*(3) [Lngl 257]; Kölbing 1889: 346)

In the material in EEBOCorp, *to*-infinitives only appear from the 1530s onwards. It is worth noting that most of this material was printed at London, whereas the two examples in (44)–(45) have more northerly origins: Margaret Paston was from Norfolk, and while the dialectal provenance of (45) is uncertain, the text shows a number of Northern or north Midlands features, such as *ilk* ‘same’, the 2SG ending *-s*, and the 3PL.OBL form *theim* (c.40 attestations; *hem* does not occur).²¹ These possible regional differences fall outside the scope of my discussion here, but it would certainly be interesting to investigate the early steps of this innovation in more detail; one way to do this would be to trace it in the writings of individual authors, as in Petré & Van de Velde’s (2018) recent contribution on BE *going to*. What I hope to have shown in

²⁰ Another text included in the CMEPV returns the following—suspiciously modern-looking—example: *so that no brother shall dare to talk with him*. Looking it up in the edition (Smith et al. 1870: 170) reveals that this is indeed from a modern translation of a Latin original. I can only assume that this was included in the corpus by mistake.

²¹ The MS (Longleat House MS 257) is not surveyed in eLALME, and the language of the text is only discussed briefly in the edition (see Kölbing 1889: clxxviii–clxxix). Based on the overview of forms given by Kölbing it would seem to be a *Mischsprache* containing both northerly and southerly features. Sánchez Martí (2005) locates the MS in or close to Yorkshire on codicological grounds, but this of course says nothing directly about the scribal dialect.

this section is that the use of *to*-infinitives after *DARE* has so far only been recorded from the late fifteenth century onwards, and that the Old English and several Middle English examples that have been suggested in the literature are unconvincing. In one particular case, (38) above, an inaccurate example given by Visser (1963) has been repeated in the literature at least four times, but simply looking it up in the edition showed that it was not an instance of *DARE* plus a *to*-infinitive. Allen's (1995) warning against relying exclusively on Visser (1963) and other secondary sources is thus also applicable to the history of *DARE*. I will return to the issue of interpreting the development of *to*-infinitives in Section 6.5, but first the development of transitive *DARE* will be discussed.

6.4.3 Transitive *DARE* as a multiple-source construction

As I hope the preceding sections have demonstrated, *DARE* in Old English was a secondary verb with the meaning 'have sufficient courage (to do something)'.²² In the Middle English period some interaction with *THARF* 'need' is recorded, and towards the very end of Middle English *to*-infinitives begin to appear. A further change happens in the Early Modern English period which seems to have attracted less attention in the literature. The construction in question was illustrated by Present-Day English examples in (3) above. (46) and (47) give two Early Modern English examples, one meaning 'challenge', the other perhaps better paraphrased as 'defy':

- (46) *I dare him therefore
To lay his gay Comparisons a-part.*
(a.1616 Shakespeare *Ant. & Cl.* III. xiii; *OED*, s.v. *dare* v.¹, sense 5.b)
- (47) *A Crown's worth tugging for, and I wil ha't
Though in pursute I dare my ominous Fate.*
(1611 Heywood *Golden Age* 1; *OED*, s.v. *dare* v.¹, sense 4)

As mentioned in Section 6.2.2, the development of this pattern has been noted in passing by a number of authors. Reed (1981), Nagle (1989), and Warner (1993) all interpret it as a full-verb use of *DARE* which split off from the older modal use. Beths (1999: 1095–1096), also quoting the example from Shakespeare in (46), considers this 'semantically deviant' use of *DARE* a clear indication that *DARE* developed 'a full argument structure' in Early Modern English. It is also noticed by Sweet (1892: §1480), who writes that '*dare* in the transitive sense of "challenge" has become quite regular' in Modern English. The earliest attestations of this transitive use in the *OED* are from the late sixteenth century.

What these commentators have in common is that they do not offer any explanations for the development of this new transitive pattern. Most consider it part of a more general tendency for *DARE* to develop more 'verb-like' characteristics, and Beths explicitly describes it as evidence for a 'degrammaticalization' of the earlier modal, but there is no attempt to account for the Early Modern English change in

²² An earlier version of Section 6.4.3 was published as "To dare larks in Early Modern English" (Gregersen 2017b).

detail or explain why it happened in English but not in other Germanic languages.²³ In the following I will venture such an explanation. I suggest that Present-Day English DARE in fact goes back to two separate lexemes—indexed as *dare* v.¹ and *dare* v.² in the *OED*—making the Present-Day English verb an example of a ‘multiple-source’ construction in the sense of Van de Velde et al. (2013). It will be shown that several Early Modern English attestations can be interpreted as either of the two DARE verbs, suggesting a degree of overlap between them.

The verb in question, which I will refer to as DARE v.² in the following, is found only once in the entire Old English corpus (*DOE*, s.v. *darian*), but is well-attested in the Middle English record. The *DOE* glosses the example in (48), from the legend of the Seven Sleepers, ‘to lie still or hidden’. The *MED* (s.v. *daren* v.) gives meanings such as ‘stay in one place, tarry’, ‘lie in wait, lurk’, and ‘be overcome or stupefied by an emotion (esp. by fear or grief)’. The dictionary gives (49) as an example of the first of these meanings; it is from a description in the *Physiologus* of the behaviour of serpents (*dragunes*; see *MED*, s.v. *dragoun* n.) when the panther is roaring. (50) is given as an example of the third meaning; it is from the scene in *Sir Gawain and the Green Knight* where the fearsome Green Knight insults King Arthur’s men and calls them cowards. The most appropriate translation is probably ‘cower’ in this context.

- (48) *Far-e man swiðe hraðe þyder geond to þam scræf-e þær*
 go-SBJV person very quickly thereto away to DEM.DAT cave-DAT where
þa wiðersaca-n inne dariað behydd-e
 DEM.PL apostate-PL inside lie.still:PL hide:PTCP-PL
 ‘Let someone go very quickly over there to the cave where the apostates lie hidden’ [LS 34 (SevenSleepers), 292]
- (49) *ðe dragunes one ne stiren nout*
wiles te panter remeð ogt,
oc daren stille in here pit,
als so he weren of dede offrigt.
 ‘The serpents alone do not move at all while the panther is roaring, but lie still in their caves as if they were afraid of death.’ [eme.bestia, 759–762]
- (50) *Now is þe reuel and þe renoun of þe Rounde Table*
Ouerwalt wyth a worde of on wyȝes speche,
For al dares for drede withoute dynt schewed!
 ‘Now the revelry and the renown of the Round Table are overcome by a word from the mouth of one man; for everyone cowers in fear before a single blow has been dealt!’ [lme.gawain, f. 95’]

The senses illustrated in (48)–(50) are all intransitive, and this is how DARE v.² is usually found in Middle English. However, at some point a transitive pattern begins to occur, with the meaning ‘frighten, mesmerize’ (‘cause to cower’, i.e. a causative by

²³ For the cognate of DARE in Dutch and West Frisian, see *WNT* (s.v. *durven*) and *WFT* (s.v. *doare*), for (earlier) German *FWB* (s.v. *geturren*). As mentioned above, there is no cognate of DARE in Scandinavian, but the closest translation equivalents in Swedish and Danish at least have no recorded transitive senses comparable to English DARE ‘challenge’ (see *SAOB*, s.v. *töras*; *ODS*, s.v. *turde*).

conversion). The first attestation with this sense in the *OED* is dated 1547 (see [52] below), but the dictionary also mentions an adjectival derivation, attested from the fifteenth century onwards, with the form and meaning of a passive participle; see (51), also cited in the *MED* (s.v. *daren* v., sense 3). This suggests that the transitive use may already have been current at this point—compare the Present-Day English participles *terrified* and *scared*, also from transitive verbs—but unfortunately the limited number of attestations does not allow us to say this with certainty.

- (51) *Siles down on aithire side selcuth kniztis,*
Sum darid, sum dede, sum depe wondid.
 ‘On both sides splendid knights fall down in droves, some terrified, some dead,
 some badly wounded’ (c.1450 *Wars Alex.* [Ashm 44] 3044)
- (52) *Virtuous councillors, whose eyes cannot be dared with these manifest and open*
abominations.
 (1547 Hooper *Answer Detection Deuyls Sophistrye* 203)

In sixteenth-century sources the verb is frequently found in the collocation *dare larks*, which refers to the practice of catching larks by mesmerizing them, either with a hobby or a contrivance known as a *dare* or *daring glass* (*OED*, s.vv. *dare* sb.², *daring* vbl. sb.²). In a passage quoted by the *OED*, Thomas Cranmer describes the practice when he criticizes his opponent Stephen Gardiner for leading their discussion away from the heart of the matter:

- (53) *Like vnto men that dare larkes, which holde vp an hoby, that the larkes eies*
beyng euer vpon the hoby, shuld not see the nette that is layd on theyr heades
 (1551 Cranmer *Answer S. Gardiner* 121)

Shakespeare also refers to the practice in *Henry VIII*:

- (54) *If we liue thus tamely,*
To be thus laded by a peece of Scarlet,
Farewell Nobilitie: let his Grace go forward,
And dare vs with his Cap, like Larkes.
 (*Henry VIII*, III. ii.; *OED*, s.v. *dare* v.², sense 5)

However, the verb is also found outside of this collocation, showing that it was a productive transitive verb. (55) is another example from Shakespeare:

- (55) *For our approach shall so much dare the field*
That England shall couch down in fear and yield.
 (*Henry V*, IV. ii. 34–35)

The similarity between *DARE* v.¹ and *DARE* v.² has already been pointed out by Samuels (1972: 69), who suggests that *DARE* v.² disappeared from the language to avoid confusion between the verbs. I will suggest a slightly different scenario, namely that the two verbs were indeed confused and that the transitive use of *DARE* v.¹ found in Present-Day English is in fact an indirect survival of *DARE* v.². At first glance this

may seem unlikely, for the verbs can actually be considered (near-)antonyms in some of their uses: DARE v.¹ means ‘have sufficient courage (to do something)’, while one of the possible meanings of DARE v.² is ‘cower, be afraid’. However, the transitive uses of the verbs come much closer to each other semantically. The former means ‘challenge, defy’, while the latter means ‘daunt’ or ‘frighten’, and both thus imply an asymmetry in terms of courage between the subject and the object. In fact, there are several early attestations where either of the two interpretations seems possible. In (56) and (57), for instance, ‘challenged’ and ‘frightened’ both seem equally appropriate. (56) is the first example of the sense ‘challenge’ given by the *OED* (s.v. *dare* v.¹, sense 5), but in the context in question ‘daunted, frightened’ seems like an equally appropriate paraphrase of the participle:

- (56) *An Englishman hath thrée qualyties, he can suffer no partner in his loue, no straunger to be his equall, nor to be dared by any.*
(1580 Lyly *Euphues* 48)
- (57) *Of heauen, or hell, God, or the Diuell, he earst nor heard nor carde,
Alone he sought to serue the same that would by none be darde.*
(EEBO, 1597 Warner *Albions England*)

Furthermore, while the verbs evidently go back to different sources—DARE v.¹ to a preterite-present, DARE v.² to a weak verb—some of their forms had already become identical in Early Modern English, and this formal identity was noticed by writers in the period. Spenser and Shakespeare both pun on the two verbs, Spenser in one of his *Cantos of Mutabilitie* (see [58]) and Shakespeare in *The First Part of Henry VI*, as seen in (59). The early lexicographer John Minsheu in his *Guide into Tongues* actually suggests that DARE v.² is derived from DARE v.¹, as shown in (60).²⁴

- (58) *Enclos’d the bush about, and there him tooke,
Like darred Larke; not daring vp to looke*
(Spenser 1609: 357)
- (59) WIN. *Do what thou darest; I beard thee to thy face.*
GLOUC. *What! am I dared and bearded to my face?*
(1 *Henry VI*, I. iii. 399–400)
- (60) *to Dare, an old English word, and it signifieth to stare, because they which behold a man stedfastly with a wide open staring eie, are said to bee bold or daring [...]
Sometimes likewise it signifieth to challenge.*
(Minsheu 1617: 118)

In some later dictionaries, the expression *dare larks* is in fact indexed under DARE v.¹, but this may be because DARE v.² had by then become obsolete. Since it was found in earlier works of literature, including several times in Shakespeare, nineteenth-

²⁴ As Thijs Porck has pointed out to me (p.c., Dec 2016), Minsheu may well have meant the false etymology in (60) as a joke. In either case, it of course relies on the formal similarity between the two verbs.

century lexicographers thought it necessary to include it.²⁵ However, in some non-standard dialects the meaning ‘frighten’ survived at least until the nineteenth century, as evidenced by the *OED* (s.v. *dare* v.²) and *EDD* (s.v. *dare* v.2). Interestingly, some dialects also had a meaning ‘deter by threatening, forbid’ (e.g. Yorkshire *dar ’em frae’t* ‘frighten them from doing it’), but Wright in the *EDD* takes this to be a use of *DARE* v.¹ rather than *DARE* v.². If the etymology proposed here is correct, no hard and fast distinction can be made: the transitive use of *DARE* originated in *DARE* v.², but was at some point reanalysed as belonging to *DARE* v.¹.

Three observations have been made in this section which may serve as circumstantial evidence for conflation of *DARE* v.¹ and *DARE* v.² in Early Modern English. First, there are early attestations where either of the senses ‘challenge’ and ‘frighten’ appears to be possible; second, the formal similarity was evident at least to some seventeenth-century writers; and third, later lexicographers were not able to distinguish the two verbs. To be sure, none of this is direct evidence for such a conflation, and it may well be impossible to prove that the two verbs interacted in the way proposed here. However, I think it is at least worth entertaining the idea and considering what might count as support for—or counterevidence of—such a ‘conflation’ hypothesis. Note also that whereas earlier accounts (e.g. Warner 1993; Beths 1999) have merely noted the existence of the more ‘verb-like’ transitive pattern, the suggestion offered here at least provides a source of this use of *DARE*. As we saw in Section 6.4.1, the cognates of *DARE* have interacted with the *THARF* etymon in several West Germanic languages. I venture the hypothesis that something similar happened in English with *DARE* v.², as illustrated by Figure 6.6.

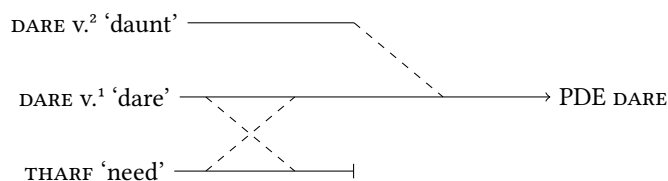


Figure 6.6: *DARE* as a multiple-source construction

6.5 Discussion: beyond (de)grammaticalization

This chapter has investigated four different aspects of the history of *DARE*: its co-occurrence with other ‘courage’ verbs in Old English, the ‘confusion’ between *DARE* and *THARF* in Middle English, the emergence of the complementation pattern with

²⁵ See e.g. Webster (s.v. *dare* v.t.), who treats the expression *dare larks* as a specialized use of the weak verb *dare* ‘To challenge; to provoke; to defy’; Nares *Glos.* (s.v. *dare*) also seems to indicate that *dare* with the meaning ‘terrify’ is a specialised use of ‘courage’ *dare*. Finally, Richardson *New Dict.* (s.v. *dare*) includes ‘have boldness [...] face danger [...] to cower or cause to cower’ as senses of the same verb and repeats Minsheu’s etymology in (60).

a *to*-infinitive, and the development of the transitive use with the meaning ‘challenge’. I have argued that the co-occurrence of DARE and other ‘courage’ verbs in Old English does not indicate that DARE was especially ‘bleached’ of meaning and had a highly auxiliarized status. Rather, there were more or less subtle semantic differences between DARE and verbs like *gedyrstlæcan* and *geneðan*, and when they were used together DARE retained its usual meaning ‘have sufficient courage (to do something)’. A small-scale study of the Present-Day Danish verbs *turde* ‘dare’ and *vove* ‘dare, venture’ showed that such a situation is not unique to Old English, and that verbs with closely related ‘courage’ meanings need not be entirely synonymous.

From a strictly functional point of view, the history of DARE seems to be primarily one of stability. As Chapters 7 and 8 will show, the three modals CAN, MAY, and MOT all experience semantic changes from Old to Late Middle English; by contrast, DARE seems to have retained its Old English secondary-verb meaning virtually unchanged. Accordingly, there is little basis for speaking of either ‘grammaticalization’ or ‘degrammaticalization’ of DARE in functional terms. The major functional innovation happens in the Early Modern English period and concerns the development of the transitive sense ‘challenge, defy’. I have argued in Section 6.4.3 that this may actually reflect conflation with another lexeme, DARE v.², which is first attested in transitive uses around the same time. The fact that the cognates of DARE have interacted with the THARF etymon in several other West Germanic languages, as discussed in Section 6.4.1—as it also did in Middle English—suggests that this kind of conflation is not necessarily as rare or exceptional as it may appear and should be taken seriously as a factor in language change.

The other major changes to DARE are morphosyntactic in nature, such as the development of regular morphology and complementation with the *to*-infinitive rather than the \emptyset -infinitive. These have both been taken to reflect a decrease in the grammatical status of DARE (e.g. Beths 1999; Schlüter 2010). Traugott (2001) also considers the *to*-infinitive pattern less ‘grammatical’ than the \emptyset -infinitive one, but does not consider DARE an instance of degrammaticalization ‘because main verb *dare to* uses were always attested in the data’ (Traugott 2001: 9). As Section 6.4.2 above has demonstrated, this claim is inaccurate: there are no clear examples of *to*-infinitive complements of DARE until the latter half of the fifteenth century. Yet this does not necessarily mean that the ‘degrammaticalization’ analysis is the most accurate one. Beths, Traugott, and Schlüter all seem to take for granted that complementation with the *to*-infinitive is somehow less ‘grammatical’ than with the \emptyset -infinitive, but as far as I can tell no explicit arguments have been presented for this analysis. It seems to rest mainly on the analysis of Present-Day English DARE, which, as the literature review in Section 6.2.1 showed, many authors have considered a ‘main’ verb when used with a *to*-infinitive (see Table 6.1 on p. 167). I think it is questionable, however, whether a formal characteristic like the presence or absence of the *to*-infinitive is an appropriate criterion for determining the grammatical status of a linguistic item

at an earlier stage of the language.²⁶ The formal and functional properties of the *to*-infinitive itself have evidently also changed through the history of the language, as discussed in the work of several authors (e.g. Ohlander 1941; Los 2005; Fischer 2000, 2015), but this point does not appear to have attracted much attention in the literature on DARE. A further issue, already mentioned in passing above, is that the ‘degrammaticalization’ label by itself offers little by way of explanation of the observed changes.

I think a more fruitful approach to the history of DARE is one which recognizes the importance of ‘the synchronic state of the grammatical system [...] at a given time’ (De Smet & Fischer 2017), i.e. of the linguistic realities of the speakers at earlier stages of the language. De Smet & Fischer argue that historical linguists can only account for the contingency of change (i.e. ‘why change x in language A but not in language B’) if they pay attention to the formal and functional similarities with other linguistic items and available ‘supporting constructions’ when a change happens (see the introduction in De Smet & Fischer 2017: 240–246 for details). If such an analogical perspective is applied to the history of DARE, I believe, the apparent ‘degrammaticalization’ changes which seem to have bemused some earlier commentators become rather more comprehensible.

At least two earlier authors on DARE in fact come close to an analogical account without explicitly describing it as such. Warner takes the lexemic ‘split’ between more verb-like and more auxiliary-like uses of DARE as an indication of ‘a sharpening of the distinctness of modals’ (Warner 1993: 203). According to Warner, the increased formal and structural coherence of the category of modal auxiliaries in Early Modern English forced the ‘full-verb’ uses of DARE to become more clearly distinct from the auxiliary ones. Analogy is not mentioned in Warner’s discussion of DARE (and is not to be found in the general index of the book), but his general views on category formation (see especially Warner 1993: 209–218) appear to be entirely commensurate with the analogical perspective. Along similar lines, Krug (2000: Ch. 5) suggests that DARE ‘gravitates’ towards a new auxiliary prototype in Early Modern English, when forms like HAVE *to*, USED *to*, and BE *going to* become increasingly frequent. According to Krug, the grammaticalization of this new group of auxiliaries caused a gravitational ‘pull’ drawing DARE away from the older auxiliaries. As far as I can tell, this is essentially an analogy-based explanation, even if Krug does not explicitly spell it out in these terms.

The two questions asked in Section 6.1 will thus be answered in the following way: DARE has not ‘degrammaticalized’, but changed a number of morphosyntactic properties and interacted with formally similar verbs. I have argued that analogy is the primary factor in these developments, in the case of the inflectional morphology with the larger class of weak verbs (weak verbs \mapsto DARE); in the case of the *to*-infinitive the analogy was most likely with the increasingly frequent class of secondary verbs with *to*-infinitive complements (HAVE *to*/USED *to*... \mapsto DARE). The transitive use of DARE

26 The same applies to regular vs. irregular morphology. I have seen no explicit arguments in the literature for why PST *durst* is more ‘grammatical’ than PST *dared*. It is of course less regular, but irregular inflectional morphology is not unique to grammatical items. Compare pairs like *wove/weaved* and *hung/hanged*, where the first member can hardly be said to be more ‘grammatical’ than the second.

was suggested to have developed through conflation with DARE v.². While it may be impossible to find hard and fast evidence for this hypothesis, it has the advantage over the ‘degrammaticalization’ analysis that it identifies a source for the transitive pattern and explains why it developed in English but apparently not in other West Germanic languages (i.e. the ‘contingency of change’ mentioned above).

To conclude this chapter with the image suggested by Fischer et al. (2004)—*Up and down the cline*—I think the most interesting question is not whether DARE has moved up or down any metaphorical ‘cline’ of grammaticalization, but what has caused successive generations of speakers to change its specific formal and functional characteristics. I have argued in this chapter that the changes to DARE have been primarily formal, and that analogy is the factor which can best account for these developments. The concluding Chapter 9 will discuss some of the possible avenues for future work on this topic.

CHAPTER 7

The development of CAN and MAY

The wise Plato seith / as ye may rede
The word / moot nede accorde with the dede
If men shal telle proprely a thyng
The word / moot cosyn be to the werkyng
— Geoffrey Chaucer, *The Manciple's Tale*

7.1 Introduction

This chapter investigates the development of CAN and MAY from Old to Late Middle English. As earlier scholarship has established—see Chapter 2, Section 2.2—CAN and MAY develop along similar lines in the period, with CAN gradually taking over some of the earlier functions of MAY. In this way the English developments are comparable to the ‘competition’ which Nuyts & Byloo (2015) observe for *kunnen* and *mogen* in the history of Dutch. In addition to this parallel, I will point out a number of other similarities between early English and the other Germanic languages, in particular regarding the uses of MAY and its cognates. The chapter presents the results for CAN and MAY separately and then compares them in the final section. The classification of modality I have used was introduced in Chapter 3. The corpus and search methods were presented in Chapter 4.

The following sections first give an overview of the development of CAN (Section 7.2.1) and then go on to discuss a number of issues in more detail, namely its changing modal semantics (Section 7.2.2), a possible habitual use in Old and Early Middle English (Section 7.2.3), and the loss of primary-verb uses (Section 7.2.4). The

sections after that are devoted to MAY, again first presenting the general development (Section 7.3.1) and then discussing several more specific issues. These are the various primary-verb uses of MAY in early English (Section 7.3.2), its modal functions (Section 7.3.3), and the apparent existence of an ‘autonomous’ modal pattern in Old English (Section 7.3.4). Finally, Section 7.4 sums up the findings by presenting a slightly revised semantic map of CAN and MAY in early English and comparing the changes to the ones observed in Dutch and German.

7.2 CAN

7.2.1 Overview of changes

As is well known from the literature, Old English CAN could occur intransitively, with an object, and with an infinitival complement (Bosworth–Toller, s.v. *cunnan*; DOE, s.v. *cunnan*; Ono 1975; Goossens 1992), i.e. both as a primary and secondary verb. In my analysis I have distinguished the three complement types direct object, oblique object, and infinitive, along with the intransitive use without a complement. These correspond more or less to the types distinguished by Ono (1975), except that I have included clausal objects such as complement clauses as a subtype of direct object (see also Section 7.2.4). Table 7.1 summarizes the results. The types ‘direct object’, ‘oblique object’, and ‘intransitive’ are primary-verb uses.¹

Table 7.1: Complements of CAN

	OE		EME		LME	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Direct object	118	59.0	66	33.0	31	15.5
Oblique object	1	0.5	7	3.5		
Intransitive	2	1.0			1	0.5
Infinitive	79	39.5	127	63.5	168	84.0
TOTAL	200	100.0	200	100.0	200	100.0

The type ‘infinitive’ in Table 7.1 includes instances of ‘post-verbal ellipsis’ (see Warner 1993: Ch. 5), i.e. instances where a verbal complement is clearly implied in the context. This includes cases where the verb occurs in another form, such as the subjunctive form *gecnawe* ‘recognise’ in (1):

¹ The trade-off between primary-verb and secondary-verb uses in the period is significant with a moderate to large effect size, $\chi^2(2, N = 600) = 84.52$, $p < .001$, Cramér’s $V = .3753$.

- (1) 7 *þæs we habb-að eall-e þurh God-es yrre bysmor gelome,*
 and DEM.GEN we have-PL all-PL through God-GEN wrath reproach repeatedly
gecnaw-e se ðe cunne.
 recognize-SBJV DEM.M REL CAN:SBJV
 ‘And because of that [our sinful behaviour], we are all repeatedly humbled by
 the wrath of God, may he recognize who is able to.’² [WHom 20.1, 41]

For objects, I distinguish between direct (accusative) and oblique (prepositional) objects. Oblique objects of CAN are also marginally attested in the genitive case in Old English (see Toller *Supp.*, s.v. *cunnan*, sense 4; Mitchell 1985: §1092), but there are no examples with an unambiguous genitive object in my data: all object noun phrases are either clearly in the accusative, such as *ðone cræft grammatican* in (2a), or show syncretism between the accusative and the genitive, such as *mihta* in (2b).

- (2) a. GRAMMATICVS is se ðe can ðone cræft grammatica-n
 grammarian COP.3SG DEM.M REL CAN DEM.M.ACC craft(M) grammar-ACC
be full-an.
 by full-DAT
 ‘A grammarian is he who fully understands the art of grammar.’ [ÆGram, 289.13]
- b. *he bið tæl-ed [...] fram swylc-um mann-um swylc-e*
 he COPB.3SG mock-PTCP by such-PL.DAT person-PL.DAT such-PL.NOM
þære wyrte miht-a cunnun
 DEM.F.GEN herb(F)-GEN power(F)-PL.ACC/GEN CAN:PL
 ‘he [a gullible man] is mocked ... by people who know the powers of that
 herb’ [Lch I (Herb), 61.0]

The feminine *i*-stem *miht* (also attested as *meht*) has a syncretic NOM/ACC/GEN form *mihta* in the plural (Hogg & Fulk 2011: 42–43), so in (2b) *mihta* could theoretically be either accusative or genitive.³ The genitive phrase *þære wyrte* ‘of that herb’ is of course an adnominal of *mihta*. For the sake of simplicity I have counted ambiguous cases like (2b) as direct objects.

In a few cases, an object of CAN is marked by a preposition, such as *on* ‘in’ in (3). In the Late Middle English data *of* also occurs. These were counted as oblique objects.

³ Note that in the parsed version of the YCOE (filename coherbar) *mihta* is simply tagged as an accusative form. I agree with the editors of the corpus that this is the most likely analysis, as there is one other instance of transitive CAN in the same text, with an accusative object pronoun [Lch I (Herb), 94.0]. However, variation in case selection in OE is well documented, not only ‘in different places in the works of the same writers, but even in the same sentence’ (Mitchell 1985: §1089), and from a morphological point of view *mihta* in (2b) remains ambiguous.

- (3) *eall-e ða Eastern-an 7 Egyptisc-an þe selost cunnon on*
 all-PL DEM.PL Eastern-PL and Egyptian-PL REL best CAN:PL in
gerimcræft-e
 arithmetic-DAT
 ‘All the Eastern and Egyptian people who know the most about [or are the
 most skilled in] arithmetic’ [ÆTemp, 6.1]

In a limited number of examples CAN occurs without any complement in a use sometimes termed ‘absolute’ (e.g. Toller *Supp.*, s.v. *cunnan*). Even if one might imagine that an object is implied here, none is recoverable from the context. In (4), also mentioned by Ono (1975: 46), a translation like ‘be knowledgeable’ or ‘understand properly’ seems the most appropriate.

- (4) *næfre gielp-es to georn, ær he geare cunne*
 never boasting-GEN too eager before he well CAN:SBJV
 ‘[The wise man should be ...] never too eager to boast before he properly
 understands’ [Wan, 65]

The *DOE* (s.v. *cunnan*, sense 1.A.) translates (4) ‘before he has the ready understanding’. The dictionary gives three other examples of this use ‘without expressed object’, but two of them are from interlinear glosses. As Table 7.1 shows, the pattern is also marginal in my material, with only two attestations in Old English.

7.2.2 Semantic development

The semantic developments discussed in this section concern the secondary-verb (‘modal’) uses of CAN. Section 7.2.3 briefly considers the possibility of a habitual sense in Old and Early Middle English. Changes in the use of CAN as a transitive verb will be discussed in Section 7.2.4.

Table 7.2 shows the frequency of the various meaning categories. The rows with two labels show instances which I have analysed as ambiguous between those categories. For the sake of comparison, the cases where CAN is used as a primary verb, i.e. transitively or intransitively, are also included in Table 7.2.

As Table 7.2 shows, modal uses of CAN in Old English only occur with DYN-INH meaning, or, in a few instances, with a possible habitual sense. In other words, CAN always expresses an ability inherent in the subject, as in (5).

- (5) *And se þe ne cunne þæt Leden understand-an hlyst-e nu*
 and DEM.M REL NEG CAN:SBJV DEM.N Latin understand-INF listen-SBJV now
on Englisc be sum-an dæl-e hwæt þæt Leden cwed-e
 in English by some-DAT part-DAT what DEM.N Latin say-SBJV
 ‘And whoever is not able to understand Latin may now hear some of what
 the Latin says in English.’ [WHom 19, 42]

Table 7.2: Semantic development of CAN

	OE		EME		LME	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
DYN-INH	75	37.5	111	55.5	121	60.5
DYN-INH/HAB	4	2.0	1	0.5		
DYN-INH/DYN-IMP			9	4.5	14	7.0
DYN-IMP			6	3.0	31	15.5
DYN-INH/DYN-SIT					3	1.5
DYN-IMP/DYN-SIT					1	0.5
Primary verb	121	60.5	73	36.5	30	15.0
TOTAL	200	100.0	200	100.0	200	100.0

The modal meaning of CAN in Old English is sometimes translated ‘know how (to)’, suggesting that it was limited to intellectual and cognitive capacities (e.g. Bybee et al. 1994: 190–192; Hogg & Fulk 2011: 308).⁴ However, it has also been noted repeatedly that there are occasional examples of a more general ability sense at least in the late Old English material (Tellier 1962: 122–123; Mitchell 1985: §1011; Goossens 1992: 380–381). The clearest example of this may be the example in (6) from Goossens, where *cude* refers to a lame man’s ability to walk after St Peter has healed him:

- (6) *And he leap sona cunnigende his feðes hwæðer he cuðe*
 and he leap.PST at.once try:PROG his pace:GEN whether he CAN:PST
gan.
 walk:INF
 ‘And he jumped up at once, trying his steps whether he was able to walk.’
 [ÆLS (Peter’s Chair), 32]

There are no clear examples of physical ability of this kind in my sample; the DYN-INH uses of CAN all seem to express an intellectual or cognitive capacity, suggesting that examples like (6) are indeed marginal in Old English.

The most important change from Old to Early Middle English is the appearance of DYN-IMP uses. A clear example of this is seen in (7), from the description of the lion in a thirteenth-century verse translation of the Latin *Physiologus*, traditionally known as the ‘Middle English Bestiary’. The passage explains how the lion covers its

⁴ Note that Bybee et al. do not actually describe the OE uses of CAN in any detail, but use the history of CAN to illustrate the development from ‘know how to’ to a possibility modal. It is evident from their discussion that they assume ‘know how to’ to be the appropriate translation of the OE modal, as they only date the emergence of ‘physical ability’ senses to c.1300 (Bybee et al. 1994: 192).

tracks whenever it senses a hunter approaching. The reason why the hunter cannot find the lion is that it erases its tracks, i.e. the reason is imposed by the circumstances rather than inherent in the hunter himself.⁵

- (7) *Alle hise fet steppes*
After him he filleð,
Drageð dust wið his stert
ðer he steppeð,
Oðer dust oðer deu,
ðat he ne cunne is finden
 ‘All his footsteps he [the lion] covers behind him, brushes dust with his tail
 where he treads, either dust or dew, so that he [the hunter] cannot find them’
 [eme.bestia, 7–12]

However, in the majority of cases in Early Middle English which allow a DYN-IMP interpretation, a DYN-INH reading is possible as well. The ambiguity between these two meanings is most often due to different ways of construing the same situation, as in (8), from the humorous animal fable *The Fox and the Wolf*. In this passage, the fox has tricked the wolf into believing that he will only be able to enter Paradise if he makes confession as soon as possible, but unfortunately the wolf is alone in the woods with no one around to hear it.⁶

- (8) *To wom shuldich, þe wolfe seide,*
Ben i-knowe of mine misdede?
Her nis noþing aliue,
þat me kouþe her nou sriue.
 “‘To whom,” said the wolf, “should I confess my misdeeds? There is nothing
 alive here that would now be able to take my confession.” [eme.foxwo,
 181–184]

The two readings are both simultaneously possible here. No one with the ability to take confession (DYN-INH) is present, and consequently, no one can hear the wolf’s confession (DYN-IMP). Hence, this example belongs to the category DYN-INH/DYN-IMP in Table 7.2.

In a few instances of ambiguity, this is due to a semantic ambiguity in the infinitival complement itself rather than a different way of construing the situation as in (8). One such instance is given in (9), from the Early Middle English version of the life of St Katharine of Alexandria. In this passage St Katharine tells the pagan King Maxentius that she is ready for anything he has in store for her:

⁵ The form *cunne* in (7) is the 3SG.SBJV of CAN. I follow Wirtjes (1991: 23) in taking *he* in the final clause to refer to the hunter and the 3PL pronoun *is* to refer to the lion’s footsteps; this is also the general sense of the corresponding passage in the 12th-c. Latin version in Bayerische Staatsbibliothek, MS Clm 536: *ut non secutus uenator uestigia capiat eum* (Wilhelm 1916: 18) ‘... so that the hunter, following the tracks, does not catch him’.

⁶ The fox is technically present, but is trapped at the bottom of a well. In order to get out again he convinces the wolf, who happens to pass by, that the well is actually a portal to Paradise. Hence, the wolf thinks that the fox is dead and is talking to him from the afterlife.

- (9) *Ah hat hihendliche þ' tu hauest in heorte; for ich am 3arow to al þe wa þ' tu const me 3arkin þ' ich iseo mahe mi lufsume leofmon*
 'But do command at once that which is in your heart; for I am ready for all the torment that you can contrive/prepare for me, in order that I may see my dearly beloved [i.e. Jesus]' [eme.kathe, 50]

The exact subtype of modality here depends on the meaning of the verb *3arkin* (*MED*, s.v. *yarken*), which can be used both cognitively in the sense 'contrive, devise' and 'effectively' in the sense 'prepare, arrange'. Either of these would fit the context: St Katharine is ready for whatever tortures King Maxentius is able to concoct in his wicked mind (DYN-INH) or which it is possible for him to arrange for her in his capacity as king (DYN-IMP). The *MED* (s.v. *yarken*, sense 3) appears to favour the former reading, which would certainly fit the general tenor of the text—the king is referred to elsewhere as *þe wed wulf*, *þe heaðene hund* 'the mad wolf, the heathen hound'—but since I do not think the DYN-IMP reading can be ruled out completely, I have classified this instance as ambiguous as well.

As Table 7.2 shows, unambiguous DYN-IMP examples become increasingly frequent in the Late Middle English period, and the category DYN-SIT appears as well. However, all four DYN-SIT examples are ambiguous with one of the other dynamic meanings. In (10) there is ambiguity between an ability or skill inherent in the devil (DYN-INH) and a general possibility for the situation to occur (DYN-SIT).

- (10) *And if þou do þus, no doute of þou shalt stonde a3enst all the shotis þat þe devill can shete to þe*
 'And if you do so [sc. submit to the power of the Lord], without a doubt you will be able to withstand all the shots that the devil is able to/may shoot at you' [lme.gestaron, 4]

In (11) the ambiguity is between DYN-IMP and DYN-SIT. The passage comes from the written recantation which a Lollard named Richard Sparke had to sign after he was tried and found guilty of heresy in 1457. He promises never to associate with Lollards again and to inform (lit. 'make knowledge to') the bishop in charge immediately if he hears about anyone spreading heresies.⁷

- (11) *And I swere by this boke that, as soone as I can haue knowlige or vndirstandynge of any suche bokes or of any suche persones [...] I shal make knowlige to the ordinary Bisshop*
 'And I swear by this book that as soon as I am able to/may obtain information or intelligence of any such books or any such persons ... I shall inform the bishop in charge' [lme.lincdoc, 97–98]

The ambiguity of CAN in (11) depends on whether the condemned actively plays a role in obtaining the information (DYN-IMP) or whether the event occurs by chance (DYN-SIT). There is no indication elsewhere in the text that Richard Sparke was ex-

⁷ For the use of *ordinary* in the sense 'responsible, in charge', see *MED* (s.v. *ordinari*[e] adj., sense 2).

pected to actively gather intelligence about other Lollards in the future, so the latter reading may be the likelier one here. Again, however, I have classified the example as ambiguous as I do not think the DYN-IMP can be ruled out.

The appearance of inanimate subjects

The appearance of DYN-IMP and DYN-SIT as possible meanings of CAN is accompanied by a wider range of possible subjects. In Old English, CAN appears to be attested only with cognizant subjects, referring to human or at least personified beings, not only when it has the primary-verb meaning ‘know’ but also when it is used as a modal verb. This leads Goossens (1992) to gloss the modal use ‘know how to’ rather than the more general ‘can’ and Warner (1993: 133) to classify CAN as a ‘subject-selecting verb’, i.e. a verb which places restrictions on its possible subject material. According to Warner, ‘neutral’ instances which do not select their subject start appearing towards the end of the Middle English period, although some early examples are ambiguous between a subject-selecting and a ‘neutral’ use.⁸ If we take unambiguously inanimate subjects—i.e. ones which cannot be analysed as instances of personification—as a clear indication that the restriction to cognizant subjects has been lost, Late Middle English comes out as the relevant period in my data as well, although the overall frequency is low. The numbers of animate and inanimate subjects are summed up in Table 7.3.⁹

Table 7.3: Animacy of subjects of CAN

	OE		EME		LME	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
ANIM	199	99.5	196	98.0	184	92.0
INANIM (pers.)	1	0.5	3	1.5	6	3.0
INANIM					3	1.5
n/a			1	0.5	7	3.5
TOTAL	200	100.0	200	100.0	200	100.0

The few examples of inanimate subjects in Old and Early Middle English are all more or less clear cases of personification, e.g. by synecdoche, as in (12a), where *no tunge* likely stands for ‘no one, no person’, etc. In the Late Middle English material, however, there are three examples of CAN with a passive infinitive where such an analysis is not possible. The earliest of these, given in (12b), is from a will dated 1465.

⁸ See Warner (1993: 177–178) for details. I take Warner’s category ‘subject-selecting dynamic modality’ to be more or less synonymous with DYN-INH and ‘neutral’ dynamic modality to correspond to DYN-IMP and DYN-SIT. Warner’s second category is, however, only defined negatively as dynamic modality without subject selection (see Warner 1993: 15).

⁹ The category ‘n/a’ in Table 7.3 refers to subjectless (nonfinite) uses. Note that I have not made separate categories for human and non-human animate subjects, as this distinction appears to be largely irrelevant in the material. Whenever non-human animate subjects occur, they are usually depicted with human characteristics, such as the talking wolf in (8) above.

- (12) a. *Ne mai non heorte it þenche. ne no tunge ne can telle
hu muchele pine. 7 hu vele. senden inne helle*
‘No heart is able to fathom, nor can any tongue tell, how great and how many are the torments of hell.’ [eme.pmor, 285–286]
- b. *And in case ther can noon be goten or thei come at playn age, that then my
plate to be devyded amonge my childern*
‘And in case none [sc. no land] can be acquired before they reach adulthood, then my [silver] plate is to be divided between my children’ [lme.lincdoc, 124]

The subject in (12b) refers to the land which the testator, a Lincolnshire man named Richard Welby, wants the executor to acquire for his children after his death. There is thus an implied agent but no overt agent argument in the clause itself. In the terms of Warner (1993), CAN in (12b) is thus not subject-selecting.

7.2.3 Habitual CAN in Old English?

A possible variant use of CAN deserves to be discussed separately. I refer to this variant as ‘habitual’ CAN (abbreviated HAB in Table 7.2 above). I identified four possible instances of this in the Old English and one in the Early Middle English material, in a text often taken to represent a transitional stage between Old and Early Middle English (see below). Two of the Old English examples in the corpus come from the same text, the tenth-century medical treatise known as *Bald’s Leechbook* (Royal MS 12 D. xvii). One of these is given in (13).¹⁰

- (13) *þam mann-um sceal man sell-an æg-ra to sup-anne,*
DEM.PL.DAT person-PL.DAT SHALL one give-INF egg-PL.GEN to sup-INFL
beren bread, clæne niwe buter-an 7 niwe beren mela oððe grytta
of.barley bread pure new butter-ACC and new of.barley flour or grits
togædre gebriw-ed swa coc-as cunnon, sell-e mon neaht+nestig-um.
together cook-PTCP as cook-PL CAN:PL give-SBJV one night+fasting-DAT
‘Those men [suffering from internal bleeding] one should give eggs to sup, barley bread, and fresh pure butter and fresh barley flour or grits cooked together as cooks do [‘can’], and one should administer that with a night’s fast.’ [Lch II (2), 26.1.4]

¹⁰ The other example from *Bald’s Leechbook* initially appears less convincing as a habitual example: *æfter þære wisan þe læcas cunnan wel*, lit. ‘after the fashion that doctors know well’ [Lch II (1), 35.2.1]. However, the parsing in the corpus seems to be incorrect. The manuscript has no punctuation to indicate the boundary between this clause and the one immediately following it, but the adverb *wel* seems to me to belong to the latter: ‘Gif þa omihtan pannan þing oþþe þa readan syn utan cumen of pundu(m) oþþe of sniþingu(m) oððe of slegum sona þu þa þing lácna mid scearpinge 7 ónlegena beres æfter þære pisan þe læcas cunnan pel þu hit betst’ (BL, Royal MS 12 D. xvii, f. 31^r, my transcription) ‘If the inflamed livid or red symptoms come from outside, from wounds or cuts or blows, you may heal those quickly with scarifying and dressings of barley, after the fashion that doctors [can] do it, you will heal it well’.

The *DOE* (s.v. *cunnan*) does not distinguish a separate habitual meaning, but includes (13) and a few similar instances under sense II.B.4., ‘with the skill clearly understood from the specific context’.¹¹ Of the two other Old English examples in my results, from the biblical poems ‘Christ’ and ‘Daniel’, only (14) is among the examples given in the *DOE*.

- (14) *Bi þon giedd awræc Iob, swa he cuðe, her-eðe helm*
 by DEM.INS poem recite.PST Job as he CAN:PST praise-PST protector
wer-a, hælend lof-eðe
 men-GEN saviour extoll-PST
 ‘By that Job recited a poem, as he would [‘could’], praised the Protector of men, extolled the Saviour’ [ChristA,B,C, 633]
- (15) [*Bliðe*] *wær-on eorl-as Ebre-a, ofestum her-edon drihten on*
 happy:PL COP.PST-PL man-PL Hebrew-GEN swiftly praise-PST.PL lord in
dreame, dydon swa hie cuðon ofn-e on innan, aldr-e
 joy/song did.PL as they CAN:PST:PL furnace-DAT in inside life-DAT
gener-ed-e
 save-PTCP-PL
 ‘Happy were the Hebrew men, they swiftly praised the Lord rejoicing [or with song], did as they were wont [‘could’], inside the furnace, spared with their lives’ [Dan, 255]¹²

I would suggest that the meaning in these examples might be better analysed as one of habit or custom rather than skill, as indicated by the proposed translations ‘as cooks do’, ‘as he would’, and ‘as they were wont’. One can, I think, argue for a DYN-INH reading in all of these cases, so I do not wish to exclude this possibility entirely, but my conjecture is that a habitual reading makes these passages rather more comprehensible. In (13) an advice to cook the gruel the way cooks ‘can’ would seem to suggest that some special skill is required, but the reader of the *Leechbook* is clearly expected to be able to do it as well. This potential oddity disappears if one reads ‘as cooks do’. Both (14) and (15) may possibly be read as expressing that Job recited a poem ‘as [well as] he could’ and that the three Hebrew men praised the Lord as much as they were able to after surviving the fiery furnace (see Dan 3: 20–26), but these readings seem to me somewhat beside the point in the given contexts. According to the habitual interpretation, what is expressed is rather that Job and the Hebrew men praised God as they were wont to do, underscoring that they were

¹¹ The *DOE* does not suggest any particular syntactic analysis of these cases. The senses under II.B. include both transitive and auxiliary uses of CAN. I take the *swa*-clause in (13) to be a postmodifier of *togædre gebriwed*, specifying the particular way the barley gruel should be cooked. The implicit verbal complement is thus the transitive verb *gebriwan* ‘make into pottage’ (Toller *Supp.*, q.v.), from the noun *briw*, cognate of Dutch *brij* ‘gruel, porridge’.

¹² Note that the editor’s modernized punctuation in (15) seems to imply a different analysis, where *ofne on innan* is part of the *swa*-clause. The manuscript text does not support either analysis over the other, as each major constituent is separated by a punctus: ‘b{̅}liðe pæron · eorlas ebreā · ofestum heredon · drihten on dreame · dydon swa hie cuðon · ofne on innan · aldre generede’ (Bodleian Library, MS Junius 11 [‘Cædmon Manuscript’], p. 187, my transcription).

good servants of the Lord. In the case of (15) this reading has in fact been suggested before, albeit implicitly and in a different context. In a discussion of the verb *generian*, Shipley (1903: 39) translates the last sentence ‘did as they *were accustomed*, within the furnace, saved with life’ (emphasis mine). This, of course, does not tell us how an Old English speaker may have understood the passage, but it shows that at least one earlier student of the language has had a similar intuition about the meaning of it.

In addition to these four examples, further searches in the Old English material revealed five other candidates for a habitual reading, all of them in *Bald’s Leechbook* and occurring in phrases similar to (13), e.g. *swa læcas cunnon* ‘as doctors can/do’.¹³ All the additional examples thus cluster in the same text and tell us little about the exact meaning of the phrase and its overall frequency. Whether more Old English examples can be found, and whether these may shed more light on the meaning of CAN in this period, must remain a topic for future investigation. The DOE entry does not appear to contain any other examples, but since the dictionary does not distinguish the meaning category ‘habitual’, these may have gone unnoticed among the c.1800 attestations of CAN in the DOEC.

Finally, I have also classified a single Early Middle English example as a possible habitual instance, given here in (16). Again, I do not think a DYN-INH interpretation can be ruled out entirely; one might also read *al ðat he cuthe axen him* as ‘everything that he could [think to] ask’. Hence, I have analysed (16) as ambiguous between DYN-INH and HAB as well.

- (16) *Derefter wæx suythe micel uuerre betuwx þe king 7 Randolf eorl of Cæstre: noht forþi ðat he ne iaf him al ðat he cuthe axen him, alse he dide alle othre; oc æfre þe mare he iaf heom þe wærsa hi wæron him.*

‘After this a very great conflict arose between the king and Randolph, earl of Chester; not because he [the king] did not give him everything that he could/would ask of him, as he did everyone else, but the more he gave them the worse they were to him.’ [eme.peterb, 57–58]

The second continuation of the *Peterborough Chronicle* was written in the middle of the twelfth century and is often taken to exemplify a transitional period between Old and Early Middle English (e.g. Horobin & Smith 2002: 127–128; Marsden 2015: 98). It is thus not far removed in time from the Old English examples discussed above and would, if one accepts the habitual interpretation, represent the latest such use in my material. Earlier writers on the *Peterborough Chronicle* have analysed (16) in different ways. Tellier (1962: 126) includes it without further comment as an example of CAN expressing ‘pouvoir permanent’. Shores (1971) seems unable to decide; at one point he translates ‘all that he was able to ask him’ (Shores 1971: 165), but not much later the passage is repeated with the translation ‘all that he asked him for’ (182, 211).

¹³ The DOEC references to the five attestations are [Lch II (2), 15.1.7], [Lch II (2), 20.1.2], [Lch II (2), 24.1.1], [Lch II (2), 27.3.4], and [Lch II (2), 28.1.15].

ABILITY → HABITUAL cross-linguistically

To finish this section I wish to point briefly to the cross-linguistic parallels to the possible habitual use of CAN. While these do not, of course, provide direct evidence for the particular semantic interpretation proposed in the above, they show that there would be nothing unexpected or extraordinary about it.

A semantic development from a verb meaning either ‘know’ or ‘can’ (or both of these) to a habitual marker is attested in several languages across the world. In their typological study of tense, aspect, and modality, Bybee et al. (1994: 154–155) cite examples from Khmer, Haitian Creole (Kreyòl), and Tok Pisin. The Tok Pisin habitual is one of the examples used by Aitchison (2013: 105–106) to explain semantic change more generally and is perhaps particularly instructive because the habitual marker *save* (or *sa*) and the source verb *save* ‘know, can’ exist alongside each other in the contemporary language (Verhaar 1995: 151; Smith & Siegel 2013). (17), from a narrative recorded by Suzanne Romaine, contains an example of both. The speaker is talking about how her boss would explain things to her and take her driving in his car.

(17) Tok Pisin

Mi no save gut long olgeta samting; yu ken wok-im olsem~olsem, na
 1SG NEG know well about all thing 2SG can do-TR thus~INT and
mitupela Dokta Smit save ron~ron long kar i go i kam.
 1DU:EXCL Doctor Smith HAB go~PLUR in car PM go PM come

‘I didn’t understand everything very well; “do it just like this” [he would say], and Dr Smith and I would go driving in the car from place to place.’

(Mühlhäusler et al. 2003: 192)

In the first clause in (17), *save* is a primary verb meaning ‘know’ or ‘understand’. In the last clause it is a secondary verb indicating that the event in question (‘go driving’) occurred habitually.

Kuteva et al. (2019: 248–249) also mention Tok Pisin along with a number of other languages, such as Sranan, Papiamentu, and Mooré (Niger-Congo; Burkina Faso). The authors seem to suggest that the development ‘KNOW → ABILITY → HABITUAL’ is particularly common in ‘pidgin and creole languages’ (2019: 249), but until a larger cross-linguistic investigation of habitual markers has been carried out, such generalizations are probably premature.¹⁴ In any case, further examples from non-creole languages from across the world are not hard to come by: Hellman (2005) documents habitual uses of the verbs *znati* ‘know, can’ and *um(j)eti* ‘can’ in Serbo-Croatian (‘Serbian/Croatian/Bosnian’), Soe (1999: 194) mentions that the Burmese verb *ta* ‘occurs both with the meaning ‘know how to’ and as a habitual auxiliary, and von Prince et al. (2019) mention habitual uses of a modal meaning ‘can’ in the two Oceanic lan-

¹⁴ It should be kept in mind that most of the languages usually labelled ‘creoles’ descend from a small number of western European languages, meaning that the sources of their grammatical morphemes are often easy to identify. For languages without attested historical stages this is much more difficult, and for most of the habitual markers in their survey, Bybee et al. (1994: 153–158) are unable to say anything about their source morphemes.

guages Maŕea and South Efate (Nafsan). If the analysis presented in the preceding section is correct, we may add Old English CAN to this list, although the habitual use is only sporadically attested in the material and appears to have died out by the Early Middle English period.

7.2.4 Transitive CAN

As Table 7.1 at the beginning of this chapter shows, transitive uses of CAN become less frequent relative to secondary-verb uses, but survive through the period and still account for 15% of the analysed instances in Late Middle English. One might suspect that transitive CAN survived primarily in certain collocations or fixed expressions in this period and that the pattern was not fully productive anymore. In order to get an impression of this, I classified all examples of transitive CAN in my sample according to the type of object. These types, in turn, were grouped into the four broader categories proposed by Dixon (2005: 82–84): concrete entities, abstract entities, properties, and activities. Because CAN also occurs with clausal objects in Old English, this was included as a separate type. Table 7.4 lists the types along with an example of each from the corpus.

Table 7.4: Transitive CAN: object types

Category	Type	Example
CONCRETE	Person	<i>Furtunatum þone bisceop</i> ‘bishop Fortunatus’
ABSTRACT	Language	<i>non engliss</i> ‘no English’
	Object of study	<i>holi writ</i> ‘holy scripture’
	Place/direction	<i>þe ricthe gate</i> ‘the right way’
	Experience	<i>nane bysene</i> ‘no precedent’
PROPERTY	Secret	<i>manna ingehygd</i> ‘people’s thoughts’
	Mental	<i>moche sorow</i> ‘much sorrow’
	Moral	<i>mare uuel</i> ‘more evil’
ACTIVITY	Physical	<i>his muðes meðe</i> ‘the limits of his appetite’
	Course of action	<i>no socoure</i> ‘no recourse’
ACTIVITY	Skill	<i>feole craftes</i> ‘many skills’
CLAUSE	Clause	<i>hwæt þu segst</i> ‘what you are saying’

Some objects can easily be assigned to one of these types, while others fit less comfortably in the classification. The boundary between abstract entities and activities is especially difficult to draw. For instance, knowledge of abstract entities such as languages and scholarly objects of study usually involves having particular skills as well (speaking or reading a language, reciting scripture, and so forth). The guiding principle here was that the type ‘skill’ is only used when the focus is on the activity itself rather than the abstract knowledge. One example clearly illustrating the difference is seen in (18), from a homily on the Creed. Here it is explicitly pointed out

that knowing the Creed (i.e. being able to recite it) is not the same as understanding what it means. Note that CAN in (18) is only used for the skill, whereas the meaning ‘know, understand’ in the second clause is expressed by a negative form of the verb WIT (*MED*, s.v. *witen* v.1).¹⁵

- (18) *Alle ȝe kunnen leste þet ich wene ower credo . þeh ȝe nuten nawiht alle hwat hit seið .*

‘You all at least know your Creed, I should think, though you do not all know what it means.’ [eme.lamb, 75.39]

Another problem is the analysis of clausal objects, which of course constitute a grammatical type rather than a purely semantic one. A clausal object can often be assigned to one of the semantic types as well, but because this group is clearly distinct I decided to include it as a separate type, and as Table 7.5 shows, it is indeed involved in a diachronic change from Old to Early Middle English. In any case, the goal of the classification in Table 7.4 was not to propose an ideal semantic analysis of the objects of CAN, but to divide up the material in a meaningful way and allow a comparison across the three time periods. I give only the absolute figures in Table 7.5, as the totals for Early and Late Middle English are lower than 100 instances.

Table 7.5: Transitive CAN: attestations per object type

Category	Type	OE	EME	LME
CONCRETE	Person	21	2	
	Language	10	4	2
ABSTRACT	Object of study	14	11	7
	Place/direction	7	2	
	Experience	11	3	
	Secret	21		
PROPERTY	Mental	1	5	3
	Moral	6	9	1
	Physical		6	1
ACTIVITY	Course of action		5	1
	Skill	17	24	14
CLAUSE	Clause	9		
OTHER		2	2	
TOTAL		119	73	29

¹⁵ This apparent ‘division of labour’ between the two verbs in earlier English has parallels in modern continental Germanic languages. Compare the use of modern Danish *kunne*, the cognate of CAN, in *Engang kunne jeg Trosbekendelsen udenad* ‘Once I knew the Creed by heart’ with *vide*, the cognate of WIT, in *De vidste begge, hvad det betød* ‘They both knew what that meant’ (both examples from KorpusDK).

Although the numbers for most of the types are low and should be interpreted with caution, I believe one can draw at least two relatively certain conclusions on the basis of Table 7.5. Firstly, the semantic types ‘person’ and ‘secret’ and the grammatical type ‘clause’ evidently disappear soon after the Old English period. Only the first of these is attested in the Middle English material at all, and both of the two examples occur in texts from before 1200.¹⁶ The second type, which I have termed ‘secret’, refers to knowledge of the thoughts of others and similar ‘hidden’ phenomena. Two Old English examples are given in (19). (19a) is from a verse psalter, (19b) from a prognostic text about divining what will happen on certain days.

- (19) a. *God eall-e cann guma-n geðanc-as eorð+buend-ra*
 G. all-PL CAN man-GEN thought-PL earth+dweller-PL.GEN
 ‘God knows all the thoughts of the mortal man’ [PPs, 93.10]
- b. *feawa mann-a syndon þe þas dag-as cunnon*
 few person-PL.GEN COP:PL REL these day-PL CAN:PL
 ‘There are few people who know these days’ [Days 5.4, 1]

The type exemplified in (19) is absent in my Middle English material, and the *MED* does not appear to record any examples either. Considering the frequency of these ‘person’ and ‘secret’ types in the Old English material, I think their absence in Middle English is unlikely to be accidental.

The third type, clausal objects, is also not attested in my Middle English material, and again no examples are recorded in the *MED*. This also seems to represent a genuine change from the Old English situation. Although this type is less frequent than ‘person’ and ‘secret’, it is by no means marginal in Old English. The *DOE* (s.v. *cunnan*, sense v) gives numerous examples, and of the nine instances in my material only a single one might be due to metrical considerations.¹⁷ In none of the attestations from metrical texts, such as in (20), does CAN alliterate.

- (20) *Swa wæs Biowulf-e, þa he biorg-es weard sohte,*
 so COP.PST B.-DAT when he barrow-GEN keeper seek.PST
searo+nið-as; seolfa ne cuðe þurh hwæt his woruld-e gedal
 deceit+enmity-PL REFL NEG CAN:PST through what his world-GEN parting
weorð-an sceolde.
 become-INF SHALL:PST
 ‘So it was for Beowulf when he sought the keeper of the barrow and its
 deceitful enmities; he himself knew not in what way his parting with the
 world would happen.’ [Beo, 3066]

¹⁶ Namely in the *Ormulum* [eme.ormulum, 18849] and in the legend of the cross in MS Bodley 343 [eme.rood, 18]. The latter is an adaptation of an earlier version and could reasonably be regarded as transitional between OE and ME. The few examples of personal objects in the *MED* (s.v. *connen*, sense 5) are also dated c.1200 or earlier.

¹⁷ *Nu þu wast and canst, lað leodsceaða, [hu] þu lifian scealt* [GenA,B, 916] ‘Now you know and understand, hateful enemy of mankind, how you have to live’. There is no alliteration here, but the more or less pleonastic *wast and canst* may have been an easy way to fill the half-line.

Another observation is that at least one type, ‘skill’, survives through Middle English without any decline in relative frequency. Although a few of the examples are best analysed as idiomatic, such as CAN *art* ‘know tricks, be cunning’ in (21), the pattern seems to be fully productive and is attested with a range of different objects, such as *many scyences*, *lettris*, *þe psalter*, *þaire pater noster*, and *that craft* (referring anaphorically to *whichecraft*).

- (21) *And for his lyes, in great dispyte*
we will departe his clothyng tyte,
Bot he can more of arte.

‘And for his lies, out of sheer contempt, we will at once divide his clothing, unless he knows other tricks.’ [nme.towneley, 498–500]

This suggests that instead of asking when CAN stopped appearing as a transitive verb, it may be more expedient to investigate which particular uses and constructions survived into a given period. While it is surely a correct generalization that CAN was used transitively both in Old and Middle English, the figures in Table 7.5 indicate that it was not necessarily the same kind of transitive verb.

7.3 MAY

7.3.1 Overview of changes

Unlike CAN, MAY occurs almost exclusively with infinitives in all three periods, as the figures in Table 7.6 show. In the Late Middle English material all 200 excerpted examples are with an infinitive. The category ‘infinitive’ again includes cases of post-verbal ellipsis (see Section 7.2.1 above).

Table 7.6: Complements of MAY

	OE		EME		LME	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
MAY <i>against</i>	3	1.5				
Infinitive	194	97.0	198	99.0	200	100.0
‘Autonomous’	1	0.5				
Directional expression	2	1.0				
Object (state of affairs)			2	1.0		
TOTAL	200	100.0	200	100.0	200	100.0

The category ‘MAY *against*’ refers to instances where MAY is followed by a phrase expressing an antagonist, usually marked by the preposition *wip* ‘against’. I discuss this and other primary-verb uses of MAY in Section 7.3.2. The remaining four categories concern instances where I have taken MAY to express modal and other secondary-

verb meanings, to be discussed in Section 7.3.3. The secondary-verb instances include two Old English examples where MAY is followed by a directional expression, in a pattern well known from other Germanic languages. An example will be given below (see p. 227). One Old English example I have labelled ‘autonomous’ for lack of a better term; I will consider this and a possible North Germanic parallel in Section 7.3.4. Finally, in the two Early Middle English instances labelled ‘object (state of affairs)’ in Table 7.6, MAY occurs with a negative object pronoun referring to a state of affairs, in both cases an action carried out by the subject referent. (22) is from an entry in the Peterborough Chronicle (AD 1132); (23) is from a twelfth-century homily:

- (22) *7 þur’h’ Godes milce [...] þa wiste þe king ðat he feorde mid suicdom. Þa he nammor ne mihte, þa uuolde he ðat his nefe sculde ben abbot in Burch*
 ‘And by the grace of God ... the king then knew that he [Henry of Poitou] was acting treacherously; and when he could [do] no more he wanted his nephew to become abbot of Peterborough’ [eme.peterb, 54]
- (23) *heo ne mugen willnigen nanes godes ac yfel heo gewillnigeð 7 þ’ heo mugen don, 7 we habbeð betæld þ’ yfel nis nan þing 7 for þan heo ne mugen nan þing*
 ‘They [evil people] cannot desire any good, but they desire only evil, and that they can do, and we have declared that evil is nothing and because of that they can [do] nothing’ [eme.kenthom, 143]

The example in (22) is about a certain abbot, Henry of Poitou, who was scheming to have the Abbey of Peterborough subsumed under the Abbey of Cluny. The Chronicle informs that when this failed, he attempted to have his nephew named abbot of Peterborough instead. I take *nammor* ‘no more, nothing else’ in (22) to refer to his acts of treachery; in Present-Day English an infinitive *do* is necessary in this context. (23) is part of a theological argument why evil people are powerless against God. Following St Augustine, the homilist argues that evil is nothing but the absence of good, and since evildoers do nothing but commit evil, all their actions are really nothing. I take the negative pronoun *nan þing* ‘nothing’ to refer to the actions performed by the evildoers, similarly to *nammor* in (22). Again, this kind of anaphor is not possible with the Present-Day English modals, but it does occur in some of the other Germanic languages; compare the use of German *nichts können* in (24):

- (24) Present-Day German
„Die Mitarbeiter sind mein Kapital“, sagt Inge Roterberg. „Ohne
 DEF.PL employee:PL COP.PL my capital say:3SG I. R. without
sie könnte ich nichts und sie ohne mich auch nicht.
 them can:SBJV:PST I nothing and they without me.ACC also NEG
 “‘The staff are my capital,’ Inge Roterberg says. ‘Without them I couldn’t do
 anything, and without me they couldn’t either.’ (Klößner 2015 on
 engagiert.de)

7.3.2 The primary verb MAY ‘avail, prevail’

In my sample of 200 Old English examples, primary-verb MAY occurs only three times, all of them in the same construction with an inanimate subject and the meaning ‘avail’ (or ‘have power, work, be effective’). According to the *OED* (s.v. *may* v.¹), this particular pattern is attested only in Old English medical recipes, as in the case of (25), but the pattern is clearly not restricted to this text type in the Old English material. The other two occurrences in my sample are from a magical charm [MCharm 2, 21] and from Bede’s history of the English church. The former is included in Table 7.7 (p. 221). The latter, given here in (26), is also mentioned by Visser (1963: §177), Ogawa (1989: 63), and Traugott (1992: 193–194).

- (25) *þeos sealf mæg wið ælc-es cynn-es untrumnyss-e ðe eaga-n*
 this.F salve(F) MAY against each-GEN kind-GEN disease-DAT REL eye-DAT
eigl-iað
 afflict-PL
 ‘This salve works against all kinds of disease which afflict the eye.’ [Med 3, 38.1]
- (26) *Eac neah þan eall-e þa ðing, þe ðanon cum-að, wið*
 also near DEM.INS all-PL DEM.PL thing[PL] REL from.there come-PL against
ælc-um attr-e magon.
 each-DAT poison-DAT MAY:PL
 ‘Also, almost all things that come from that place [sc. Ireland] are effective against all kinds of poison’ [Bede 1, 1.30.3]

A number of other primary-verb uses are also recorded in Old English, and some of these survive well into the Middle English period. No examples of these appear in my sample, suggesting that they were infrequent compared to the modal uses of MAY, but as the entries in the *OED* and *MED* show, they are attested in a variety of different genres at least until the fifteenth century. These uses are generally glossed ‘be strong’ or ‘have power’ in the reference works (e.g. *OED*, s.v. *may* v.¹; *MED*, s.v. *mouen* v.3; Visser 1963: §177), but depending on the context ‘avail’, ‘help’, or ‘withstand’ may be more appropriate translations. Table 7.7 (p. 221) gives an overview of the different patterns with an example of each.

The patterns in Table 7.7 are obviously closely related, and perhaps some of them might be better analysed as subtypes of the same meaning. For instance, (e) and (f) can both be paraphrased ‘help’ in many instances, and there is at least one Old English example which seems to combine the two patterns, given in (27) below. In this example there is both a dative argument (*horse*) and a prepositional phrase with *wiþ* ‘against’. The latter may be analysed as either a prepositional argument or an adverbial clause expressing ‘condition or consideration’ (Bosworth–Toller, s.v. *wiþ*, sense II.4.f), introduced by the complex conjunction *wið þon þe*.¹⁸

¹⁸ The exact nature of the ailment referred to as *corn* in (27) is unknown, but may be a type of inflammation accompanied by lameness (Braekman 1999: 631). Braekman explicitly rejects any connection with PDE *corn* ‘callus, clavus’.

Table 7.7: Primary-verb uses of MAY

	Subject	Pattern	Meaning	Example
a.	ANIM	ADV	‘fare, do’	<i>Hi cwædon þæt he wel mihte</i> [Gen, 29.6] ‘They said that he was doing well’
b.	(IN)ANIM	<i>over</i> + NP	‘prevail over’	<i>ifell gast ma33 oferr þa</i> [eme.ormulum, 8043] ‘evil spirit prevails over those’
c.	(IN)ANIM	<i>wiþ</i> + NP	‘withstand’	<i>seedes þat [...] mowe nouht with forste[s]</i> (<i>PPLC</i> 13.188; Skeat 1873: 226) ‘seeds that ... cannot withstand frost’
d.	(IN)ANIM	<i>to</i> + NP	‘be of use’	<i>To hwan mæg ðis eorðlice hus</i> [ÆCHom II, 45, 339.119] ‘What use is this earthly house?’
e.	(IN)ANIM	DAT NP	‘avail, help’	<i>ne magon hi us þonne ænigum gode</i> [HomU 27, 252] ‘then [our friends] will not avail us at all’
f.	INANIM	<i>wiþ</i> + NP	‘work, help’	<i>þeos mæg wið attre</i> [MCharm 2, 18] ‘this [herb] works against poison’

- (27) *Dis mæg hors-e wið þon þe him bið corn on*
 this.N MAY horse-DAT against DEM.DAT REL 3SG.M.DAT COPB.3SG corn on
þa fet
 DEM.PL feet
 ‘This helps a horse against [or if it has] corn on its feet’ [Med 3, 163.1]

Patterns similar to those in Table 7.7 are found across the older Germanic languages and are presumably instances of shared inheritance.¹⁹ At least the patterns (a)–(c) are attested both in older North and West Germanic, (d) also in West Germanic (Old High German). Pattern (a) with an adverbial is still found in Present-Day Swedish (with regularized inflection; see Chapter 2, Section 2.3.3). I give only a few examples of the Germanic parallels here. (28) is an example of pattern (a), (29) of pattern (c):²⁰

- (28) Early Middle Danish (c.1300)
Bær man thænnæ yrt innæ(n) si(n)n hand. oc spyr siuk
 carry:SG person this.C herb(F) inside REFL.POSS.C hand(F) and ask:SG sick
man at. huræ han ma. Swarær han wæl. tha liu(ær) han.
 person about how he MÅ.SG reply:SG he well then live:SG he
 ‘If one carries this herb inside one’s hand and asks a sick man how he is doing and he says well, then he will survive’ (*Harpestræng* [Sth. K48]; Nielsen 2015a)
- (29) Middle Dutch (c.1400)
Si en mochten jeghen ghenen stanc / noch tjeghen gheen
 they NEG mogen:PST:PL against no:M.ACC stench(M) nor against no.F.ACC
onreinichede
 uncleanliness(F)
 ‘They could not stand any bad smell or uncleanliness.’ (*De Minneburcht* [KB 79 K 10]; MNW, s.v. *mogen*¹, sense II.1)

¹⁹ I would thus propose a slight emendation of the lemma **mugan*- in the most recent etymological dictionary of Germanic (EDPG, q.v.). Although its precise semantics are of course unrecoverable, the meaning of PGmc **mugan*- was almost certainly not just ‘to be able’, as the dictionary suggests, but also ‘avail, prevail’, and so on.

²⁰ For further examples I refer to the standard dictionaries (AWB, s.v. *magan*; DWB, s.v. *mögen*, sense 2; Schiller-Lübbers, s.v. *mogen*; MNW, s.v. *mogen*¹; Fritzner, s.v. *mega*; Cleasby-Vigfusson, s.v. *mega*; Kalkar, s.v. *mu(g)*; SAOB, s.v. *mā* v.²). The Gothic material appears to contain only a single example, in the prefixed form *gamag*, translating Greek ισχύει ‘prevail, have power’ (with an inanimate subject; see Sturtevant 1937: 182; Miller 2019: 209).

Byloo & Nuyts (2011: 20) also note a single possible example in their Early Modern Dutch data, shown in (30), although they question whether this is truly an example of the original primary-verb use. In light of the occurrence of the collocation MAY + ‘against’ elsewhere—including in other Early Modern Dutch sources²¹—I think (30) indeed most likely reflects a survival of this pattern.

(30) Early Modern Dutch (1525)

ghijen weet niet dan prosperiteit gheluckighen voertghanck in
 you NEG know nothing than prosperity fortunate:M.ACC progress(M) in
desen daghen Gheen vianden en moghen teghens dese
 this:PL.DAT day:PL no enemy:PL NEG mogen:PL against this.F.ACC
machtighe stede van ierusalem.
 great:F.ACC city(F) of Jerusalem

‘You know nothing but prosperity, fortunate progress, at the present time; no enemies can withstand [or stand up to] this great city of Jerusalem.’

(Willemsz *Bedevaart naar Jerusalem*; Gonnet 1884: 103)

The ‘help’ patterns (e) and (f), on the other hand, appear to be attested only in the early English material, not in the other Germanic languages. In contexts similar to those where Old English can use a form of MAY, as in (25)–(27) above, the other languages use different verbs or constructions. For instance, in the Early Middle Danish medical text cited in (28), the verbs *hialpæ* ‘help’ and *dughæ* ‘work, be of use’ (the cognate of German *taugen* and Dutch *deugen*) are used, never the cognate of MAY. Unless examples from other early Germanic languages can be found, the uses in (25)–(27) would appear to be unique to early English.

As Görlach (1987: 1) points out, dating and explaining the loss of linguistic items are among ‘the most difficult tasks of historical linguistics’. In most cases, one can do little more than record the latest date of attestation. However, in the case of one of the older primary-verb meanings of MAY, one Late Middle English text may offer us a small piece of indirect evidence. The meaning is glossed ‘endure, fare’ in the *MED* (s.v. *mouen* v.3, sense 1.b) and corresponds to (c) in my Table 7.7 above. The text, a translation of Bartholomeus Anglicus’ *De proprietatibus rerum* produced by John of Trevisa c.1400, survives in at least eight fifteenth-century manuscripts. Both the *MED* and the *OED* (s.v. *may* v.¹, sense 1.a) quote the two examples in (31) from one of these manuscripts (BL, Additional MS 27944; early 15th c.):

²¹ See the entry in the *WNT* (s.v. *mogen*, sense 1). Additional examples from the early modern period may be found in the DBNL, e.g. from a Dutch version of Olaus Magnus’ description of Scandinavia: *Vande tacken vanden dennen worden ghemaect reepen daermen de tonnen mede bindet [...] om datse seer wel mogen teghen het buigen.* (de Groot 1562: f. 180^v) ‘From the branches of the pine trees ropes for tying barrels are made ... because they withstand bending very well.’

- (31) a. *The kyte is [...] a brid þat may wel with trauaile*
 ‘The kite is ... a bird that endures hard work well.’
 b. *Scheep [...] þat haue longe tayles may wors wiþ wynter þan þilke þat haue brode tailles.*
 ‘Sheep ... with long tails can withstand winter less well than those that have broad tails’

Less than two centuries later, in 1582, a version enlarged and annotated by the scholar Stephen Bateman (or Batman) was published in London. Bateman also modernized the language in several respects (e.g. *bird* in [32a] for earlier *brid*; *those* in [32b] for earlier *þilke*). Apparently, by the late sixteenth century the expression MAY + *wiþ* had become obsolete, as in both examples in (32) the adverb *away* has been added (Bateman 1582: Chs. 26, 81):

- (32) a. *And is a bird that may well away with trauaile, & therefore he taketh Cuckoes vpon his shoulders*
 b. *those that haue long tailles maye worse away with winter, then those that haue broade tailles*

The preposition *with* seems to be used with its current meaning in (32), rather than the older meaning ‘against’, which became obsolete towards the end of Middle English (*OED*, s.v. *with* prep.). While the collocation MAY + *away* is attested elsewhere in Early Modern English, the meaning is generally ‘be able to go’ (*OED*, s.v. *may* v.¹, sense 2.a), compare Dutch *weg kunnen*. The editor might have intended this in a metaphorical sense (perhaps ‘get away with’, ‘get through’) in the examples in (32), but perhaps the meaning of MAY *wiþ* in (31) had simply become obscure, and the closest formal equivalent was substituted. In either case, the examples in (31) and (32) strongly suggest that the use of MAY *wiþ* ‘withstand, endure’ was still possible for some speakers in the early fifteenth century but had become obsolete in London English by the late sixteenth century.²²

²² It should be added that *De proprietatibus rerum* has a complex publication history, which would certainly deserve more attention than I can give it here. In addition to the eight 15th-c. manuscripts, the text also survives in two other early prints, one by Wynkyn de Worde from 1495 and one by Thomas Berthelet from 1535 (Keen 2007: 4–5). I have not been able to consult these versions, but it would be interesting to investigate how they treat these and other modernized passages.

7.3.3 Secondary-verb ('modal') uses

Throughout the three periods, MAY is used with modal or other secondary-verb meanings in a large majority of the excerpted examples. The modal meanings expressed are for the most part dynamic, but other categories also appear in the Middle English material. Table 7.8 (p. 226) gives the figures, including the number of instances ambiguous between two categories.²³

In Old English, MAY can be characterized broadly as a dynamic possibility modal. Although a number of instances (10, i.e. 5%) also allow other readings, one of the three dynamic subcategories is usually possible as well, and 83.5% of the excerpted examples ($n = 167$) can be unambiguously assigned to one of these. In (33)–(35) I give three unambiguous examples of DYN-INH (33), DYN-IMP (34), and DYN-SIT (35), respectively.²⁴

- (33) *Ic mæg fromlicor fleog-an þonne pernex oþþe earn oþþe hafoc æfre meahte*
1SG MAY faster fly-INF than ? or eagle or hawk ever MAY:PST
'I can fly faster than any 'pernex' or eagle or hawk ever could' [Rid 40, 66]
- (34) *nag-an we ðæs heolstr-es þæt we us gehyd-an mægon in*
NEG:have-PL we DEM.GEN shelter-GEN COMP we us hide-INF MAY:PL in
ðiss-um neowl-an genip-e
this-DAT profound-DEF darkness-DAT
'We have no shelter where we can take cover in this profound darkness [sc. hell]' [Sat, 99]
- (35) *Hu mæg hit þonne gewurð-an þæt ic butan wer-es gemana-n*
how MAY it then happen-INF COMP I without man-GEN company-DAT
cynn-an scyle?
conceive-INF SHALL:SBV
'How is it possible [*lit.* how can it happen] that I am going to have a child without having known a man?' [ÆCHom I, 13, 285.128]

The meaning DYN-IMP also occurs without an infinitive in combination with a directional expression, as in (36). This pattern is well known from other Germanic languages (see e.g. Hansen 1972; Denison 1993: 305; Mortelmans et al. 2009) and survives in English well into the modern period (*OED*, s.v. *may* v.¹, sense 2.a). The pattern has often been analysed, as in the *OED*, as a case of ellipsis 'with verb of motion understood', but see Visser (1963: §178) and Huber (2017: 32–35) for critical remarks on this analysis.

²³ A Cramér's V test of the distribution of the general types DYN-INH, DYN-IMP, DYN-SIT, and 'other' across the three periods reveals only a moderate effect, $\chi^2(6, N = 600) = 47.08$, $p < .001$, Cramér's $V = .1981$. Ambiguous instances were subsumed under the first category in the table, i.e. DYN-INH/DYN-IMP was counted as DYN-INH, and so forth.

²⁴ In (33) both instances of MAY have DYN-INH meaning. The one in my sample is *meahte*. The word *pernex* is a *hapax legomenon* in OE, but is most likely a misinterpretation of *plus pernix* 'faster' in the Latin riddle which the OE version was based on (Whitman 1898: 193; Steen 2008: 103).

Table 7.8: Semantic development of MAY

	OE		EME		LME	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
DYN-INH	66	33.0	47	23.0	24	12.0
DYN-INH/DYN-IMP	14	7.0	24	12.0	11	5.5
DYN-INH/DYN-SIT	2	1.0	5	2.5	3	1.5
DYN-INH/OPT			1	0.5	1	0.5
DYN-IMP	94	47.0	76	38.0	87	43.5
DYN-IMP/DYN-SIT	7	3.5	15	7.5	19	9.5
DYN-IMP/DEO			3	1.5	1	0.5
DYN-IMP/PERM	4	2.0	1	0.5	3	1.5
DYN-IMP/OPT	1	0.5	2	1.0	3	1.5
DYN-IMP/FUT			2	1.0		
DYN-IMP/EVT					1	0.5
DYN-SIT	7	3.5	13	6.5	18	9.0
DYN-SIT/EPI	1	0.5	4	2.0	9	4.5
DYN-SIT/OPT	1	0.5	5	2.5		
DYN-SIT/EVT					4	2.0
EPI			1	0.5	2	1.0
DEO/PERM			1	0.5	1	0.5
PERM					6	3.0
OPT					3	1.5
EVT					4	2.0
Primary verb	3	1.5				
TOTAL	200	100.0	200	100.0	200	100.0

- (36) *Is þonne on west-an medmycel duru þæt mann-es heafod ge*
 COP.3SG then on west-DAT small door COMP person-GEN head and
þa sculdr-o magan in
 DEM.PL shoulder-PL MAY:PL in
 ‘And on the western side there is a small door that a person’s head and
 shoulders can enter/fit inside’ [HomS 46, 194]

A small number of Old English attestations allow another reading alongside a dynamic one. I will discuss only a few of these ambiguous examples here, as I will return to the question of ambiguity in the following sections. In (37a), from the Old English translation of the Book of Joshua, the King of Jerusalem asks the other Amorite rulers for help in order to conquer the city of Gibeon (Gabaon). The purposive *ðæt*-clause with *magon* translates the Latin subjunctive *ut*-clause in (37b):

- (37) a. *Cum-að to me, ic bidd-e, ⁊ bring-að me fultum, ðæt we*
 come-IMP.PL to me I ask-1SG and bring-IMP.PL me assistance COMP we
magon ða burh Gabaon oferwinn-an
 MAY:PL DEM.F.ACC city(F) PN conquer-INF
 ‘Come to me, I ask of you, and bring me assistance so that we may [or
 will be able to] conquer the city of Gibeon’ [Josh, 10.3]
- b. *Ad me ascendite, & ferte præsidium, vt expugnemus*
 to me ascend.IMP:PL and bring.IMP:PL assistance COMP conquer:SBJV:1PL
Gabaon
 PN
 ‘Come up to me and bring assistance, so that we may conquer Gibeon’
 (Josh 10: 4; my translation)²⁵

The example is discussed by Shearin (1903: 103) in his dissertation on Old English purposive expressions, where it is suggested that ‘the potential force of *magan* can hardly be felt at all’ and that it ‘almost’ has the function of a simple optative. I think an optative interpretation (as defined in Chapter 2) is indeed possible here, but I do not wish to rule out a dynamic possibility reading either. The king’s argument is that the Amorites will only be able to conquer Gibeon if they combine their forces, and a paraphrase with BE *able to* seems to be equally appropriate, as indicated in the translation in (37a). The fact that the Vulgate has a subjunctive form is not decisive; the Latin subjunctive mood covers a range of different functions, including possibility (traditionally considered a subtype of the ‘potential’ subjunctive; see e.g. Woodcock 1959: 89). Hence, I have classified *magon* in (37a) as ambiguous between the categories DYN-IMP and OPT.

Finally, the Old English sample contains four instances where a permission reading is possible alongside a dynamic one. One such case is given in (38), with additional context for clarity.

²⁵ The D–R version has ‘Come up to me, and bring help, that we may take Gabaon’ (Josh 10: 4).

- (38) {Gregorius cwæð, þære witegunge gast, Petrus, ne onlihteð na simle þara witegana mod. Forþam swa swa hit awriten is be þam halgan gaste þæt he orðað þær he wyle, swa is eac to witenne þæt he orðað þonne he wyle.} *Be þam is þæt Nathan se witega from þam cyning-e*
 by DEM.DAT COP.3SG COMP N. DEM.M prophet from DEM.M.DAT king-DAT
wæs geax-od hwæðer he mihte þæt templ getimbr-ian, ærest he
 was ask-PTCP whether he MAY:PST DEM.N temple(N) build-INF first he
geþwær-ode 7 syððan he hit forbæd.
 consent-PST and afterwards he it forbid.PST
 ‘{Gregory said, “the spirit of prophecy, Peter, does not enlighten the minds of the prophets all the time. For just as it is written of the Holy Ghost that he inspires where he will, so it follows that he inspires when he will.} This is why the prophet Nathan, when he was asked by the king if he [King David] could build the temple, first consented but afterwards forbade it.” [GD 2 (H), 21.146.7–19]

This example, from a translation of the *Dialogues* of Gregory the Great, may initially seem like a straightforward permission instance: King David asks the prophet Nathan if he can build a temple, and Nathan tells him first that he can do as he pleases, and then that God will not allow it (2 Sam. 7; 1 Chr. 17). However, a dynamic reading seems possible as well. The question at issue is also whether it is possible for David to build the temple without having to fear any negative consequences. It is possible that the (rather close) Old English translation is influenced by the Latin original, which has a form of *possum* ‘can, be able’,²⁶ but again the Latin text does not offer any decisive arguments for one or the other interpretation. Although permission is usually expressed by Latin *licet*, *possum* is also occasionally found with this meaning (*OLD*, s.v. *possum*; Orlandini 1998: 1022–1023). For these reasons, I decided to classify (38) as ambiguous as well, namely between *DYN-IMP* and *PERM*.²⁷

Changes in Middle English

As Table 7.8 above shows, a number of new meanings appear in Middle English, including instances which are not ambiguous with one of the dynamic categories. However, the majority of instances even in the Late Middle English sample are dynamic. Taken together, 81% of the examples from this period are unambiguously dynamic.²⁸ A further 10.5% allow a dynamic reading alongside one of the other categories (*DEO*, *OPT*, *EPI*, etc.). If there is a shift across the three periods, it happens

²⁶ *Hinc est enim quod Nathan a rege requisitus si construere templum posset, prius consensit et postmodum prohibuit* (Gregorius Magnus, *Dialogi* II, ch. XXI; Migne 1841: LXVI, 174) ‘And this is why Nathan, when asked by the king if he could build a temple, first consented and afterwards forbade it’.

²⁷ Standop (1957: 27–29) reaches a very similar conclusion on the occurrence of *PERM* uses of *MAY* in his OE material. He cites three examples where a *PERM* interpretation is more or less likely, but notes that all of these allow alternative interpretations ‘wenn man die gesamte Sprechsituation und den syntaktischen Zusammenhang berücksichtigt (Standop 1957: 28).

²⁸ Namely the categories *DYN-INH* (12%), *DYN-INH/DYN-IMP* (5.5%), *DYN-INH/DYN-SIT* (1.5%), *DYN-IMP* (43.5%), *DYN-IMP/DYN-SIT* (9.5%), and *DYN-SIT* (9%).

between the dynamic subcategories; the share of DYN-INH instances declines from 33% in Old English to 12% in Late Middle English, while DYN-SIT instances become slightly more frequent, with an increase from 3.5% in to 9% in the same time frame. However, the frequency of the latter category in absolute terms is quite low.

As argued above, a permission interpretation is possible in four instances in the Old English material, but all of them allow a DYN-IMP reading as well. In Middle English, we find examples where a dynamic reading is not appropriate. I give two of these in (39), one ambiguous with a deontic-moral reading, the other an unambiguous permission instance. In (39a), from a biblical paraphrase, the narrator discusses the embarrassing episode in Genesis where Lot's daughters trick him into sleeping with them (Gen 19: 30–38). The reader is instructed not to forget that the daughters had good intentions, and that Lot was intoxicated and did not know what he was doing. This can either be considered an interdiction not to forget on the part of the narrator (i.e. non-permission, 'may not') or an expression of a moral judgement ('ought/should not'). Hence, I have analysed (39a) as ambiguous between the categories PERM and DEO. A clear permission instance is seen in (39b), from the rule of the Third Order of St Francis. Since the main aim of the rule is to establish what the friars and sisters are required and permitted to do, it is clear that the example explains not when they are able to eat meat, but when they are allowed to, i.e. PERM.

- (39) a. *And on eiðer here a knaue bi-geten*
ðis ne mai nogt ben for-geþen
ðis maiden es deden it in god dhogt
ðe fader oc drunken ne wiste he it nogt
 'And with both of them he fathered a boy. This may/should not be forgotten: the girls did it with good intentions, and the father also, drunk, he did not know' [eme.genexod, 1152–1155]
- b. *And as to theme that be lett bloode, they may ete fleshe iij Dayes. And they þat travell by the way may also ete fleshe all that while.*
 'And as for those that have their blood let, they may eat meat for three days. And those that travel on the road may also eat meat for the whole duration.' [lme.order, 49]

Another example of a non-dynamic meaning is given in (40), from a letter from the Prior of Durham dated 1456. The Prior asks Sir Alexander Home, the bailie of Coldingham in Scotland, to ensure that monks from Durham may be safely received at the Priory of Coldingham despite the political tensions between the two countries.

- (40) *I recomende me to you in my full hertely wise [...] besekynge you to labour effectually, as yhe have writen to me, that my brethre may be resaved and admytt to our place of Coldyngham*
 'I commend myself to you in the most heartfelt manner ... entreating you to work diligently, as you have written to me, so that my brethren may be received and admitted to our place of Coldingham' [nme.coldingh, 182]

I have analysed the use of MAY here as optative (in the broad sense of the term defined in Chapter 2). The Prior does not merely intend that it should be possible for the brethren to be received at the Priory of Coldingham, but hopes that this state of affairs will actually be realized (for a useful discussion of this use of MAY, see Yanovich 2017).

Finally, a few examples of the category ‘eventuality’ ($n = 4$) occur in the Late Middle English material. There is also one example which I analysed as ambiguous between DYN-IMP and EVT, along with four which were analysed as ambiguous between DYN-SIT and EVT (for the definition of the latter category, see Chapter 3, Section 3.3.3). Two eventuality examples are given in (41).

- (41) a. *But byfor þis tyme þe counsseyle of þe cyty bad Pylat yeld þe sette and tovrne. And Pylat sayd, ‘Nay, abyde ȝe a whylle yf anny of þis lordys may dye or yf we may þem pleyse wytt ȝeyftus of ovr treysovr.’*
 ‘But some time before this, the council of the city had asked Pilate to surrender the city and town. But Pilate had said, “No, you should wait a while in case any of these lords MAY die or we may satisfy them with presents from our riches.” [lme.siege, 85]
- b. *Þis penance ilkday sal scho do
 Vntil hir souerayn se þerto.
 And when scho ful mendyng may trow,
 Scho sal say, ‘sese, it suffes now.’*
 ‘This penance she has to do every day until her superior has dealt with it. And when she [sc. the superior] MAY trust that there is full atonement, she has to say, “cease, now it is enough.” [nme.benmetr, 1821–1824]

The first instance of MAY in (41a) was analysed as an unambiguous eventuality instance. It appears in a conditional clause and expresses that the actualization of the state of affairs is not certain: the people of Jerusalem are to wait and see *if* any of the lords are going to die or they may buy them off. The example in (41b), on the other hand, is a case of ambiguity between DYN-IMP and EVT. The passage, from a rhymed version of the Rule of St Benedict, specifies how a nun should do penance for a variety of offences. The rule instructs that her superiour should make her stop as soon as she is confident that the offence has been atoned for. This may be read either as a use of DYN-IMP meaning something to the effect of ‘have (sufficient) reason’ (see Standop 1957: 20–21 for examples of this use in Old English)—‘when she has reason to trust that there is full atonement’—or as expressing the eventuality of the situation: ‘whenever she may trust that there is full atonement’. It is of course possible that the use of MAY in (41b) is influenced by the metre of the rule, but this iambic tetrameter is relatively flexible, as Kock’s (1902: xiii–xiv) examples show. At any rate the type EVT is infrequent in the material, and the potential example in (41b) is thus a marginal case.

The development of epistemic meanings

Epistemic uses of modal verbs have been much discussed in the literature on English and other European languages, as noted in Chapters 2 and 3. For this reason I will only treat the development of epistemic *MAY* briefly, showing how my corpus data fit with the existing proposals.

Although there is disagreement about the analysis of some individual examples, most scholars seem to agree that epistemic uses of the English modals are securely attested from Middle English onwards (e.g. Goossens 1982; Plank 1984; Warner 1993).²⁹ The main debates have focussed less on the timing than on the sources of epistemic meanings and the theoretical implications of the development. In the case of *MAY*, one hypothesis is that the epistemic sense developed out of the permission meaning. Shepherd (1982), Goossens (1987a), Traugott (1989), and Sweetser (1990) all accept some version of this explanation. Another hypothesis places the source of the epistemic sense in the meaning category which has been variously termed ‘wide-scope possibility’ (Gamon 1993), ‘general situation possibility’ (Depraetere & Reed 2011), and ‘objective epistemic’ modality (Warner 1993), and which I take to correspond to Nuyts and colleagues’ situational type, i.e. *DYN-SIT*. Despite the proliferation of terms, the examples given by these authors suggest that they are referring to the same meaning category. The pathway from situational to epistemic meaning has been advocated by, among others, Gamon (1993) for the German modals, Fischer (2007, 2008) for English, and Nuyts & Byloo (2015) for Dutch.³⁰

My Middle English material clearly supports the second hypothesis, i.e. that epistemic *MAY* developed out of the situational meaning. There are more attestations showing ambiguity between *DYN-SIT* and *EPI* (4 in EME, 9 in LME) than there are unambiguous epistemic ones (1 in EME, 2 in LME), while not a single example shows ambiguity between *PERM* and *EPI*. Two ambiguous examples are given in (42), the one in (42a) from an Early Middle English devotional text, the one in (42b) from *An Alphabet of Tales*, a Northern Late Middle English collection of exempla (on this text see also Chapter 8, Section 8.3.4). I do not think it is possible to read either of these as a permission example without distorting the meaning of the text (e.g. #‘my heart is allowed to break’; #‘great misfortune was allowed to happen’). In (42a) the point is rather that it is possible (*DYN-SIT*) or indeed quite likely (*EPI*) that the heart of the believer is going to break into pieces because of the Passion of Christ. In (42b) the

²⁹ Denison (1993: 298–301) gives several examples of epistemic *MAY* from OE. His conception of ‘epistemic’, however, is evidently broader than the one I have adhered to in my analysis. Most of the examples given by Denison would be considered participant-imposed (*DYN-IMP*) or situational (*DYN-SIT*) in the terms of Nuyts and colleagues.

³⁰ Note that these authors do not necessarily agree about the mechanism by which the change *DYN-SIT* → *EPI* comes about. Gamon (1993) appears to consider the German development purely semantic, while Fischer (2007, 2008) suggests that a more general change from biclausal to monoclausal structures with raising verbs played a role in English.

pope warns against the practice of some confessors of concealing acts of blasphemy, which has the potential (DYN-SIT)—or is likely (EPI)—to cause damage to the whole church.³¹

- (42) a. *A hwat schal i nu don? Nu min herte mai to breke. min ehne flowen al o water.
A nu is mi lefmon demd for to deien.*
'But what am I to do now? Now my heart may break to pieces; my eyes are running over with water. But now my beloved is condemned to die.'
[eme.wohunge, 283]
- b. *'a confessor', he sayd, 'aw not be þe law to layn such a blasfeme, whar-þurgh grete perell myght fall vnto all holie kurk.'*
"A confessor", he [the pope] said, "should not according to the law conceal such a blasphemy, through which great misfortune could/might happen to the entire Holy Church." [nme.alpha, 126]

The earliest unambiguous epistemic instance in my corpus sample is from Robert of Gloucester's chronicle of England (BL, Cotton MS Caligula A. xi) from c.1300. There are in fact two instances of epistemic MAY in the same passage, in lines four and five in (43). The second one appears with the epistemic adverb *par auntre* 'perhaps'.

- (43) *Ac vor loue of mi louerd · þe pope icholle do þis ·
ȝiue þe erchebissopriche · wan so is wille is ·
& icholle wan so he it ȝifþ · vawe auonge þerto ·
An Maister steuene of langetone · may so wel do ·
Her after þat par auntre · ich may him ȝiue zute ·
Anoþer uor þe popes loue · & þat nis noȝt lute ·*
'But for the love of my lord the Pope, I will do this: give the archdiocese to whomever he wishes, and whomever he gives it I will gladly accept. And Master Stephen of Langton may do so well after this that I may perhaps give him yet another one out of love of the Pope, and that is not a small thing.' [eme.rob glo, 10300–10305]

The examples of epistemic MAY in (43) are earlier than the first unambiguous permission example in my corpus. This may well be accidental, however, as the number of instances of both types is low. The OED records permission examples before epistemic ones (see OED, s.v. *may* v.¹, senses 6, 7, 17).³² In addition to the clear examples from Middle English, there are a few Old English examples where either PERM or EPI is a possible reading along with one of the other meaning categories, suggesting

³¹ The infinitive *to breke* in (42a) is of course not a *to*-infinitive but a prefixed form (MED, s.v. *tobreken* v.; OED, s.v. *to-break* v.), with a meaning similar to German *zerbrechen* 'shatter, break to pieces'. On the verb *layn* 'hide, conceal' in (42b), almost certainly a borrowing from Old Norse, see MED (s.v. *leinen* v.) and OED (s.v. *lain* v.). The verb is still recorded in northern Lancashire in the mid-19th c. (Peacock–Atkinson, s.v. *leän*).

³² The earliest epistemic example in the OED (s.v. *may* v.¹, sense 7a) is from Lāzamon's *Brut* (BL, Cotton MS Caligula A. ix; c.1275): *Þurh hire þu miht biwinnen lufe of hire cunnen* [eme.brutcali, 15523] 'Through her you MAY secure the friendship of her family'. I think a DYN-IMP reading is more plausible here. In the passage in question a messenger is trying to convince the British king Cadwallon to marry a Mercian

that there was at least a potential for epistemic and permission uses in the earliest attested period. An example ambiguous between DYN-IMP and PERM was cited in (38) above (see p. 228). The single example of ambiguity between DYN-SIT and EPI in my Old English material, from the famous preface to Ælfric's *Grammar*, is given in (44).

- (44) {Ic ælfric wolde þas lytlan boc awendan to engliscum gereorde of ðam stæfcræfte þe is gehaten GRAMMATICA, syððan ic ða twa bec awende on hundeahtatigum spellum, forðan ðe stæfcræft is seo cæg, ðe ðæra boca andgit unlicð;}
 and ic þohte þæt ðeos boc mihte frem-ian iung-um
 and I think:PST COMP DEM.F book(F) MAY:PST benefit-INF young-DAT
 cild-um to anginn-e þæs cræft-es, oððæt hi to
 child-PL.DAT at beginning-DAT DEM.M.GEN craft(M)-GEN until they at
 mara-n andgyt-e becum-on.
 greater-DAT understanding-DAT come-PL
 'I, Ælfric, wanted to translate into English this little book on the art of letters which is called *grammatica*, after I had translated those two books with eighty stories, because the art of letters is the key which unlocks the meaning of those books.} And I thought that this book could/might benefit young children at the beginning of the craft, until they reach greater understanding.'
 [ÆGram, 2.13–18]

In the preface Ælfric explains his motivations for translating the *Excerptiones de Prisciano* (see Chapter 5): he thought or intended (*þohte*) that the translation could (*mihte*) be of use to novices at the early stages of learning Latin. It is easy to read this as corresponding to Present-Day English epistemic *might*, as indeed Hogg appears to do:

I thought that this book might help young children at the start of their study [of grammar], until they could achieve greater understanding. (Hogg 1992: 17)

However, 'could' is usually a more appropriate translation of the Old English past-tense form *mihte*, and I think that a DYN-SIT reading may indeed be more likely in this case: 'I thought that this book could (turn out to) benefit young children'. Still, since both readings seem possible, I analysed it as ambiguous. As the next section will show, there may be other instances of epistemic MAY in the Old English material.

7.3.4 MAY as an 'autonomous' modal

The use of MAY which I have termed 'autonomous' in Table 7.6 above is represented by only a single example in my Old English corpus. I believe it warrants some further discussion here, not because it has not been noticed in the existing literature, but

princess in order to secure an alliance with her family. It seems more likely that the messenger is arguing that marrying the princess will enable Cadwallon to form an alliance with the Mercians (i.e. a DYN-IMP reading), not just that there is a chance that he might form an alliance (i.e. an EPI reading).

³³ Skeat (1881: 1, 548) characterizes the Bodley version as ‘late and ill-spelt’, but the language is more appropriately classified as transitional between OE and EME. (Another text from Bodley 343 [eme.rood] is indeed included in my EME corpus.) Compare Bodley *i-* with Julius *ge-* and lexical items such as Bodley *lage* ‘law’ for Julius *æ*, *halga* ‘holy’ for *eadiga*, *ferde* ‘departed’ for *gewat*, and *læd* ‘send for (IMP)’ for *gelange* (readings from Skeat 1881).

The combination of MAY and *swa* without an infinitive has been noticed before. Bosworth–Toller (s.v. *magan*, sense III, 3) cite three examples similar to (45)–(46) as cases of ellipsis ‘of a verb to be inferred from the context’, but also refer the reader to sense I, ‘to be strong’, suggesting that some instances might also be interpreted as primary-verb uses. Mitchell (1985: §1008) voices a similar agnosticism: ‘Each reader will have his own opinion whether a particular example shows an independent use of *magan* [...] or “ellipsis” of an infinitive’. Wülfing (1901: §394) is more certain about his analysis: he finds that one example of MAY in his early Old English material, cited here in (47), is ‘[g]anz unabhängig’. This is also one of the examples cited by Bosworth–Toller; Ogawa (1989: 64) mentions it as well, but does not comment on the absence of an infinitive:

- (47) *Ondswar-e* *him* *mon* *þæt* *heo* *Ongl-e* *nem-de* *wær-on*.
 reply-PST him.DAT person COMP they English-PL call-PTCP.PL COP.PST-PL
Cwæð he: Wel þæt swa mæg: forðon heo ænlic-e onsyn-e
 say.PST he well that so MAY because they unique-ACC.F look(F)-ACC
habb-að 7 eac swylce gedafon-að þæt heo engl-a
 have-PL and also similarly befit-PL COMP they angel-PL.GEN
æfen+erfeweard-as in heofon-um sy.
 equal+heir-PL in heaven-PL.DAT COP.SBJV
 ‘He was told that they were called “English”. And he said, “That may well [be] so, because their appearance is unequalled and it would also befit them to be joint heirs with the angels in heaven.” [Bede 2, 1.96.22]

Table 7.9: Attestations of ‘autonomous’ MAY

Pattern	n	DOEC references	
		Prose	Verse
MAY + <i>swa</i>	10	Bede 2, 1.96.22 ÆLS (Peter’s Chair), 222	And, 1322 + 1393 Beo, 2089 GuthA,B, 576 Met, 11.101 Prec, 26 Rid 29, 1 Sat, 22
MAY + <i>eaðe</i>	1	Bede 3, 11.192.5	

The example in (45) is thus not an isolated case. Further searches in the DOEC reveal additional examples, almost all of them with *swa*, as shown in Table 7.9.³⁴ Unlike the primary-verb uses of MAY discussed in Section 7.3.2—but similarly to some of the ‘autonomous’ uses of the Present-Day Dutch modals—the meanings of the examples in Table 7.9 can all be characterized as modal. It thus seems that the Present-Day Dutch pattern discussed by Nuyts (2011, 2013) has a close parallel in Old English MAY, even if this is only sporadically attested in the corpus. Compare (45)–(47) with the use of Dutch *kunnen* in the sense ‘be possible’ in (48). The speaker is explaining how his father paid off his house by instalment without ever signing a contract:

(48) Present-Day Dutch

En ieder jaar betaalde mijn vader tienduizend gulden. Dat kon toen zo.
 and every year pay:PST my father 10,000 guilder that can.PST then so
 ‘And every year my father paid 10,000 guilders. That was possible back then.’
 (Niemantsverdriet 2015 on luutjeniemantsverdriet.nl)

The only example without *swa* in Table 7.9 is from the Old English translation of Bede, i.e. the same text and manuscript as (47). Here, *mæg* occurs with the adverb *eaðe* ‘easily, readily’:

- (49) *Bidd-o ic þe la, gif þu ænig-e his reliquias hæbbe mid*
 pray-1SG I 2SG.DAT indeed if 2SG any-PL his relics have:SBJV with
þec, þæt þu me selle. Eaðe mæg þæt me Drihten
 2SG.ACC COMP 2SG me.DAT give:SBJV easily MAY COMP me.DAT Lord
þurh his geearnung milts-igan wille.
 through his merit have.mercy-INF WILL:SBJV
 ‘I pray you, if you have any of his [St Oswald’s] relics with you, that you give them to me. It may easily/perhaps [be] that the Lord is going to have mercy on me for his merits.’ [Bede 3, 11.192.4–5]

The example in (49) is discussed by Fischer (2007, 2008), who considers it a potential early epistemic instance. She uses it to illustrate the point that the epistemic use seems to have been established first in ‘impersonal’ contexts without an agentive subject (e.g. ‘it may be that the Lord will have mercy’), and only later spread to contexts with agentive subjects (e.g. ‘the Lord may have mercy’). In the terms used in this study, (49) seems to allow both a DYN-SIT and an EPI interpretation, but I agree with Fischer that an epistemic reading is indeed quite likely here. First, the sick man asking for St Oswald’s relics in (49) is expressing a meek hope that God is going to have mercy on him, and a paraphrase with the epistemic adverb ‘perhaps’ seems rather more appropriate than ‘easily’, the more literal translation of *eaðe*; see DOE (s.v. *eaþe* adv.) for the different senses. Second, the Latin original, which the Old English version follows fairly closely, has the epistemic adverb *forte* ‘perhaps’ in the

³⁴ There is also a potential example in [GDPréf and 4 (C), 39.323.15]: *we witon 7 naht ne tveogiað þæt hit mæg* ‘we know and have no doubt that it is possible’ (?). However, this is most likely a case of postverbal ellipsis. The infinitive *beon gecyþed* ‘be shown’ occurs in the preceding clause with a complement clause, which *hit* refers to anaphorically: ‘we know and have no doubt that it may [be shown that ...]’.

corresponding passage.³⁵ Third, the collocation *eaðe mæg* is found as a translation of epistemic adverbs elsewhere in the Old English corpus, although unfortunately this use does not seem to be attested in running prose: all examples are from glosses, as pointed out by Goossens (1982: 78) and discussed by Warner (1993: 165–166). Warner notes that while the expression *eaðe mæg* is found outside of glosses, a non-epistemic reading is always possible in the prose attestations. The *DOE* (s.v. *eape* adv.) notes that *eaðe* is found with the meaning ‘perhaps’, but the only prose example cited is the one in (49). In the glosses to the Lindisfarne Gospels (BL, Cotton MS Nero D. iv) and the Rushworth Gospels (Bodleian Library, MS Auct. D.2.19), on the other hand, *eaðe mæg* is regularly found as a translation of Latin *forte* and *forsitan* (also ‘perhaps’), suggesting that for the two glossators in question *eaðe mæg* could function as an epistemic adverb. The evidence from these interlinear glosses obviously has to be interpreted with great caution, not least because parts of Rushworth were based on Lindisfarne or a common source. It is noteworthy, however, that the occurrence of *eaðe mæg* appears to be restricted to Old Northumbrian, i.e. the northernmost of the four dialects traditionally distinguished for Old English. The expression is used in all four Gospels in Lindisfarne and in Mark, Luke, and John in Rushworth—precisely the material which is generally agreed to be written in Old Northumbrian.³⁶ It is important to note that the non-Northumbrian sections of Rushworth appear to contain very few instances of *forte* and none of *forsitan*, meaning that there was little opportunity for the glossator to use the expression. However, I have also found no examples of *eaðe mæg* glossing *forte* or *forsitan* in any other gloss included in the DOEC. By far the most common translation is *wenunga* ‘presumably, perhaps’, which is also found in both of the Old Northumbrian glosses (e.g. *woenunga* [JnGl (Ru), 5.46]; *woenunge l eaðe maege* [MkGl (Li), 14.2]). Other alternatives include *uutedlice l uoen is* [JnGl (Li), 4.10], and *eaða* without *MAY* [MkGl (Li), 14.13]. The use of *eaðe mæg* can thus not be explained merely as due to a lack of an Old English word corresponding to Latin *forte* and *forsitan*.

If *eaðe mæg* had indeed developed into an epistemic adverb in Old Northumbrian, this suggests that the use of *MAY* to express epistemic meaning was already established at least in some (northern) varieties of Old English. Unfortunately, these also happen to be among the most poorly attested early English dialects, and when substantial northern texts start appearing towards the end of the Middle English period, the collocation *eaðe mæg* seems to have disappeared without a trace. Neither the *MED* (s.v. *ethe*), the *OED* (s.v. *eath* | *eith* adj. and adv.), nor the *DOST* (s.v. *eith* adv.) make any mention of it.

35 The Latin reads, in Migne’s edition, *precorque, si aliquid reliquiarum illius penes te habes, adferas mihi, si forte mihi Dominus per ejus meritum misereri voluerit* (Migne 1841: xcvi, 137) ‘and I pray, if you have any of his relics with you, bring it to me, in case perhaps the Lord is going to have mercy on me for his merits’.

36 The Rushworth Gospels were glossed by two different scribes: the first part, conventionally referred to as Ru¹, consists of Matthew and two short sections of Mark (1–2: 15) and John (18: 1–3) and was glossed by a priest named Farmon (or Farman). The second part (Ru²), was glossed by Owun (Ker 1957: 352). The Lindisfarne Gospels (Li) were glossed by a single scribe, one ‘Aldred presbyter’, most likely also the glossator of the Durham Collectar (Ker 1957: 215–216). It is generally assumed that Owun and Aldred wrote in Old Northumbrian, Farmon in a Mercian dialect (Fernández Cuesta & Pons-Sanz 2016: 1–2).

An Old Norse parallel

Before concluding the investigation of CAN and MAY, I wish to point briefly to another parallel to the ‘autonomous’ use of MAY, which to the best of my knowledge has not been noticed in the literature. The cognate of MAY in Old Norse—more precisely the Old West Norse dialect spoken in Norway and Iceland—is recorded in a pattern which is remarkably similar to the Old English one described above. The older dictionaries by Fritzner (s.v. *mega* v., sense 4) and Cleasby–Vigfusson (s.v. *mega*, sense II.3) both describe it as instances of ‘ellipsis’ of an infinitive and quote examples from several different sources. In the online dictionary *ONP*, which is still in development, the entry for *mega* (q.v.) does not yet provide any detailed analysis of the various patterns, but lists a number of collocations along with relevant examples.³⁷ I will give just two examples here, in (50) and (51), both of them from the saga literature (MS dates from the *ONP*):

(50) Old West Norse (c. 1302–1310)

Þorarininn mællti: „Ver skvlym bera a land dyrgripa
 Þ. speak:PST we shall:1PL carry:INF on land fine.ware:PL.ACC
vara ok ma at hans menn fari a land at sia
 our:PL.ACC and *mega*.3SG COMP his person.PL go:3PL.SBJV on land to see.INF
ok forvitnaz gripina
 and enquire:INF treasure:PL.ACC:DEF
 ‘Þorarininn said, “Let’s carry our fine wares ashore, and then it may [be] that
 his men come ashore in order to see and enquire about the wares’.
 (*Fóstbræðra saga*, AM 544 4° [‘Hauksbók’]; Þórólfsson 1925: 116)

In (50) the character Þorarininn is planning an ambush of the enemy’s men by luring them with luxury goods. He suggests that if they leave the goods on the shore, the enemy will perhaps follow and look for them, making this a fairly clear epistemic instance of *mega*, here in the third-person singular form *ma*. I take the subject of *ma* to be the complement clause beginning with *at* ‘that’. There is no other infinitive form in the matrix clause, making it parallel to the Old English example from Bede in (49).³⁸

In (51) the character Hrútr suggests going to meet the king, and Qzurr agrees that this is possible. The pronominal subject *þat* refers anaphorically to the whole situation; compare again the earlier examples, with the Old English subject pronouns *hit* and *þæt* in (45)–(47) and Dutch *dat* in (48).

³⁷ Entry located at <https://onp.ku.dk/onp/onp.php?053364> (20 April 2020). See in particular the collocations ‘*má at ...*’, ‘*má vel*’, and ‘*impers.: má*’.

³⁸ Note that the pattern does not seem to be available in Present-Day Icelandic. I could find no mention of it in the sections on modals in Thráinsson (2007: 421–428). A modern translation of (50) published on the internet uses the expression *kann vera*, lit. ‘may be’: *og kann vera að nokkurir menn Þorgeirs fari út að undrast gripina* ‘and it may be that some of Þorgeir’s men ...’ (*Fóstbræðra saga* 2007).

(51) Old West Norse (c. 1300–1325)

mælti *Hrútr: Gǫngum fyrir konung. Þat má vel, sagði Qzurr*
 speak:PST H. go:1PL before king.ACC that *mega*.3SG well say:PST Q.
 ‘Hrútr said, “Let’s go and see the king.” “That’s possible [*lit.* that can well]”,
 said Qzurr’ (*Njáls saga*, AM 468 4° [‘Reykjabók’]; Sveinsson 1954: 13)

Whether there is any historical connection between the Old English and Old West Norse patterns may be an unanswerable question. Although there appears to have been a renewed interest in—and optimism about—syntactic reconstruction in recent years (see e.g. Eythórsson & Barðdal 2005), the Old English pattern discussed above is probably too sporadically attested to say anything about its likely origin. Still, the existence of this and similar patterns in a number of Germanic languages may be instructive at another, more general, level. Modals are usually described as auxiliaries in the literature (or, much more rarely, as ‘secondary verbs’ with the terminology I have adopted in this work), but while it seems reasonable to describe the uses in (45)–(51) as modal, they can hardly be described as auxiliaries (‘helping verbs’) in any meaningful sense, as they are the only verbs in the clause. This suggests that ‘autonomous’ modals like the ones observed for Present-Day Dutch and other continental West Germanic languages may not be as exceptional as they first appear. As I will argue in the next chapter, this also seems to be the case for the change ‘possibility → necessity’ in MOT and its cognates, which has a parallel in MÅ, the Danish cognate of Old West Norse *mega*.

7.4 Comparison and conclusions

By way of a conclusion to this chapter I will briefly compare the developments of CAN and MAY and the fates of their cognates in Dutch and German. Before discussing the similarities relating to the semantic developments, it is perhaps worth explicitly spelling out a few differences. Sections 7.2 and 7.3 should have made clear that CAN and MAY both occur as primary and secondary verbs in the material, but that the frequencies of these in my sample differ considerably. As Figure 7.1 shows, the 600 analysed examples of MAY were almost exclusively secondary-verb uses, whereas the relative frequency of secondary-verb uses of CAN increases in the period. As in the case of the morphosyntactic changes discussed in Chapter 5, we see that the individual modals develop in different ways rather than as a coherent class. Goossens’s (1987b: 141) suggestion that the modals ought to be investigated ‘individually, not globally’ thus finds some support in the development of CAN and MAY in Middle English. It is also worth noting that the primary-verb uses of CAN and MAY are of a different nature. CAN is predominantly used as a transitive verb in the material, whereas primary-verb MAY seems to have been used mainly as an intransitive verb meaning ‘fare’ or ‘prevail’.

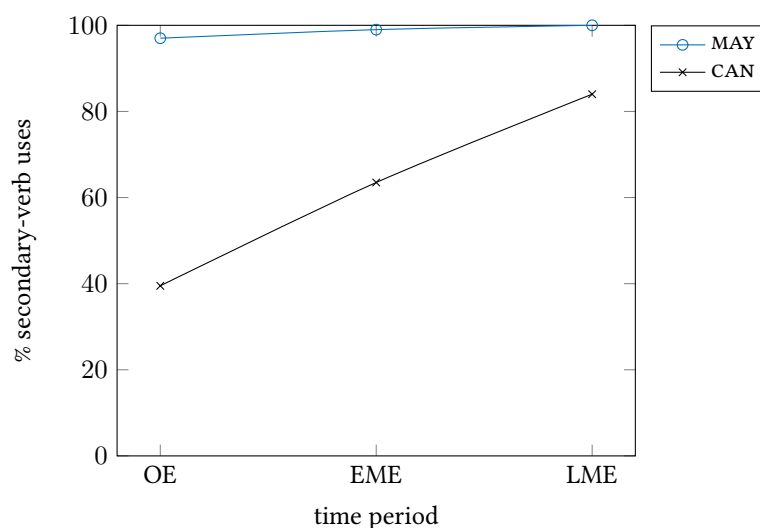


Figure 7.1: CAN and MAY as secondary verbs

Turning to the semantic development, Figure 7.2 shows the probable ‘pathway’ of change in CAN observed in the material. Figure 7.4 (see p. 242) shows that of MAY. The dashed arrows indicate developments which are inferred on the basis of less certain examples or assumed to have happened before the first written records. I will concentrate on the more securely attested developments here. It is worth stressing that these diagrams are meant to be purely descriptive, not predictive—unlike on the semantic maps in Bybee et al. (1994) and van der Auwera & Plungian (1998), the arrows in Figures 7.2 and 7.4 are not intended to make any claims about universal semantic pathways, but only represent the developments observed in my Old and Middle English material (similarly to the diagram from Standop [1957: 18] reproduced as Figure 2.1 on p. 17).

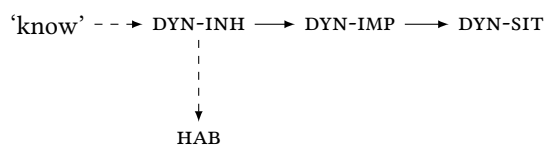


Figure 7.2: Reconstructed semantic development of CAN

The developments observed in my study of CAN (Figure 7.2) are broadly in line both with the earlier investigation of English material by Goossens (1992) and the literature from other West Germanic languages. The development of Dutch *kunnen* as described by Byloo & Nuyts (2014) is parallel to the one shown in Figure 7.2. For German *können*, Fritz (1997) also reconstructs a similar trajectory, shown here

in Figure 7.3. Although the categories distinguished do not correspond exactly to the ones I have used, Fritz also observes a development from participant-inherent ability ('Fähigkeit') to external types of possibility (termed 'Handlungsmöglichkeit' and 'Möglichkeit'). The types 'epistemische Möglichkeit' (EPI) and 'Erlaubnis' (PERM) were not observed for *CAN* in the Old and Middle English material, but compare Figure 7.3 with the semantic map of *MAY* below.

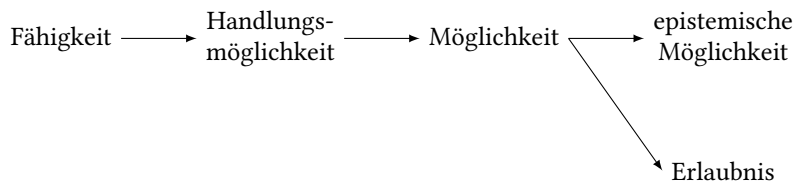


Figure 7.3: Development of German *können* (after Fritz 1997: 34)

A similar picture is presented in the cross-linguistic investigation by Bybee et al. (1994), where it is also argued that possibility modals often follow the trajectory from internal to external possibility (see Figure 2.3 on p. 37). The development of *MAY* in the Old and Middle English material investigated also adheres to this general principle. However, more different meaning categories are represented in the material for *MAY* than for *CAN*. As shown in Figure 7.4 and argued in Section 7.3.3, I consider the development from situational (DYN-SIT) to epistemic (EPI) meaning well attested in the material. The subtype 'situational' is often not distinguished in the literature (see e.g. Bybee et al. 1994; van der Auwera & Plungian 1998). According to the model proposed by van der Auwera & Plungian, epistemic modality develops out of 'participant-external' modality, of which deontic meaning is a subtype. In the framework of Nuyts and colleagues adopted here, this 'participant-external' type is really a conflation of several distinct meaning categories: presumably DYN-IMP, DYN-SIT, DEO, and PERM would all be subsumed under 'participant-external' modality in van der Auwera & Plungian's account. While the two approaches are similar in spirit in many ways, this is a clear difference between them. The fact that the model of Nuyts and colleagues is more fine-grained makes it helpful in tracing the precise steps in the development of modality. Applying it to the Middle English material has turned out to be fruitful in that it shows how the notions of permission and epistemic modality are connected to that of possibility in different ways: they both have their origins in dynamic modality, but not in exactly the same subtypes of this category.

While the histories of *CAN* and its Dutch and German cognates are very similar, *MAY* and its cognates present a slightly different picture. Dutch *mogen* followed a trajectory similar to the one in Figure 7.4 (see Byloo & Nuyts 2014: 110) and is also occasionally attested with epistemic meaning at earlier stages. However, unlike English *MAY*, the epistemic use of *mogen*, shown here in (52), has reportedly become obsolete in Present-Day Dutch.

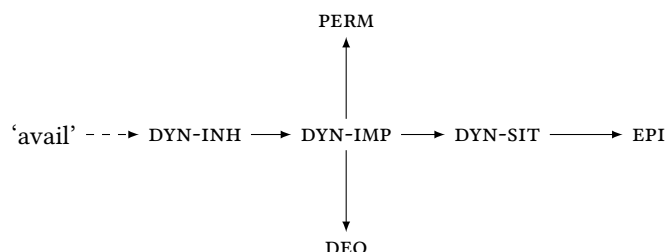


Figure 7.4: Reconstructed semantic development of MAY

(52) Early Modern Dutch (1598)

Het Dorp mocht 200. huysen groot zyn, vol volcks, waer
 DEF.N village(N) may.PST 200 house:PL large COP.INF full people:GEN where
van 20. in een wacht-huijs saten
 of 20 in INDF watch-house sit.PST:PL
 ‘The village might have been about two hundred houses large, full of people,
 of which twenty were sitting in a watchhouse’ (Willem Lodewycksz., *D’Eerste*
Boeck; Rouffaer & Ijzerman 1915: 41)

In German the cognate of MAY has taken yet another course, arguably developing into two separate lexemes, *mögen* ‘like; may’ and *möchte* ‘would like; wish’, the original past subjunctive form. Fritz (1997: 103–106) argues that this happened in the early modern period and that the developing use of *möchte* appears to have been restricted to more colloquial text genres for a long period of time. He adds, however, that ‘[e]ine genaue Beschreibung dieses Vorgangs wäre wünschenswert’ (Fritz 1997: 106).

In addition to the analysis of the modal meanings of CAN and MAY, this chapter has also classified the primary-verb functions of the two verbs and traced their development in Middle English. In Section 7.2.4, I argued that while transitive uses of CAN become less frequent in the Middle English period, different subtypes of transitive use do not disappear at the same rate: whereas the subtypes ‘secret’ and ‘clause’ seem to have become obsolete after Old English, nouns referring to skills and objects of learning occur as objects of CAN throughout the Middle English period. In Section 7.3.3, I have shown that while the use of MAY as a primary verb in Old and Middle English is infrequent relative to its modal uses, it is attested in a variety of different collocational patterns with meanings like ‘fare, prevail, help, be of use’. Evidence from two versions of Bartholomeus Anglicus’ *De proprietatibus rerum* suggests that at least one of these, MAY *against*, was still in use in the early fifteenth century, but had become obsolete in London English towards the end of the sixteenth century.

Finally, I have pointed out that two of the older Germanic languages—Old English and Old (West) Norse—allowed ‘autonomous’ uses of MAY remarkably similar to the ones observed in Present-Day Dutch. This suggests that the traditional view of

modals as inherently auxiliary in nature may be somewhat too restrictive. Whether similar patterns may be found in other (older or contemporary) languages will have to await future investigations.

CHAPTER 8

The development of *MOT*

Ma syndon swergendlice *ADVERBIA*,
ac hwæt sceolon hi gesæde, nu we
swerian ne moton?
— Ælfric of Eynsham [*ÆGram*, 227.9]

8.1 Introduction

This chapter presents my investigation of the semantic development of *MOT* in Old and Middle English. Other changes involving this modal have already been mentioned at various points, in particular in the investigation of impersonal modals in Chapter 5. Whereas the focus of that chapter was on morphosyntactic changes, the present chapter concerns semantics, although a few instances of ‘impersonal’ *MOT* will also be discussed below.

The chapter begins (Section 8.2) with an outline of the most important works on the semantics of *MOT* in and after Old English and the main controversies surrounding it. These are, most prominently, the meaning of *MOT* in the Old English record and the timing and circumstances of the change from ‘may’ to ‘must’. The development of the evidential (‘epistemic necessity’) use and the loss of the original present-tense forms will also be mentioned briefly. In Section 8.3 I present the results of my corpus investigation, beginning with the analysis of the Old English material and continuing by reconsidering the various hypotheses about the development of the necessity meaning in Early Middle English. I also briefly discuss some apparent dialectal differences in the Late Middle English data.

My findings are placed in a comparative perspective in Section 8.4, on a close parallel to the development of the necessity meaning in *MOT*. I will argue that this change can be observed not just in the West Germanic cognates of *MOT* (such as Dutch *moeten* and German *müssen*), but also in the cognate of *MAY* in some of the Scandinavian languages. This suggests that the change from possibility to necessity meaning may not be as peculiar as it first appears. A small-scale investigation of Late Middle Danish material is carried out in order to identify the contexts of the change from possibility to necessity. Finally, Section 8.5 summarizes the findings of the chapter.

8.2 Literature review

8.2.1 The meaning of *MOT* in Old English

The ancestor of Present-Day English *must* has received much attention in the literature on Old English. It is well known that Old English *MOT* is usually best translated by Present-Day English ‘may’, but there has been considerable debate about exactly how to characterize its meaning in Old English. The different approaches to this question may be grouped into three types, which, following Yanovich (2013, 2016a), I will call the ‘ambiguity’ analysis, the ‘possibility’ analysis, and the ‘variable-force’ analysis. According to the first of these, Old English *MOT* could express both possibility (‘may’) and necessity (‘must’). The former meaning was the usual one, but the latter is also attested both in earlier and later Old English texts. By contrast, the possibility analysis holds that *MOT* only expressed possibility and that the apparent necessity instances that have been cited in the literature are unconvincing or may be explained as contextually induced variants. The variable-force analysis, finally, proposes that the meaning of *MOT* was neither possibility nor necessity in the usual sense of these terms, but a special kind of modality (‘variable-force’) which in some contexts is better rendered by Present-Day English ‘may’, in other contexts better by ‘must’. Table 8.1 lists these three analyses and the scholars who have argued for each of them.

Table 8.1: Analyses of Old English *MOT*

Analysis	Gloss of <i>MOT</i>	References
Ambiguity	‘may’ (rarely ‘must’)	Bosworth–Toller; <i>OED</i> ; Standop 1957; Ono 1958; Tellier 1962; Goossens 1987a; Van Herreweghe 2000; Traugott & Dasher 2002
Possibility	‘may’ (exclusively)	Solo 1977
Variable-force	‘may~must’	Yanovich 2013, 2016a

As Table 8.1 makes clear, the ambiguity analysis is by far the most widespread among scholars of Old English. The two dictionaries Bosworth–Toller and *OED* implicitly subscribe to it by giving both ‘may’ and ‘must’ as possible senses of *MOT* and providing examples of both of them. Standop (1957: 67–93) discusses the uses of Old English *MOT* at length and quotes extensively from the Old English poetic record. He states that the precise characterization of the semantics of *MOT* is difficult, and that the verb cannot always be translated directly by any of the modern German or English modals. He assumes that the original meaning of the verb was something akin to ‘be allotted, have as one’s share’ (‘mir ist zugemessen worden, ich habe als Zugemessenes’) and that the various senses found in the Old English material can be traced back to this original meaning. These include both ‘may’ (‘dürfen’) and ‘must’ (‘müssen’), although the latter meaning is said to be infrequent. More frequent is the use of *MOT* to express permission or a possibility depending on external circumstances, i.e. not on the ability of the subject referent. Standop notes that this external circumstance is very often fate or God, characterizing *MOT* as having ‘etwas Feierliches an sich’ (Standop 1957: 70), though at the same time he concedes that this may be because so many of the surviving texts are of a religious nature.

Characterizations similar to Standop’s may be found in the contributions by Ono, who calls Old English *MOT* ‘somewhat ambiguous’ (Ono 1958: 66) between the meanings ‘may’ and ‘must’, and Tellier (1962), who gives both ‘pouvoir’ and ‘devoir’ as possible translations of *MOT*. Tellier points out that while these two meanings may seem contradictory, in the case of *MOT* they also have a unifying feature: ‘le trait pertinent de ce pp. [perfecto-présent, i.e. *MOT*] est qu’il sert à la désignation d’une modalité d’ordre externe’ (Tellier 1962: 89). In fact, in Tellier’s semantic system, which builds on Bech (1951), the paradigmatic opposition between ‘intra-subjectif’ and ‘extra-subjectif’ (corresponding to ‘participant-internal’ and ‘participant-external’ in later parlance, e.g. van der Auwera & Plungian 1998) is as important as the one between possibility and necessity. That the latter opposition may be neutralized is not considered problematic or unexpected within this framework.

Goossens (1987a) investigates the use of *MAY* and *MOT* in a selection of prose texts ascribed to Ælfric. He describes *MOT* as having a ‘permission core’ (Goossens 1987a: 229), noting that 48 of the 100 analysed examples are unambiguous permission instances, while an additional 38 examples allow a permission reading along with one of the senses ‘ability’, ‘obligation’, ‘contingency’, or ‘wish’. The remaining 14 instances Goossens classifies as expressing unambiguous obligation, although only three of these are cited in the paper, none of them particularly convincing (and one of them clearly incorrect, as shown by Yanovich 2013: 157 n. 12).¹

¹ Specifically, Goossens argues that there are twelve clear examples of obligation in affirmative contexts and two in negative contexts, i.e. meaning ‘need not’ ($\neg \Box p$). Yanovich rejects the single negative example cited in the paper. I do not think the two remaining examples given by Goossens stand up to closer scrutiny either. To illustrate, I give a single one here, from a homily on the life of St Lawrence:

(i) *Eala gif ic moste ðam eadigan Laurentium geefenlæcan!*
oh if I *MOT*:PST DEM.DAT holy:DEF PN imitate:INF

Translation by Goossens (1987a: 227): ‘woe (to me) if I had to/should imitate the blessed Laurentius’ [*ÆCHom* I, 29, 427.241]

Van Herreweghe (2000) uses the same categories as Goossens but applies them to a corpus of poetry rather than prose. She analyses 218 instances of *MOT* and finds that it most often expresses ‘pure permission’ ($n = 147$) or ‘permission blended with ability’ ($n = 53$). Only eight instances, i.e. less than four per cent, are analysed as expressing obligation (Van Herreweghe 2000: 210–211). Van Herreweghe does not comment on any of Goossens’s obligation examples, but explains the lower share in her material as a result of the more archaic language of much of the poetry. Along the same lines, Traugott & Dasher (2002: 123) characterize *MOT* as an ability or permission modal which developed an obligation sense in ‘later OE and especially EME’. Despite this somewhat vague timing of the innovation, they implicitly date it to Old English by citing two alleged obligation examples from Goossens (1987a) and one from the *OED*, all dated to *c.* AD 1000.²

Though widespread, the consensus in favour of the ambiguity analysis is not universal. The authors cited so far in this section all agree that *MOT* with necessity or obligation meaning was marginal in Old English, but Solo (1977) questions whether this meaning is found at all. According to Solo, *MOT* always expressed possibility or permission, at least until the very end of the Old English period. In his view most or all apparent examples of the necessity meaning can be explained either as due to stylistic considerations or as textual errors. His argument centres on a handful of attestations where earlier scholarship has almost universally taken *MOT* to mean ‘must’. I will give just a single example here, in (1), to illustrate the problems involved in the interpretation. I leave *MOT* untranslated in the Present-Day English paraphrase.

- (1) *Hu sceal sincþego 7 swyrd+gifu, eall eðel+wyn*
 how SHALL treasure+receipt and sword+bestowal all home+joy
eowr-um cynn-e, lufen alicge-an; lond+riht-es mot þære
 2PL.POSS-DAT kin-DAT joy cease-INF land+right-GEN MOT DEM.F.GEN
mægburg-e monn-a æghwylc idel hweorf-an, syððan æðeling-as
 clan(F)-GEN person-PL.GEN each devoid turn-INF after nobleman-PL
feorran gefricge-an fleam eower-ne, domleas-an dæd.
 from.afar learn-PL flight(M) 2PL.POSS-M.ACC inglorious-DEF deed
 ‘How [or now] the receiving of treasure and bestowal of swords, all the
 accustomed joys of your kin, shall cease! Every member of that clan *MOT* be
 deprived of his land right when rulers far and wide learn of your flight, your
 inglorious deed.’ [Beo, 2884–2889]

The translation suggested by Goossens is inaccurate. The example occurs in the speech of an unrepentant Christian when the Romans threaten him with torture. The man is actually hoping that he *will* end up imitating St Lawrence and become a martyr: ‘Oh, if only I might imitate [or follow] the blessed Lawrence!’. That this is the man’s sentiment is obvious from the immediate context: *Ða þa he langlice gebeaten wæs þa þancode he gode* [ECHom I, 29, 427.243] ‘And when he had been beaten for a long time, he thanked God’.

² In her earlier paper on subjectification, Traugott appears to favour the possibility analysis, although it is not stated explicitly when *MOT* began to appear with the meaning ‘must’. For the Old English period, however, she characterizes *MOT* as a ‘deontic of permission’ (Traugott 1989: 38) and later writes that ‘be allowed’ was ‘the Old English sense of **motan*’ (1989: 50). In Traugott (1992: 193), on the other hand, *MOT* is glossed ‘be allowed to, be obliged to’, although no examples of either sense are given.

The passage appears near the very end of *Beowulf*, where Wiglaf scolds Beowulf's men for not having aided him in the battle against the dragon. He tells the men that they have brought shame not just upon themselves, but their entire clan. Although there are a few uncertainties about the interpretation of (1), it is generally considered a clear example of MOT meaning 'must' or 'have to'.³ It is cited under this sense by Bosworth–Toller (s.v. *motan*, sense 11) and characterized as expressing 'necessity or obligation' by both the *OED* (s.v. *mote* v.¹, sense 2) and Ono (1958: 64), who translates (from *londrihtes* to *hweorfan*) 'each man of your family will have to wander shorn of his landed possessions', interpreting the present-tense form *mot* as expressing a future necessity or inevitability. Van Herreweghe (2000: 220–221) discusses it under the heading 'obligation', and Tellier under 'devoir': 'il est difficile d'interpréter autrement qu'en donnant à MOT le sens de "il doit"' (Tellier 1962: 88). A recent, rather free, verse translation renders it 'You and your kin must lose your land rights | When neighboring nobles hear of your flight' (Williamson 2017: 682).

Standop's analysis of the passage is less clear. He mentions the example in the section entitled '*motan* = "müssen"', but also seems to think that this use of MOT is not entirely synonymous with the modern German modal verb. He compares MOT in (1) to the use of *sceal* in the same passage:

Hier ist *motan* fast synonym mit dem *sculan* von [Zeile] 2884 gebraucht. Durch den *syððan*-Satz wird die getroffene Feststellung ganz konkret auf die Zukunft bezogen; trotzdem behält die Stelle etwas sentenzenhaftes, das gern durch *motan* ausgedrückt wird. *Motan* drückt ein rechtliches Bestimmtheit aus [...] Nur der Gesamtsinn kann hier überhaupt darüber entscheiden, ob es sich um 'müssen' oder 'dürfen' handelt. (Standop 1957: 76)

Standop thus appears to consider the necessity meaning in (1) contextually determined. Solo also stresses the importance of the context, but unlike Standop concludes that MOT in (1) has its usual permission meaning as part of a 'sarcastic understatement' (Solo 1977: 224). He notes that the tone of Wiglaf's speech is sarcastic throughout and that reading MOT as a permission modal in (1) fits the tone better than a necessity reading. He translates the passage:

Now the receiving of treasure and giving of swords, all comfort, every joy of the native land, must cease; every man of this clan will be allowed to go empty of landright, when princes hear from afar about your flight, your inglorious deed. (Solo 1977: 224)

³ The MS as it survives reads 'hu sceal sinc þego 7spýrd[...] | [...]all eðelpyn 'eopru(m) cýnne.' lufena licgean | lond rihtes mot þære mæg burge monna | æghwýlc idel hweorfan' (BL, Cotton MS Vitellius A.xv, f. 196^v, my transcr.). Most editors emend 'hu' to 'nu' (though this may be unnecessary; see Mitchell & Robinson 1998: 149), and the reading 'lufen alicgean' for 'lufena licgean' appears to be universally accepted. The compound 'eðelpyn' (lit. 'home-joy') is only attested in *Beowulf* (DOE, s.v. *epel-wynn*). The phrase 'eopru(m) cýnne' is written above an erasure, and '7 spýrd[gifu]' is restored on the basis of earlier transcriptions from when the MS was less damaged, but these two readings are otherwise unproblematic.

Van Herreweghe (2000: 221 n. 4) characterizes this reading as ‘too farfetched’ but does not discuss the example further. Similarly, Ogawa (1989: 37) asserts that ‘the modern sense “must” is in evidence’ in (1) and in a note calls Solo’s interpretation unconvincing. I am somewhat less confident about dismissing Solo’s analysis. As Solo (1977: 220) notes, the *Beowulf* poet otherwise uses MOT quite consistently to express permission, so it does not seem too farfetched to me to try to read (1) in this way rather than as an otherwise isolated necessity or obligation instance. At any rate, even if a permission reading of (1) is unlikely, this does not compel us to accept Van Herreweghe’s ‘obligation’ analysis, as MOT has other uses in Old English, such as expressing wishes and predictions (see Section 8.3.2 below). Standop (2005: 119) appears to have settled on the latter interpretation in his later edition and German translation of *Beowulf*, where he uses a periphrastic future with *werden*:

Des Landrechts wird
ein jeder der Männer dieser Sippe
verlustig gehen, sobald die Edlen
weithin erfahren von eurer Flucht,
eurer unrühmlichen Tat.

No one in the literature surveyed for this chapter appears to have noted the possibility of a ‘wish’ interpretation of (1), i.e. as an optative instance according to the terminology introduced in Chapter 3. As we will see below, this meaning is recorded in Old English, and in the case of (1) seems to me to fit the context just as well as an obligation or future–predictive reading: ‘May every member of that clan be deprived of his land right!’, in effect expressing a curse upon the descendants of the deserters. In light of the obscurity of the passage and the general disagreement in the literature, however, I think the example will have to be regarded as uncertain no matter which reading one prefers.

An alternative analysis of Old English MOT has recently been proposed by Yanovich (2013, 2016a). Noting the discussion of examples like (1) in the literature, Yanovich suggests that MOT may not have expressed possibility, permission, or necessity in the usual sense—at least not in early (‘Alfredian’) Old English c. AD 900—but rather a type of ‘variable-force’ modality not known from any other language so far. This analysis, according to Yanovich, can account both for the relatively low overall frequency of MOT in the Old English corpus and for the fact that some instances appear to correspond to Present-Day English ‘may’ and some to ‘must’.

As Yanovich notes, the intuition that there is something ‘special’ about the meaning of MOT is not entirely new, as Standop (1957) also mentions a meaning which does not correspond directly to either possibility or necessity (‘mir ist zugemessen worden’; see p. 247 above). The difference is that whereas Standop assumes that MOT is ambiguous between different meanings, Yanovich argues that all uses of MOT in the Alfredian corpus are instances of a single sense, which he characterizes as possibility with a ‘presupposition of inevitable actualization’. Yanovich (2016a: 497) gives (2) as a possible paraphrase of this meaning (referring to MOT with the conjectural infinitive form *motan*):

- (2) *motan*(*p*) asserts that *p* is an open possibility and presupposes that if *p* is given a chance to actualize, it will.

Yanovich investigates the use of MOT in three texts, all of them translations made as part of the educational reform of Alfred the Great towards the end of the eighth century: the Old English versions of the *Cura pastoralis* (*Pastoral Care*) of Gregory the Great, Boethius's *Consolation of Philosophy*, and the *Soliloquies* of St Augustine. The first two are also included in my custom corpus, as [CP] and [Bo]. The three texts were chosen to get as close an approximation to a 'dialectally and temporally consistent data set' (Yanovich 2016a: 494) as possible. All occurrences of MOT in the texts were analysed and published as an online appendix (Yanovich 2016b).

Yanovich's conclusion is that the use of MOT in the three texts is always compatible with the description in (2): the asserted meaning is 'open possibility', but the verb is only used in contexts where it is presupposed that the state of affairs is also going to actualize. These include purpose, conditional, and various types of complement clauses, such as in (3):

- (3) *Heo forsih-ð þonne eall ðas eorðlic-an þing, 7 fægn-að*
 3SG.F despise-3SG then all these worldly-DEF thing[PL] and rejoice-3SG
þæs þæt hio mot bruc-an þæs heofonlic-an, siððan hio
 DEM.GEN COMP 3SG.F MOT enjoy-INF DEM.GEN heavenly-DEF after she
bið abrogden from ðæm eorðlic-an.
 COPB.3SG seize.PTCP from DEM.DAT worldly-DEF
 'It [the soul] will then despise all these worldly matters and rejoice that it MOT
 enjoy the heavenly after it is taken away from the worldly.' [Bo, 18.45.28]⁴

In contrast to MOT, Yanovich suggests, Old English MAY was used in contexts where there was an open possibility without any presupposition of actualization. In (4), for instance, *meahton* expresses that it would be possible for the teachers to instruct people if they wanted to, but there is no presupposition that this is going to happen: the actualization of the state of affairs 'depends on the will of the individual and can go either way' (Yanovich 2016a: 496).

⁴ The verb *brucan* is translated 'make use' by Yanovich (2016a: 495), but I think 'enjoy' is more appropriate here (for the possible senses of the verb, see Bosworth-Toller, s.v. *brucan*; DOE, id.). The Latin reads *mens [...] quae se caelo fruens terrenis gaudet exemptam* (Stewart & Rand 1968: 218) 'the soul ... who, enjoying heaven, rejoices to be removed from worldly affairs'.

- (4) *ðonne beo-ð hie [sua] moneg-um scyld-um scyldig-e sua [hie]*
 then COPB-PL they so many-DAT sin-PL.DAT guilty-PL as they
maneg-ra unðeaw-a gestir-an meahton mid hiora lar-um ⁷
 many-GEN vice-PL correct-INF MAY.PST:PL with their teaching-PL.DAT and
bisen-um, gif hi ongemong monn-um beo-n wold-en
 example-PL.DAT if they among person-PL.DAT COPB-INF want.PST-SBJV.PL
 ‘Then they [the lazy teachers] will be guilty of as many sins as there are vices
 that they could have corrected with their teachings and examples, if only
 they had wanted to be among people.’ [CP, 5.45.20]

The variable-force analysis of MOT is argued to be superior to the ambiguity theory for three reasons, presented in Yanovich (2016a: 503–504) and at greater length in Yanovich (2013: 161–164):

1. MOT is much rarer than most of the other Old English modals, suggesting a more specific meaning. In the three texts in Yanovich’s corpus, there are about a thousand instances of MAY, but only seventy-two of MOT.
2. Unlike MAY, MOT does not seem to enter into scalar relations with other modals of the type ‘not only $\Diamond p$, but $\Box p$ ’ (e.g. ‘they not only MOT(p), they have to’). That MOT is not attested in such contexts, according to Yanovich, suggests that it had a less typical modal force than the other Old English modals.
3. The parallel development from \Diamond to \Box across the West Germanic languages (e.g. Dutch *moeten* and German *müssen*) is difficult to explain if MOT was a ‘normal’ \Diamond modal. Again, this suggests that there was something special about MOT and its West Germanic cognates.

Of these three arguments, the second is the least compelling. As Yanovich (2016a: 504) himself notes, MAY is much more frequent in his corpus than MOT, so the absence of examples of the type ‘they not only MOT(p), they have to’ could easily be accidental. In other words, observation 2 might be a consequence of 1 rather than an independent fact. The other two observations, which may initially appear more convincing, will be discussed briefly in Section 8.3.2.

8.2.2 The development of necessity meaning

Another discussion in the scholarly literature concerns the development from \Diamond (‘may’) to \Box (‘must’), i.e. Yanovich’s observation 3 mentioned immediately above. This question has received somewhat less attention in work on English than the issues treated in the preceding section, but has been discussed extensively in relation to MUOZ, the Old High German cognate of MOT. As briefly mentioned above, a similar change has also been observed in the cognate of MAY in some of the Scandinavian languages, most prominently in Danish MÅ.

As far as I am aware, at least four different explanations for the development of necessity meaning in these Germanic modals have been proposed. The different proposals are listed in Table 8.2 along with an informal ‘shorthand’ of the explanation and the most important references. I have only included authors who have proposed a more or less clearly stated account of how the change happened. Standop (1957), Goossens (1987a), and Van Herreweghe (2000) all mention more than one factor which may have played a role, so they are not included in the table. More recently, Narrog (2012: 187–190) reviews the literature on English and German but does not settle on a single explanation: ‘the details of this shift [...] have not yet been clarified’ (Narrog 2012: 190), although he considers the change itself uncontroversial.

Table 8.2: Explanations for $\Diamond \rightarrow \Box$ in Germanic

Explanation	Shorthand	References
Negation	‘may not’ \rightarrow ‘must not’	<i>OED</i> ; Bech 1951
Implicature	‘may’ implying ‘must’	Bréal 1903; Traugott & Dasher 2002; van der Auwera et al. 2009
Variable force	‘may~must’ \rightarrow ‘must’	Yanovich 2013, 2016a
Restricted \Diamond	‘may only’ \rightarrow ‘must’	Fritz 1997; Diewald 1999; Obe 2013; Heltoft & Nielsen 2019b

The ‘negation’ explanation is tentatively suggested by the *OED*, which states that ‘the meaning “to have to, must” may have arisen from usage in negative contexts, where the two senses (“may not”, “must not”) coincide closely’ (*OED*, s.v. *mote* v.¹). The precise mechanisms of the change are not discussed in the dictionary. Standop and Goossens also both mention that negation may have played a role because a ‘denied permission amounts to an obligation-not-to’ (Goossens 1987a: 232; see also Standop 1957: 74). Presumably, the change envisaged here would involve two steps, first the reinterpretation of negated permission ($\neg \Diamond p$) to ‘obligation-not-to’ ($\Box \neg p$) and then the transfer of the new obligation sense to non-negative contexts. However, neither Standop nor Goossens spell this out in any detail—or give any evidence for potential contexts of the change—and they both ultimately conclude that negation was not the only factor.⁵

Bech (1951) proposes a different version of the ‘negation’ explanation for German *müssen* (Old High German *muoz*). Noting that *müssen* (‘must, need’) and *dürfen* (‘may’) have changed in the opposite direction in the history of German, Bech argues that these changes were connected, beginning with a reinterpretation of the meaning of *dürfen* in negated contexts, after which the meaning of *müssen* changed by analogy. The precise details need not concern us here, however, as Bech’s proposal would

⁵ More recently, Ziegeler (2016) seems to argue for the negation explanation, although it is not entirely clear if she fully endorses it. At first it is merely stated that the change has been ‘associated with negation’ in the literature, but in the next paragraph she writes that *must* ‘illustrates a diachronic pathway’ to obligation ‘in negative contexts’ (Ziegeler 2016: 395).

not be able to account for the fate of Old English *MOT* even if it might work for Old High German *MUOZ*: none of the English modals developed in a way comparable to German *dürfen* ('must' → 'may'), so a crucial element of Bech's scenario is missing in the English case.⁶

The 'implicature' explanation appeals to pragmatic factors rather than negation. An early version of it—of course not yet using the Gricean term 'implicature'—is found in a short Festschrift article by Bréal (1903). Bréal suggests that Old High German *MUOZ* came to be used as 'une sorte d'euphémisme' for the original necessity expressions: 'au lieu d'exprimer nettement une contrainte ou une nécessité, le langage a préféré présenter l'obligation sous une forme adoucie' (Bréal 1903: 28). Bréal also states that negated contexts 'sans doute' played an important role as the original locus of the innovation, but does not explain why this would necessarily be the case. More recently, Traugott & Dasher (2002) have proposed an account similar to Bréal's for English *MOT*. They suggest that the meaning change represents an instance of pragmatic 'strengthening' induced by 'invited inferences of obligation' (Traugott & Dasher 2002: 126) in permission and participant-external possibility uses. In the earlier paper by Traugott (1989), a similar explanation is also suggested in passing: 'if I say *You may go*, I may, in the right circumstances, implicate that I want you to go, and in this sense you have some obligation to go' (Traugott 1989: 51). The idea is that in certain contexts, speakers may have used the permission modal *MOT* with a conversational implicature ('invited inference') of obligation. Traugott & Dasher (2002) quote (5) from Warner (1993: 161) to illustrate their analysis.⁷

- (5) *swa þa lær-end-um þam preost-um se papa*
 so then advise-PROG-PL.DAT DEM.PL.DAT priest-PL.DAT DEM.M pope(M)
geþaf-ode þæt Equitius moste beo-n gelæd-ed to Rome+byrig
 grant-PST COMP E. MOT:PST COPB-INF lead-PTCP to Rome+city.DAT
 'And so, at the advice of the priests, the pope granted that Equitius *MOT* be brought to Rome.' [GD 1 (C), 4.35.17]

Here *moste* occurs in a complement clause after the permissive predicate *geþafode* 'granted', but according to the authors one can easily infer a notion of inevitability or compulsion from the context: 'the intention here is not only that Equitius might be brought to Rome but that he indeed would be' (Traugott & Dasher 2002: 125). It is rather unclear, however, how the 'invited inference' reanalysis is supposed to work with the third-person subject in (5), and who is inviting whom to infer an obligation

⁶ Furthermore, the German data actually seem to contradict Bech's explanation, as the suggested 'end point' of the development—*müssen* meaning 'must, need'—is attested c.200 years before the innovative sense of *dürfen* first appears in the material (Fritz 1997: 88–89). Fritz also discusses (and rejects) an earlier version of the 'negation' explanation suggested by Klarén (1913).

⁷ The translation in (5) is mine. Traugott & Dasher (2002: 125) appear to misinterpret the absolute construction *lærendum þam preostum*, lit. 'the priests advising', as a core argument, translating 'so then the pope granted to those priestly advisors that Equitius should be brought to Rome'. Tilley (1903: §66), Visser (1963: §1014), and Mitchell (1985: §3820) all agree that it is an absolute construction: *lærendum þam preostum* is not an indirect object, but a causal or circumstantial adjunct, 'at [or because of] the advice of the priests'.

interpretation; compare Traugott's more transparent constructed example *You may go* above, where it is clearly the speaker who is inviting the addressee to interpret it as a command.⁸

A version of the 'implicature' explanation also seems to be advocated by van der Auwera et al. (2009), albeit in a somewhat roundabout way. Noting that the $\Diamond \rightarrow \Box$ change has occurred in several Germanic languages, the authors suggest that the same change 'may happen to *may* and its cognates as well. What we need is that a necessity implicature conventionalizes' (van der Auwera et al. 2009: 281). They give (6), 'uttered by a general to a corporal' as an example of such an implicature.

- (6) *You may go now.*
 implicature: 'You must go now.'

I assume that this is how the authors think the change happened in early English and the other relevant Germanic languages. However, they do not support their hypothesis with any data from Old English or any other language. Traugott & Dasher (2002) do rely on historical material, though mainly gathered from the *OED* and earlier studies of MOT. A more systematic study of this hypothesis in a larger corpus thus remains a desideratum.

Yanovich's explanation of the development, for which I have reused the label 'variable force' in Table 8.2, is slightly different. As already discussed in Section 8.2.1, Yanovich does not analyse Old English MOT as a possibility modal in the usual sense, but rather assumes a special variable-force semantics. This of course means that the starting point for the development of necessity meaning was different. However, like Traugott & Dasher (2002) and van der Auwera et al. (2009), Yanovich explains the emergence of necessity meaning with reference to conversational implicature: because the variable-force meaning proposed for Old English always occurred with a presupposition of inevitability, speakers could easily reinterpret this as part of the asserted meaning of MOT. Yanovich compares his Old English material with the situation in the Early Middle English *Ancrene Wisse* and notes a clear difference. Whereas all examples in Yanovich's early Old English corpus can be accounted for with the variable-force analysis, MOT in *Ancrene Wisse* is genuinely ambiguous between necessity and possibility readings, i.e. in some cases it clearly expresses necessity, and in others it seems to express possibility in the usual sense, without the presupposition of inevitability.⁹ In other words, while Old English MOT had a single meaning of the variable-force type, by Early Middle English this had developed into at least two distinct senses, necessity and (some kind of) possibility, as illustrated by Figure 8.1.

The fourth explanation does not seem to have been advocated for English MOT specifically, but has been suggested by a number of scholars for Old High German MUOZ and Danish MÅ. I will call this the 'restricted possibility' explanation ('Restricted \Diamond ' in Table 8.2). In the case of Old High German MUOZ, it has been sug-

⁸ Traugott & Dasher (2002) note that another MS version of (5) has *sceolde* 'should' instead of *moste*. This is the version included in my corpus sample: *þæt æquitius sceolde beon gelæded to Romebyri* [GD 1 (H), 4.35.12], translating Latin *debuisset* 'was bound, obliged'. However, this is somewhat equivocal evidence, as the 'H' version of this text—the *Dialogues* of Gregory the Great—is a substantial revision which often

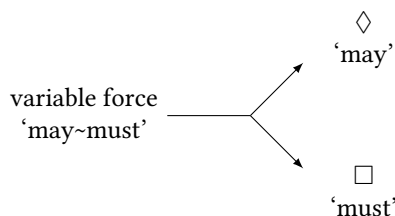


Figure 8.1: Development of MOT according to Yanovich (2016a)

gested independently by Fritz (1997) and Diewald (1999). For Danish MÅ it has been proposed in the work of Obe (2011, 2013) and in a recent contribution by Heltoft & Nielsen (2019b) (an online appendix to Heltoft & Nielsen 2019a). I will only discuss the relevant German literature here, as I return to the situation in Danish in Section 8.4.

Fritz (1997: 85–94) gives a comprehensive overview of the earlier literature on MUOZ and points out several problems with both the ‘implicature’ and the ‘negation’ explanation. He suggests that the shift from possibility to necessity is not as radical as it may appear, in particular because Old High German MUOZ always expressed a possibility dependent on external circumstances (whereas participant-inherent possibility was usually expressed by the cognate of MAY; Fritz 1997: 9). He refers to Standop’s proposal about an original meaning ‘be allotted, have as one’s share’ rather than ‘be able’ or ‘be allowed’ and suggests that this may be a more appropriate description of the meaning of MUOZ in Old High German (compare also Tellier’s analysis of Old English MOT discussed in Section 8.2.1). The necessity meaning could then easily develop in contexts where there was only one possible course of action, in particular when the state of affairs was less desirable, as in (7), from a passage in Notker’s translation of Boethius describing the difference between the Roman social classes *equites* (horsemen) and *pedites* (foot soldiers):

corrects the translation to follow the Latin more closely. The use of two different forms may indicate that these were not synonymous, but that the reviser considered the choice of translation in the C version inappropriate. I will return to the *Dialogues* in my discussion in the OE material in Section 8.3.2.

⁹ Yanovich is not entirely sure about the latter point, however. MOT in the *Ancrone Wisse* is said to have ‘non-□, perhaps ◇, readings’ (Yanovich 2016a: 507), and one of the examples is analysed as ‘◇-like’ (2016a: 508). I discuss the EME meanings in Section 8.3.3.

(7) Old High German (c.1025)

Tér uuás EQUES . tér DECEM MILIA máhta geziugôn déro
 DEM.M COP.PST *eques* REL.M ten thousand can:PST vouch:INF DEM.PL.GEN
suârôn féndingo . díe SESTERTIA hiezên.
 heavy:DEF.PL.GEN silver.coin(M):PL.GEN REL.PL.M *sestertia* be.called.PST:3PL
Tíe mínnera hábetôn . díe mûosôn gân.
 DEM.PL.M less have:PST:3PL DEM.PL.M MUOZ.PST:3PL walk:INF
 ‘Whoever could vouch for 10,000 of the heavy silver coins that were called
 sesterces, was an *eques*. Those who had less [money], they had to [or could
 only?] walk.’ (Notker, *Boethius* [Cod. Sang. 825]; Tax 1988: 128)

Fritz’s suggestion is similar to Yanovich’s in that both involve a conventionalization of necessity meaning in contexts where both possibility and necessity were available readings. The difference is that whereas Yanovich assumes a very specific semantics for Old English MOT (‘possibility with the presupposition of inevitable actualization’), Fritz (1997: 90) describes Old High German MUOZ as having ‘eine Offenheit des Gebrauchs’ and a very general meaning, with the necessity reading only arising in some contexts.

Finally, Diewald (1999: 335–344) argues for yet another analysis of MUOZ in Old High German, namely as a non-modal (i.e. primary) verb meaning ‘Raum haben’ like Gothic *gamotan*, which could be used metaphorically to mean ‘in der Lage sein’. This meaning was then reinterpreted to ‘müssen’ in contexts where the situation was understood to be inevitable. A detailed treatment of this hypothesis and the Old High German attestations falls outside the scope of my discussion here. It is worth mentioning, however, that MUOZ is almost exclusively attested with infinitival complements, and in fact no clear primary-verb examples are recorded in the AWB.¹⁰ Hence, even if Diewald’s metaphorical analysis may seem intuitively appealing, it is difficult to evaluate against the available data, as the hypothesized literal primary-verb meaning ‘Raum haben’ does not appear to be attested in the Old High German corpus.

8.2.3 Other developments

Evidential (‘epistemic’) uses

The development of evidential (usually known as ‘epistemic’) meaning in MUST was already mentioned in Chapter 2 (see Section 2.3.2). It is generally agreed that this happened in Late Middle or Early Modern English, i.e. at the very end or after the period covered by my corpus, but since it has been such a prominent topic in the literature, I will briefly mention the major works here.

¹⁰ ‘*muozan* ist in der Regel mit dem Infinitiv verbunden, in wenigen Fällen ist dieser erspart bzw. bei Glossen nicht mitübersetzt. Eindeutige Belege für *muozan* als Vollverb fehlen’ (AWB, s.v. *muozan*).

The differences of opinion concern both the probable source of the evidential meaning and the mechanisms involved in the change. Sweetser (1990) has famously argued that it is a case of metaphorical extension of the obligation meaning. According to Sweetser, both (8a) and (8b) can be said to express different types of compulsion, the former in the ‘sociophysical’ world’ and the latter in the speaker’s mind (Sweetser 1990: 61):

- (8) a. *You must come home by ten.* (Mom said so.)
 paraphrase: ‘The direct force (of Mom’s authority) compels you to come home by ten.’
 b. *You must have been home last night.*
 paraphrase: ‘The available (direct) evidence compels me to the conclusion that you were home’

Traugott (1989, 1990) explains the development of evidential *MUST* as a conventionalization of an implicature rather than metaphorical extension, but otherwise agrees with Sweetser that the use in (8b) is derived from the one in (8a). A modified and somewhat more detailed version of this analysis is presented in Traugott & Dasher (2002: 127–130), where the work of Goossens (1999, 2000) is taken into account. An additional step is now assumed, namely the use of *MOT* in Middle English to express ‘generalized deontic necessity’ where the obligation does not come from an overtly mentioned individual, but from a source which is typically left unspecified, such as ‘God’s authority, law, spiritual awareness, or logic’ (Traugott & Dasher 2002: 128). The use of *MOT* in such ‘generalized’ obligation contexts ‘invited the inference that what is necessarily obliged to happen in the future is also obliged to happen in the present’ (2002: 130).

The most obvious problem with the account proposed by Sweetser is that it is based exclusively on Present-Day English examples, simply taking for granted that the use of *MUST* in (8b) developed out of the one in (8a). While Traugott (1989, 1990) and Traugott & Dasher (2002) do refer to Middle and Early Modern English examples in their analyses, there is no systematic investigation of patterns of ambiguity or possible contexts for the change. In addition, as discussed in the context of (5) above (see p. 254), the analyses of the individual examples are not always convincing. As in the case of epistemic uses of *MAY*, however—compare the discussion in Chapter 7, Section 7.3.3—other possible sources for evidential *MUST* have been proposed. According to a number of authors, evidential *MUST* did not develop out of obligation uses like (8a), but from ‘general objective necessity’ (Goossens 2000) or ‘inevitability’ (Furmaniak 2011) uses. Contrary to Traugott & Dasher’s characterization this use does not involve any kind of obligation, but rather an inevitability inherent in the situation as a whole. It is clear from the examples in these works, such as (9) from Furmaniak (2011), that the authors are referring to the meaning category termed ‘situational dynamic’ (*DYN-SIT*) in the work of Nuyts and colleagues.

(9) Late Modern English (1821)

And shall I remain to witness the happiness which must [i.e. will inevitably] destroy mine?

(Beazley *Love's Dream*; Furmaniak 2011: 53)

These studies notwithstanding, the idea that the obligation meaning is the source of the evidential use is often repeated in the literature. Kuteva et al. (2019: 289–290) include a diachronic pathway from ‘obligation’ to ‘probability’ and give both Present-Day English *MUST* and German *müssen* as examples. The recent handbook chapter by Ziegeler (2016) appears to endorse this analysis as well.

The present-tense form *must*

Another change which has received some attention in the literature is the loss of the present–past distinction in MOT and the generalization of *must* as its only finite form. In the extant Old English texts MOT appears with the expected distinction between present-tense (e.g. PRS.IND.PL *moton*) and past-tense forms (e.g. PST.IND.PL *moston*), as shown in Table 8.3.¹¹

Table 8.3: Paradigm of Old English MOT

	PRS		PST	
	IND	SBJV	IND	SBJV
1/3SG	mot	mote	moste	moste
2SG	most	mote	mostest	moste
PL	moton	moten	moston	mosten

Some authors have suggested a link between the development from \diamond to \square and the loss of the original present-tense forms. This was proposed already by Sweet (1892: §1482) and Brunner (1950: II, 297; cited by Standop 1957: 74), and again—apparently independently—by Traugott (1989). The idea is that the past-tense form of permission MOT was reinterpreted as expressing a present-tense obligation:

must was originally the past tense form of **motan*; here past permission was interpreted as implying obligation (an analogy is the modern use of *You could go, You might go* as polite commands). (Traugott 1989: 40)

Similarly, Ziegeler (2016: 395) writes that ‘a declaration of (past) permission [...] can easily be interpreted as referring to an obligation or expectation’. The problem with this explanation, as already pointed out by Standop (1957), is that the \square meaning

¹¹ Table 8.3 is based on Hogg & Fulk (2011: 305–306), Brunner (1965: §424), and the DOEC. All the forms in the table are attested in the corpus. In addition, the ‘reduced’ PRS.PL form *mote* is attested before the pronoun *we*, e.g. *þonne mote we geseon* ‘then may we see’ [*ÆCHom* I, 15, 303.119]. The IND–SBJV opposition is neutralized in this form.

appears long before the form *must* is generalized to the present tense. While most authors agree that necessity instances occur already in Old English, or at least very early Middle English (as discussed in Section 8.2.1), the present–past opposition survives long into the Middle English period. Standop states the implications of this in clear terms:

Wenn die Bedeutung [‘müssen’] schon ae. [altenglisch] ist, hat sie nichts mit der späteren Verallgemeinerung der Präteritalform zu tun, sondern ist für sich zu betrachten. (Standop 1957: 74)

In addition, it should be noted that the cognate of English *MUST* has developed the meaning ‘must’ across the West Germanic family without losing the formal present–past distinction, as shown by Dutch *moet* (PRS.SG) and *moest* (PST.SG), German *muss* and *musste*, and West Frisian *moat* and *moast*. If the change from possibility to necessity is directly linked to the English present–past syncretism, the parallel semantic change in the other West Germanic languages is left unaccounted for.

The *OED* (s.v. *must* v.) offers a pragmatic explanation for the loss of the original present-tense form: ‘The use [of *must*] as a present arose from the practice of employing the past subjunctive as a moderate, cautious, or polite substitute for the present indicative.’ There are a number of advantages to this explanation. First, it seems to go together with a more general English tendency to use the original modal past-tense forms with non-past meanings, such as in *might*, *should*, and *ought*, originally the past-tense form of *owe* (on the ‘opacity’ of the present–past distinction in Middle English, see Plank 1984: 312–313; Warner 1993: 148–150). Second, it fits better with examples like (10), where the two forms occur in different versions of the same text, apparently with the same meaning (v.r. from *MED*, s.v. *moten* v.2, sense 6a):

- (10) *Oon of vs two / moste* [v.r. *moot*] *bowen doutelees*
 ‘Doubtlessly either one of us has to obey’ [Ime.wifebath, 440]

Jespersen (1949: IV, 6) also argues that the use of *must* as a ‘preterit of imagination’ led to its use in present-tense contexts. In addition, he suggests that the original 2SG form *most* may have ‘assisted’ in the development. Goossens is more certain about the role of the 2SG form, suggesting that without doubt ‘such second person forms must have played a part in the merging process’ (Goossens 1987a: 233).

8.2.4 Interim summary

The literature review in the preceding pages should have established at least two things: on the one hand that the literature on early English *MOT* is extensive and attests to a continued interest in the history of this modal; on the other, that there are still many unresolved and contested issues relating to its semantic development. I have pointed to four open questions, some of them more closely related than others. These are the characterization of the meaning of *MOT* in Old English, the timing and circumstances of the emergence of necessity meaning, the development of evidential uses, and the loss of the present–past distinction and the generalization of the form

must. In the following, I present the findings of my own study of the functions of *MOT* in Old and Middle English. I will not be able to give definite answers to all of the questions mentioned above, but I will at least provide new evidence to help answer some of them. Specifically, I will argue that *MOT* is polyfunctional in all of the investigated periods and cannot be reduced to a single semantics in any of them. While the variable-force analysis proposed by Yanovich (2013, 2016a) can often be made to work for the examples in the Old English corpus, there are also a number of instances that do not fit this analysis, but seem to be straightforward examples of ‘ordinary’ possibility or permission meaning.

Regarding the development of the meaning ‘must’, I will show that this happened first in dynamic modal uses, not in contexts of permission and obligation. This strongly suggests that the ‘implicature’ explanation of the development from ‘may’ to ‘must’ (see Section 8.2.2) does not provide a satisfactory account. I will suggest that the ‘restricted possibility’ explanation is the one that best fits the early English data. I will explore the possible steps of such a development in Section 8.4 with a small study of the Middle Danish modal *må*, which underwent a very similar change around AD 1500.

In addition to these developments, I will point to a number of possible dialectal differences in the Late Middle English material relating to the meaning of the *MOT* etymon and the expression of necessity. While the number of examples analysed in this corpus investigation is too low for any statistical statements about the dialectal distribution, I note that a few texts consistently deviate from the more common patterns observed in the material. I will suggest that future work ought to investigate such differences more systematically.

8.3 Findings

8.3.1 Overview of semantic changes

I now turn to the results of my semantic analysis. As in Chapter 7 on *CAN* and *MAY*, I will first present the development of *MOT* through the three periods in general terms and then focus on some of the more specific questions discussed above, most importantly the meaning of *MOT* in Old English and the development of necessity meaning. The results of the semantic analysis are presented in Table 8.4 (see p. 263). For the sake of readability I have divided the meaning categories into three groups: under \diamond the dynamic possibility and permission meanings are shown; under \square dynamic and deontic–moral necessity are shown along with obligation. The third group consists of the categories future (*FUT*), optative (*OPT*), mandative (*MAND*), and a single uncertain example. Examples which are ambiguous between *FUT* or *OPT* and one of the categories under \diamond or \square are grouped with the latter types.

As Table 8.4 shows, the most frequent meaning of *MOT* in the Old English sample is *PERM*. This category accounts for more than forty per cent of the analysed examples. The second most frequent category is ‘*DYN-IMP/PERM*’, i.e. instances which allow a

dynamic possibility reading along with a permission one. The categories OPT and FUT are represented as well. Four instances have been analysed as ambiguous between dynamic necessity and FUT, and one could not be classified. I return to these below.

In Early Middle English MOT still occurs with dynamic meaning, but this has now almost completely shifted from possibility to necessity: nine examples allow a dynamic possibility reading (of which only a single one was analysed as unambiguous), whereas 58 express some kind of dynamic necessity and a further 22 are ambiguous between DYN-IMP and either DEO or OBLIG. Both of the older meanings PERM and OPT are represented as well, but their relative frequency has shifted compared to the Old English material: PERM is the more frequent of the two in Old English, whereas in the Early Middle English sample OPT is the more frequent category ($n = 74$). The number of instances ambiguous between PERM and OPT is similar in the two periods. A few unambiguous examples of DEO and OBLIG also occur in the Early Middle English material, but these categories are usually ambiguous with dynamic necessity. The material thus suggests that dynamic necessity developed prior to the deontic and obligation meanings. This will be discussed in more detail in Section 8.3.3.

The most frequent meanings in the Late Middle English sample are dynamic necessity and obligation. The three subtypes of dynamic necessity account for almost half of the examples, obligation for close to twenty per cent. Of the ambiguous instances, almost half ($n = 20$) show ambiguity between DYN-IMP and OBLIG (see Table 8.4). The optative use is represented as well, but less frequently than in Early Middle English, with about ten per cent of the examples. There are sporadic DYN-IMP \diamond and PERM instances. Despite their low numbers, I believe these provide an indication of dialectal differences in the Late Middle English period. I return to this issue in Section 8.3.4.

The figures from Table 8.4 are presented in a slightly simplified form in Table 8.5 (p. 264), where the three subtypes of dynamic modality have been collapsed. The general development of the five most frequent unambiguous categories are represented in Figure 8.2.¹²

8.3.2 Old English MOT

As mentioned above, the most frequent meaning of MOT in my Old English material is permission. Dynamic, optative, and future uses occur as well, but their frequencies are lower, and many examples are ambiguous between two of the categories. The most frequent type of ambiguity is between DYN-IMP and PERM ($n = 34$), followed by PERM and FUT ($n = 12$). To illustrate the analysis, I give two unambiguous and

12 Statistical testing is probably not necessary to recognize the change in the general direction $\diamond \rightarrow \square$, but for good order's sake I ran a Cramér's V test on the variables \diamond (including PERM and ambiguous instances), \square (including OBLIG and ambiguous instances), and 'other' (FUT, OPT, MAND, and 'uncertain'). The effect size is indeed very large, $\chi^2(4, N = 600) = 447.52$, $p < .001$, Cramér's $V = .6104$.

Table 8.4: Semantic development of MOT

		OE		EME		LME	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
◇	DYN-IMP	20	10.0	1	0.5	4	2.0
	DYN-IMP/DYN-SIT	4	2.0				
	DYN-IMP/PERM	34	17.0	6	3.0		
	DYN-IMP/OPT	6	3.0	2	1.0		
	DYN-IMP/FUT	3	1.5				
	DYN-SIT/PERM	2	1.0				
	DYN-SIT/OPT	2	1.0				
	DYN-SIT/FUT	1	0.5				
	PERM	85	42.5	17	8.5	3	1.5
	PERM/OPT	10	5.0	9	4.5		
	PERM/FUT	12	6.0				
□	DYN-INH					3	1.5
	DYN-INH/DYN-IMP			2	1.0	1	0.5
	DYN-INH/DYN-SIT					1	0.5
	DYN-IMP			53	26.5	60	30.0
	DYN-IMP/DYN-SIT			2	1.0	5	2.5
	DYN-IMP/DEO			6	3.0	4	2.0
	DYN-IMP/OBLIG			16	8.0	20	10.0
	DYN-IMP/FUT	4	2.0				
	DYN-SIT			1	0.5	25	12.5
	DYN-SIT/FUT			3	1.5	4	2.0
	DEO					1	0.5
	DEO/OBLIG					7	3.5
	OBLIG			4	2.0	39	19.5
	FUT	3	1.5	3	1.5	1	0.5
	OPT	13	6.5	75	37.5	20	10.0
	MAND					2	1.0
	uncertain	1	0.5				
TOTAL		200	100.0	200	100.0	200	100.0

Table 8.5: Semantic development of MOT (simplified)

		OE		EME		LME	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
◇	DYN	24	12.0	1	0.5	4	2.0
	DYN/PERM	36	18.0	6	3.0		
	DYN/OPT	8	4.0	2	1.0		
	DYN/FUT	4	2.0				
	PERM	85	42.5	17	8.5	3	1.5
	PERM/OPT	10	5.0	9	4.5		
	PERM/FUT	12	6.0				
□	DYN			58	29.0	95	47.5
	DYN/DEO			6	3.0	4	2.0
	DYN/OBLIG			16	8.0	20	10.0
	DYN/FUT	4	2.0	3	1.5	4	2.0
	DEO					1	0.5
	DEO/OBLIG					7	3.5
	OBLIG			4	2.0	39	19.5
	FUT	3	1.5	3	1.5	1	0.5
	OPT	13	6.5	75	37.5	20	10.0
	MAND					2	1.0
	uncertain	1	0.5				
TOTAL		200	100.0	200	100.0	200	100.0

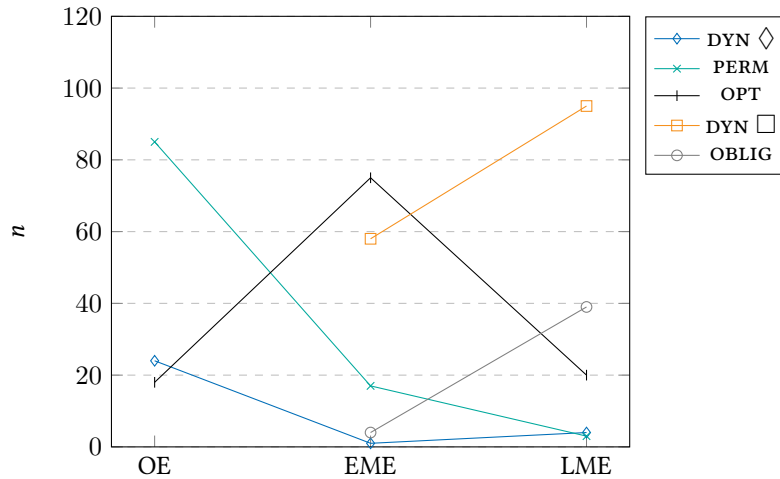


Figure 8.2: Semantic development of MOT (major categories)

one ambiguous example in (11)–(13): one example of DYN-IMP, one of PERM, and one which is ambiguous between these two categories. As in Section 8.2, I have left MOT untranslated in the modern paraphrases.

(11) DYN-IMP ◇

{*Æfter þeosan gewinne gewearð þætte Perse gebudan frið eallum Creca folce,*
næs na for þæm þe hie him ænigra goda wpen, ac for þæm þe hie wunnon on
Egypti,} *þæt hie mosten for him þy bet þæm*
 COMP they MOT.PST:SBJV.PL for them.DAT DEM.INS better DEM.DAT
gewinn-e fullgong-an.
 war-DAT pursue-INF

‘{After this war it befell that the Persians offered peace to all the Greeks, not because they wished to do them any good, but because they were at war with the Egyptians,} so that they MOT pursue that war the better in place of them [sc. the Greeks].’ [Or 3, 1.55.15]

(12) PERM

Soðlic-e ða þuner-as þe Iohannes ne moste awrit-an on
 true-ADV DEM.PL thunder-PL REL John NEG MOT.PST describe-INF in
APOCALIPSIN sind gastlic-e to understand-enne
 Revelation.ACC COP.PL spiritual-ADV to understand-INFL

‘Certainly the thunders that John MOT not describe in Revelation should be understood spiritually’ [ÆTemp, 14.2]

(13) DYN-IMP \diamond or PERM

þæt wæs modig cyn. þenden hie þy rice ræd-an
 DEM.N COP.PST brave people while they DEM.INS realm govern-INF
moston, burg-um [wealdan], wæs him beorht wela.
 MOT.PST:PL city-PL.DAT rule:INF COP.PST them.DAT bright glory
 ‘That was a brave people. As long as they MOT hold the government, rule the
 cities, their glory was bright.’ [Dan, 8]

In (11), from the Old English translation of Orosius’ *Historiæ adversus paganos*, the Persians end the war with the Greeks in order to be in a better position to fight the Egyptians. There is no notion of permission involved; rather, it is the improved circumstances which (are supposed to) enable the Persians to focus on the war in Egypt. Hence the example was classified as DYN-IMP. (12) is from the section on the weather in Ælfric’s *De temporibus anni*, a short treatise on the natural world. Ælfric instructs the reader that the thunder which occurs in our world is not to be compared to the seven heavenly thunders which speak to St John in Revelation. It is clear from the Biblical text that *moste* in (12) pertains to permission: when St John hears the seven thunders, he is just about to write down what they say, but then a voice from heaven tells him that he is not allowed to (see Rev. 10: 3–4). Finally, the example in (13), from the beginning of the poem *Daniel*, is ambiguous between DYN-IMP and PERM. The narrator introduces the topic of the poem, the Babylonian exile, by comparing it to the time when the Israelites were able (or allowed) to govern themselves. This was possible for them because of the circumstances (i.e. DYN-IMP), but also because God allowed it as long as they served him well (i.e. PERM), a point made later in the poem. In the context of (13), however, there are no cues to disambiguate between these two interpretations, and both seem equally appropriate to me. Hence the analysis as DYN-IMP/PERM.

An example of each of the less frequent meaning categories OPT and FUT is given in (14) and (15). The optative example in (14) is from a homily on the Last Judgement; the future one in (15) is from the Old English translation of Exodus.

(14) OPT

Men þa leof-est-an, uton we us giorn-e biorg-an, 7
 person.PL DEM.PL dear-SUPR-DEF HORT we us diligent-ADV guard-INF and
utan giorn-e bidd-an þæt we moton þæs wyrðe bio-n þe
 HORT diligent-ADV pray-INF COMP WE MOT:PL DEM.GEN worthy COPB-INF REL
he þonne cwið to his soðfæst-um
 he then say.3SG to his faithful-PL.DAT
 ‘Dearly beloved people, let us guard ourselves diligently, and let us pray
 diligently that we MOT be worthy of that which he then promises to those
 who are faithful to him [i.e. salvation]’ [HomS 3 (Verc 8), 88]

(15) FUT

7 ða Egyptisc-an nyd-don þæt Israhelisc-e folc ut of
 and DEM.PL Egyptian-DEF force-PST.PL DEM.N Israelite-DEF people(N) out of
heora land-e, 7 ðus cwæd-an: Eall-e we moton swelt-an.
 their land-DAT and thus say.PST-PL all-PL WE MOT:PL die-INF
 ‘And the Egyptians forced the Israelites out of their country, saying, “We MOT
 all die!”’ [Exod, 12.33]

The example in (14) is representative of the optative use, most of which occur either in purpose clauses or in complement clauses of predicates expressing wishes or desires. In some cases a dynamic or permission reading is possible as well, but in (14) I see MOT as clearly optative: the believers do not just pray that it will be possible for them to be worthy of salvation (or that they will be permitted to be worthy) but that they will actually be worthy.¹³ Similarly, while some FUT examples allow another interpretation, I have analysed (15) as a straightforward case of the futurity–predictive meaning. After the tenth plague, the Egyptians realize that they are in imminent danger and have to get rid of the Israelites as soon as possible. (15) is uttered in a state of panic about their impending doom and translates a Latin future-tense form: ‘We are all going to die!’ or similar.¹⁴ The example has been cited in the literature as a possible epistemic instance, although Warner (1993: 162) and Traugott & Dasher (2002: 127) also note that it is not synonymous with any of the Present-Day English expressions usually referred to as ‘epistemic’. Under the definition adhered to in this dissertation, the example would not be considered epistemic.

The Old English findings presented in this section so far do not directly contradict any of the three analyses of MOT discussed in Section 8.2.1, i.e. the ‘ambiguity’, ‘possibility’, and ‘variable-force’ analyses. The discussion in the existing literature primarily concerns the modal force of MOT, not the type (‘flavour’) of modal mean-

¹³ See Yanovich (2017) for a similar argument about the use of MAY in expressions of hopes and wishes in Early Modern English; compare also (40) in Chapter 7 (p. 229).

¹⁴ *Vrgebantq. Ægyptij populum de terra exire velociter, dicentes: Omnes moriemur* (Ex 12: 33). A parallel example occurs in Matthew: *Drihten, hæle us; we moton forwurpan* [Mt (WSCp), 8.25] ‘Lord, save us; we MOT die’, translating a Latin present tense: *Domine, salua nos, perimus* (Matt 8: 25). An appropriate Present-Day English translation here might be ‘we are going to die’ or simply ‘we are dying’. D–R has ‘Lord, save us, we perish’.

ing. In fact, most of the types distinguished in my analysis have already been identified by scholars of Old English, though usually with different terms, as shown in Table 8.6.¹⁵ Even Solo's possibility analysis is not necessarily at odds with the existence of a few potential necessity examples (see Table 8.5): although Solo doubts the existence of unambiguous necessity instances in the Old English record, he does concede that there may be examples in the late Old English material which allow a necessity reading along with another meaning (Solo 1977: 227–230). My findings are compatible with this analysis: all four potential necessity instances allow a future–predictive reading as well, and all are found in texts from the eleventh century, i.e. the end of the Old English period. I return to these in the discussion of examples (17) and (19) below.

Table 8.6: Meanings of MOT: terminology

	<i>OED</i>	Standop 1957	Goossens 1987a	Yanovich 2016a
DYN-IMP	possibility	‘können’	ability	circumstantial
DYN-SIT			contingency	metaphysical (?)
PERM	permission	‘dürfen’	permission	deontic
OPT	wish	‘mögen’	wish	
FUT		futurisch		

Only two of the three subtypes of dynamic meaning are represented in my Old English material, DYN-IMP and (occasionally) DYN-SIT. I have not found any examples of participant-inherent (DYN-INH) possibility, even if Goossens's somewhat misleading term ‘ability’ (see Table 8.6) might suggest otherwise. It is clear from Goossens's discussion that all of his ‘ability’ examples from Ælfric are in fact participant-imposed: ‘in none of these instances we get a purely internal meaning’ (Goossens 1987a: 223). Tellier's general characterization of Old English MOT as ‘extra-subjectif’ thus seems appropriate, and I am sceptical about Traugott & Dasher's suggestion that the original meaning of MOT was one of ability. The authors give only a single example of ‘the putatively original Germanic participant-internal ability meaning’ (Traugott & Dasher 2002: 122), from the story of Sodom and Gomorrah in the Old English metrical Genesis, but I do not think this is convincing. I reproduce the example with their translation in (16); the gloss is corrected.

- (16) *Wil-t ðu, gif þu most, wes-an usser her aldor+dema, leod-um*
 WILL-2SG 2SG if 2SG MOT.2SG COP-INF 1PL.POSS here elder+judge man-PL.DAT
lareow?
 teacher
 Translation by Traugott & Dasher: ‘Are you willing, if you are able, to be the leader of the army, the teacher of the people?’ [GenA,B, 2482]

¹⁵ Note that the comparison in Table 8.6 is not meant to imply perfect correspondence between the terms. In particular, although Yanovich's type ‘metaphysical possibility’ has some overlap with DYN-SIT, it appears to be a rather broader notion; hence the question mark in the table.

The translation suggested by Traugott & Dasher is inaccurate, as indicated by my gloss. In the context of (16) the people of Sodom are not asking Lot to be the leader of their army (*her* is the adverb ‘here’; ‘army’ would be bisyllabic *here*, in this context GEN *heriges*), but rather reproach him for trying to teach them about morality although he is foreign-born (see Gen 19: 6–9). The Old English in (16) appears to be an elaboration of the shorter Latin *numquid ut iudices?* ‘surely you are not going to judge?’, and may be more appropriately rendered as ‘If you get the opportunity, are you then also going to be our supreme judge, the instructor of our people?’. It is not clear from the context whether this hypothetical opportunity would arise from the circumstances or be granted by some authority (e.g. God’s), so if the example was included in my material it would be categorized as ambiguous between DYN-IMP and PERM. In any case, a participant-internal ability (DYN-INH) interpretation of (16) seems most unlikely to me.

As for the question of necessity instances in Old English, four examples in my sample allow such a reading, all of them from eleventh-century prose texts. Two examples appear in the same passage from the beginning of Wulfstan’s homily *Sermo lupi ad Anglos*; I give the first of these in (17).

(17) DYN-IMP □ or FUT

And we eac forðam habb-að fela byrst-a 7 bismr-a
 and we also therefore have-PL many injury-PL.GEN and insult-PL.GEN
gebid-en, 7 gif we ænig-e bot-e gebid-an scylen,
 experience-PTCP and if we any-F.ACC relief(F)-ACC experience-INF SHALL:PL
þonne mote we þæs to God-e geearn-ian bet þonne we ær
 then MOT:PL we DEM.GEN of God-DAT earn-INF better than we before
þyss-an dyd-an.
 this-DAT do.PST-PL
 ‘And for this reason we have also endured many injuries and insults, and if
 we are to experience [*or expect*] any relief we MOT earn it from God better
 than we have done so far.’ [WHom 20.1, 12–14]

The homily was written during Wulfstan’s tenure as Archbishop of York after a series of Viking raids, probably c. AD 1010 (Bethurum 1957: 356). Its main argument is that the Viking attacks are God’s punishment for the sins of the English and that they will only cease once the people begin living virtuous lives that will please God. The example in (17) certainly seems to allow a necessity reading: if the people are to be relieved, they need to earn it from God, because there is no other way to attain this. However, I think a future–predictive reading is equally appropriate: if the sinners are ever going to experience any relief, this is only going to happen because they earn it from God. Note that at least some speakers of Present-Day English use BE *going to* in a similar way in conditional contexts, such as in (18), uttered by a rugby coach about his team:

- (18) Present-Day English (speaker from New South Wales)

At the end of the day, whoever plays the Bulldogs, if they're going to beat us, they're going to earn it, that's our philosophy here.

(Rowe 2018 on nine.com.au)

Here the future state of affairs 'they're going to earn it' is presented as a precondition of 'they're going to beat us', leading to an implication of necessity.

The two remaining potential necessity examples occur in another homily by Wulfstan [WHom 16b, 31] and in a version of the Anglo-Saxon Chronicle (BL, Cotton MS Tiberius B. i), dated to the middle of the eleventh century. The example, given here in (19), occurs in the entry for AD 1006, so that is the *terminus post quem* of the original text. The historical background is one of the Viking attacks mentioned above in connection with example (17) from Wulfstan.

- (19) DYN-IMP □ or FUT

þa geræd-de se cyng and his wita-n eall-um þeodscype to
 then agree-PST DEM.M king and his counsellor-PL all-DAT people to
þearf-e, þeah hit him eall-um lað wære, þæt man
 need-DAT though it them.DAT all-PL.DAT grievous COP.SBJV.PST COMP man
nyde moste þam here gafol gild-an.
 of.necessity MOT.PST DEM.DAT army tribute pay-INF

'Then the king and his counsellors agreed, for the benefit of the whole people—even if it was grievous to all of them—that they MOT of necessity pay tribute to that army [sc. the Vikings].' [ChronC, 1006.36]

The adverb *nyde* 'of necessity, inevitably' in (19) rules out an open possibility reading, and it is clear that the king and his counsellors have no other reasonable choice than to pay tribute to the invading army. However, it is not self-evident that MOT expresses necessity in (19), as this meaning may be carried by *nyde* alone; compare the possible Present-Day English translations 'they had to pay tribute of necessity' and 'they were going to pay tribute of necessity'. In other words, while the meaning of MOT in (19) must of course be compatible with the necessity adverb *nyde*, it need not be entirely synonymous with it, and hence this example was analysed as ambiguous between DYN-IMP □ and FUT as well. I will return to the possible role of *nyde* in Section 8.3.3.

Finally, a single example in the Old English material, from the *Dialogues* of Gregory the Great, was classified as indeterminate because it is unclear which meaning MOT contributes to the clause. As shown in (20), MOT co-occurs with a form of SHALL and translates Latin *debutit*:

- (20) a. *Petrus cwæð, me lic-að þæt þæt þu sæg-st. Ac ic*
 Peter speak.PST me.DAT please-3SG DEM.N REL.N 2SG say-2SG but I
þe bidd-e, þæt þu me secg-e, hwæðer he sceol-de oððe
 2SG.DAT ask-1SG COMP 2SG me.DAT say-SBJV whether he SHALL-PST or
moste forlæt-an þa broðr-o, þe he æne underfeng.
 MOT.PST abandon-INF DEM.PL brother-PL REL he once receive.PST
 ‘Peter said, “I like what you are saying. But I pray you, tell me whether he
 [St Benedict] SHALL or MOT abandon the brethren that he had once
 received’ [GD 2 (H), 3.108.22–23]
- b. *Petr. Plac-et quod dic-is: sed quæs-o responde-as, si*
 please-3SG REL.N say-2SG but ask-1SG answer-2SG.SBJV if
deser-ere fratr-es deb-u-it, quos semel suscep-it.
 abandon-INF brother-PL ought-PRF-3SG REL.PL once receive.PRF-3SG
 ‘Peter: I like what you are saying. But please tell me if he ought to have
 abandoned the brethren whom he had once received.’ (Gregorius Magnus,
Dialogi II, ch. III; Migne 1841: LXVI, 138)

The version of Gregory’s *Dialogues* included in my corpus sample (the ‘H’ version) is a very substantial revision of an earlier translation (‘C’), and a number of interesting grammatical, lexical, and stylistic differences between the two versions have been pointed out.¹⁶ In the case of the passage in (20), however, H agrees with C: *hweper he scolde oððe moste forlæt-an þa gebroðru* [GD 2 (C), 3.108.26]. Considering the meticulousness of the revision in H, which often corrects the Old English to make it more faithful to the Latin, this is unlikely to be an accident, and the use of *scolde/sceolde* and *moste* must have been an attempt to adequately render the Latin. The verb *debeo* ‘owe, ought, must’, may express various kinds of necessity, obligation, and moral expediency (*OLD*, s.v. *debeo*), but in (20b) it seems to be unambiguously deontic–moral (DEO). Peter’s question is whether it was right of St Benedict to abandon the monks he had previously agreed to take into his custody, i.e. whether he ought to have done so. It would appear that the Old English translators did not consider *scolde/sceolde* by itself adequate, but what the exact contribution of *moste* is in (20a) must, I think, remain uncertain.

Revisiting the variable-force analysis

Having surveyed the various meaning categories found in my Old English sample, I now wish to return to the variable-force analysis of MOT. As discussed in Section 8.2.1, Yanovich (2013, 2016a) only investigates the behaviour of MOT in a small selection of texts, namely three of the Alfredian translations from around AD 900. This was a deliberate attempt to minimize any dialectal and diachronic variation in the corpus, in other words to make sure (insofar as possible) that the texts investi-

¹⁶ See e.g. Yerkes (1979) for a comparison of the lexicon, Yerkes (1982) for various syntactic and stylistic differences, Los (2005: 179–185) for a comparison of complementation patterns, and Yamamoto (2009, 2010) for the use of modals and subjunctive forms.

gated belonged to the same variety of Old English. Yanovich (2016a: 519) mentions explicitly that future work on other Old English texts—as well as related languages like Old High German and Old Saxon—is necessary to check whether the variable-force analysis also works outside of his small corpus. In the following I will take a first step in that direction by reconsidering Yanovich’s proposal in light of my Old English material.¹⁷

Yanovich’s description of the semantics of *MOT* was given in (2) on p. 251 and is repeated here in (21). The crucial element which distinguishes this from ‘usual’ possibility and permission modals is the second part, which states that *MOT* always carries what Yanovich terms a ‘presupposition of inevitable actualization’.

- (21) *motan*(*p*) asserts that *p* is an open possibility and presupposes that if *p* is given a chance to actualize, it will.

A great many examples in my material are compatible with this description. Most of the examples which were analysed as *DYN-IMP* or *PERM* indeed occur in contexts where actualization seems to be presupposed. For instance, *MOT* occurs frequently in purpose clauses and in complement clauses of wish and permission predicates, and such clauses of course generally express what people wish or intend to do (and hence presuppose that they are actually going to do it if they get the chance). In (22), for instance, Joseph of Arimathea asks Pontius Pilate for permission to remove the body of Christ from the cross and bury him. There is little doubt that if he gets this permission, Joseph is also actually going to do so.

- (22) *Ʒa eode he sona deagol-lice for Iudea ege to Pilate, 7 hine*
 then go.PST he at.once secret-ADV for Jews.GEN fear to P.DAT and him.ACC
bæd Ʒæt he him forgeaf-e Ʒæs hælend-es lichama-n,
 ask.PST COMP he him.DAT give.PST-SBJV DEM.GEN saviour-GEN body-ACC
Ʒæt he hine moste of ðære rod-e ado-n. Ʒa
 COMP he him.ACC MOT.PST of DEM.F.DAT cross(F)-DAT take.down-INF then
alef-de Pilatus him Ʒæt.
 allow-PST P. him.DAT DEM.N
 ‘Then at once he [sc. Joseph of Arimathea] secretly went to Pilate for fear of the Jews, and asked him to give up the body of the Saviour, so that he *MOT* take him down from the cross. And Pilate allowed him to do that.’ [HomS 24.1, 357–359]

¹⁷ In addition to Yanovich’s suggestions for future work, I would also suggest a careful investigation of the Old Frisian material. Not only is this language generally considered the closest recorded relative of OE, unlike OHG and Old Saxon it survives predominantly in legal texts (see Johnston 2001 for an overview). This type of text is likely to contain many explicit expressions of permission and obligation, making it an ideal starting point for an investigation of these types of modality; see also below on the relevance of the OE laws.

Compare also the examples in (11)–(13) discussed above (p. 266). In (11), for instance, the purpose of the Persian peace offer is to enable them to concentrate on their war against Egypt, so naturally they are also going to do so if they get the opportunity. In (12), similarly, if St John had not been told not to describe the seven thunders, he was actually going to do so. This is stated explicitly in Revelation (10: 4).

However, the material also contains examples where Yanovich's analysis does not seem to work, as there is no presupposition of inevitable actualization. Of course, it is impossible for us to know with absolute certainty how an Old English speaker may have interpreted the examples, but Yanovich (2016a: 516–518) himself actually provides a very useful diagnostic for determining whether the presupposition holds, namely the occurrence of MOT in contexts where more than one possibility is mentioned explicitly. Comparing his analysis of MOT to the 'acquisitive' modals (term due to van der Auwera et al. 2009) in the languages of the Baltic Sea region, such as Estonian *saama* and Norwegian *få*, he notes that these do not carry a presupposition of inevitable actualization. In Norwegian, for instance, *få* may be used in contexts such as (23) where there is an open possibility and no presupposition about what the child is going to do:

(23) Norwegian

Du få-r lek-e i hage-n. Du få-r også se tegnefilm-er
 2SG get-PRS play-INF in garden-DEF 2SG get-PRS also see-INF cartoon-PL
der.
 there.

(An adult suggesting possible activities to a child:) 'You may play in the garden. You may also watch cartoons over there.' (Yanovich 2016a: 518)

According to Yanovich's analysis, examples like (23) should not be expected to occur with Old English MOT. Yet such examples do occur in my material. Consider (24), from a section on the placement of adverbs in Ælfric's *Grammar*. Ælfric writes that adverbs are best placed at the beginning of the sentence, but that some of them may also be placed at the end. There are thus two options and no presupposition about which of them the student is going to choose. Note the presence of the adverb *eac* 'also', parallel to Norwegian *også* in (23):

- (24) {ADVERBIA *beoð gelimplicor geendebyrde, gif hi standað on foreweardan on ðære spræce*: BENE AGIT *wel he deð*; SAPIENTER LOQUITUR *wislice he sprecð*.}
Man mot hi eac bæftan sett-an {butan þam, ðe beoð anes
 person MOT them.ACC also behind place-INF
stæfgefeges oððe æteowigendlice oððe [ascigendlice] oððe tihtendlice oððe
gelicnysse: ðas sceolon æfre standan on foreweardre spræce.}
 ‘{Adverbs are more properly placed if they stand at the beginning of the sentence: BENE AGIT “he is doing well”; SAPIENTER LOQUITUR “he is speaking wisely”.} One MOT also put them at the end, {except those that are monosyllabic, demonstrative, interrogative, hortative, or of similarity. Those always have to come [*lit. stand*] at the beginning of the sentence.}’ [ÆGram, 241.9–14]

Another example is seen in (25), from the *Regula canonicorum* of St Chrodegang of Metz. Here it is explained why priests, not bishops, are charged with anointing the sick:

- (25) {*For þi hit is gecweden be mæssepreostum for þam þe biseopas beoð mid oðrum unæmettan abyrgode þæt hi ne magon to eallun seocum faran.*}
Ellicor for-wel se biseop mot þe þone ele halg-að,
 otherwise INT-well DEM.M bishop MOT REL DEM.M.ACC oil(M) sanctify-3SG
þone andyttre smyr-ian, {gif he hine wurðne læt his neosuncge 7 his
 DEM.M.ACC penitent(M) anoint-INF
bletsunge 7 his hrininge.}
 ‘{For this reason it is said of priests [*sc. that they anoint the sick*], because bishops are usually preoccupied with other duties so that they cannot visit every sick person.} Otherwise, the bishop who sanctifies the oil MOT very well anoint the penitent himself, {if he considers him worthy of his visitation and his blessing and his touch.}’ [ChrodR 1, 69.7–11]

The rule explains that the priests have this task because bishops are too busy, but then adds that if the bishop so wishes and is able to, he is free to anoint the person himself. The Latin version states that the bishop ‘may without misgivings’ visit and anoint the sick person.¹⁸ It is thus not a problem if the bishop performs the sacrament, but there seems to be no presupposition that this is also inevitably what is going to happen.

One possible objection to these examples is that they are from comparatively late texts. Ælfric’s *Grammar* may be from c.1000 (see Chapter 5, Section 5.2.3), while the translation of the rule of St Chrodegang may be from the late tenth century.¹⁹ Yanovich’s texts, by contrast, are from c.900. Language change might thus be the

¹⁸ *Cæterum si episcopus potest, aut dignum ducit a se visitandum, et benedicere, et tangere chrismate, sine cunctatione potest* (Migne 1841: LXXXIX, 1088) ‘Otherwise, if the bishop is able or considers him [*sc. the sick man*] worthy to be visited by himself, he may without misgivings both bless and anoint him.’

¹⁹ Drout (2004) argues for a slightly earlier date of composition on the basis of stylistic considerations, perhaps in the 940s or 950s. In either case, the text is later than the translations in Yanovich’s corpus.

explanation for the use of MOT in (24)–(25). Perhaps MOT was indeed a variable-force modal around AD 900, but changed into a ‘normal’ \Diamond modal during the tenth century. This solution would be one way to maintain the variable-force analysis for Alfredian MOT, even if it might make it slightly less attractive. One of the suggested advantages of the variable-force analysis is that it helps explain why MOT developed into a \Box modal in Middle English (Yanovich 2016a: 504; see also p. 252 above), but this advantage of course disappears if MOT first developed into a ‘regular’ \Diamond modal before developing \Box meaning, as shown in (26). If that is what happened, the change from ‘regular’ \Diamond to \Box still needs to be accounted for.

(26) variable force (c.900) \rightarrow \Diamond (c.1000) \rightarrow \Box (Middle English)

The most obvious way to investigate whether a diachronic change indeed occurred in Old English would be to systematically compare the use of MOT in a larger selection of early texts, such as the rest of the Alfredian corpus, with its use in later texts, such as the writings of Ælfric and Wulfstan; as discussed above, three of the four potential necessity instances in my material occur in the writings of Wulfstan, so this body of texts may be particularly interesting for future investigations. Alternatively, one might try to identify changes in the use of MOT in texts which were written in continuations, similarly to Sommerer’s recent diachronic investigation of determiners in two versions of the Anglo-Saxon Chronicle (Sommerer 2018: Ch. 6), but given the low frequency of MOT, this may not yield very reliable results.

A closer examination of the modal force of MOT in early Old English falls outside the scope of the present investigation, but I do wish to point to another possibly very fruitful avenue for future work. While Yanovich’s decision to limit his investigation to a small selection of dialectally homogenous texts is understandable, it is worth stressing that this corpus is also quite homogenous in terms of genre and subject matter: all three texts are translations of Latin works from late antiquity dealing with philosophical and theological questions. I would suggest that the investigation of MOT should be extended to include other early Old English text types, perhaps most importantly the early English laws, which are likely to contain many explicit expressions of permission and obligation.²⁰ In addition, many of the laws survive in several manuscript copies and Latin translations, so the use of MOT can be checked against other versions. A preliminary look through the concordances from the laws included in my corpus yields some interesting results, such as (27a), which I give along with its Latin translation in (27b):

²⁰ Indeed, in the six secular law texts included in my Old English sample—[LawAf 1], [LawAfEl], [LawICn], [LawIICn], [LawVAt], and [LawVIAt]—I found 23 examples of MOT and 55 of MAY, i.e. about 4 occurrences of MOT for every 10 examples of MAY. Compare this to Yanovich’s statistics from the three Alfredian texts, where the incidence of MOT is less than 1 for every 10 examples of MAY (72 examples of MOT against about 1,000 of MAY; see Yanovich 2016a: 503).

- (27) a. *Gif hwa his wæpn-es oðr-um onlæn-e, þæt he mon mid*
 if anyone his weapon-GEN other-DAT lend-SBJV REL.N he man with
ofslea, hie moton hie gesomn-ian, gif hie will-að, to þam
 kill.SBJV they MOT:PL them.ACC gather-INF if they WILL-PL to DEM.DAT
wer-e.
 wergild-DAT
 ‘If anyone lends his weapon to someone else, which he then kills a person
 with, they MOT unite, if they want to, for the wergild.’ [LawAf 1, 19]
- b. *Si quis alter-i prest-et arma su-a in*
 if anyone other-DAT supply-3SG.SBJV arms(N.PL) REFL.POSS-N.PL in
occisio-ne alicuius, lic-et eis, si uel-int,
 murder-ABL someone.GEN be.permitted-3SG 3PL.DAT if want-3PL.SBJV
wer-am eius (mortui) coniect-are.
 wergild-ACC 3SG.M.GEN dead.GEN bring.together-INF
 ‘If anyone supplies another with his weapon in connection with the
 murder of someone else, they are allowed, if they want, to pay wergild for
 him (the deceased) together.’ (*Quadripartibus*; Liebermann 1903: I, 61)

Here, as in (24)–(25), MOT expresses a free choice: the conspirators may pay the wergild together if they want, but they may also do so separately. There is no presupposition about which of the two they are going to choose—or at least, if the Old English version carried such a presupposition, it was not rendered in the Latin, which simply uses the permission expression LICET.

Finally, I briefly return to two of the observations about MOT which the variable-force analysis is supposed to explain: the apparent rarity of MOT in the Old English material and the difficulty of explaining the change from ‘regular’ \diamond to \square (i.e. observations 1 and 3 mentioned on p. 252). I think both of these are weakened when considered against cross-linguistic evidence. As for the first point, Yanovich observes that the modal MAY in his three ‘Alfredian’ texts is more than ten times as frequent as MOT, suggesting that MOT must have had a special semantics. I have already noted (see n. 20) that the relative frequency of the two modals appears to be dependent on text type, the difference being much smaller in the laws in my corpus than in the philosophical texts investigated by Yanovich. Furthermore, it should be noted that certain types of modality simply appear to have a lower overall discourse frequency than others, without necessarily instantiating cross-linguistically rare or unexpected meanings. Consider the overall frequencies of the Dutch modals *mogen* ‘may’ and *kunnen* ‘can’ in the lemmatized corpus CHN, given in Table 8.7 (absolute and normalized to 1). As the table shows, the possibility modal *kunnen* is more than five times as frequent in the corpus as the permission modal *mogen*.²¹ The Present-Day Dutch

²¹ Corpus searched 24 April 2020. The corpus consists of several earlier Dutch corpora and is regularly updated with additional material. The word count of the entire corpus is not given, but the current version contains more than 800,000 texts. Note that the modal *mogen* also occasionally has dynamic possibility meaning in contemporary Dutch, but the permission sense is by far the most frequent one. On the meanings of the two items, see Van Ostaeyen & Nuyts (2004) and Byloo & Nuyts (2011).

material in the CHN is of course not directly comparable to the Old English corpus, but I think one ought to consider the possibility that MOT is less frequent in the Old English record—at least in part—because of more general tendencies in discourse. If expressions of permission tend to be less frequently used in discourse than possibility expressions, no special semantics is necessary to account for the distribution of MOT and MAY in the Old English corpus.

Table 8.7: Frequency of Dutch *mogen* and *kunnen* (CHN)

	<i>n</i>	<i>f</i>
<i>mogen</i>	350,529	1
<i>kunnen</i>	1,892,514	5.4

The other observation made by Yanovich concerns the apparent cross-linguistic rarity of the change $\diamond \rightarrow \square$. Yanovich notes that the change has happened to MOT and its cognates across West Germanic and calls it a ‘very rare event’ (Yanovich 2016a: 504), again suggesting that there must have been something special about the meaning of the MOT etymon. This appears to be a purely intuitive judgement, however, and no references are given to any cross-linguistic literature on the matter. In fact, a development from possibility to necessity has been reported in several unrelated languages and may not be as exceptional as it first appears. I have already mentioned the case of Danish MÅ, the cognate of English MAY. This is of course a closely related language which, moreover, has been in close contact with West Germanic languages for several centuries. However, developments from \diamond to \square have also been suggested for modal markers in Chinese (Ziegeler 2003: 245–247; Li 2004: 212–213), Hungarian (van der Auwera & Plungian 1998: 99; Kiefer 2004: 343–344), and the Oceanic language Tinrin (van der Auwera & Plungian 1998: 99, based on examples from Osumi 1995: 71).²² A closer look at such potential parallels would, I think, be well advised before we make any claims about the exceptionality of the English developments.

8.3.3 The development of necessity meaning

Having given an overview of the meanings of MOT in my corpus generally (Section 8.3.1) and in the Old English material more specifically (Section 8.3.2), I will now look into the changes in the Middle English period in greater detail, in particular with reference to the development of \square meaning. I will consider this in light of the various explanations that have been proposed in the literature (see Section 8.2.2 above).

²² Narrog (2012: 124–128) also suggests that the Old Japanese modal expression *be-* may have developed from circumstantial possibility to ‘inevitability’, but the precise steps of the development are uncertain. I stress that I am not competent to evaluate any claims about the history of Chinese, Hungarian, Tinrin, or Japanese, and consequently I do not vouch for any of the analyses mentioned here. The point is merely that potentially relevant examples have been noted in the literature; additional work is necessary to determine whether they are similar to the development of English MOT or represent entirely different phenomena.

Before analyzing the □ uses, it is worth stressing that the most frequent meaning category in the Early Middle English sample is actually not any kind of necessity or obligation, but optative, i.e. the expression of hopes and wishes. Instances of the permission sense also occur, but as mentioned in Section 8.3.1, the frequency of the permission and optative uses relative to each other has changed: in Old English, PERM was the more frequent of the two (see Tables 8.4 and 8.5 above). The number of instances ambiguous between PERM and OPT is similar in the two periods.

In Table 8.8 I repeat the Early Middle English figures from Tables 8.4 and 8.5, this time divided into two subperiods, c. 1150–1250 and c. 1250–1350. I give only the absolute numbers as they are very low for most of the types. Note also that while there may seem to be a diachronic decline in the frequency of the OPT category, the effect size is actually quite small.²³ It also cannot be ruled out that the apparent decline is mainly due to genre differences. The texts in the earlier subperiod are almost exclusively of a religious nature (e.g. homilies, saint's lives, and religious rules)—the only major exception is the Peterborough Chronicle [eme.peterb]—and contain a large number of prayers and other expressions of hopes and wishes. In contrast, the period c. 1250–1350 consists of a larger variety of genres, including a significant number of secular texts, such as chronicles and romances. While these certainly contain optative examples as well, as shown by (28b) and (28c) below, it is conceivable that there might be fewer relevant contexts. Because of these limitations of the material, I do not venture any hypotheses about the diachronic development between c. AD 1150 and 1350, i.e. within the Early Middle English period.

The optative sense is found in different pragmatic contexts. The entry in the *MED* distinguishes three uses which are all represented in my sample: prayers, 'oaths and asseverations', and 'blessings and curses' (*MED*, s.v. *moten* v.2).²⁴ I give an example of each of these in (28). In (28a) MOT is used as part of a prayer. In (28b) it is used in an oath.²⁵ In (28c) it is used by one character to curse another.

²³ $\chi^2(1, N = 200) = 6.54, p < .0106, \phi = .1808$.

²⁴ The *MED* also mentions a fourth context, 'greetings', where all examples given contain a form of *welcome*. One such example occurs in my material: *Welcom, lord, mot þou be* [eme.harrow, 131]. I think this could reasonably be analysed as a variant of the type 'blessings and curses', specifically as a kind of blessing.

²⁵ For similar examples of swearing by one's (or someone else's) eyes, see *MED* (s.v. *eie* n.1, sense 7a).

Table 8.8: MOT in Early Middle English

	1150–1250	1250–1350
DYN-IMP		1
DYN-IMP/PERM	1	5
◇ DYN-IMP/OPT	1	1
PERM	4	13
PERM/OPT	6	3
DYN-INH/DYN-IMP	2	
DYN-IMP	27	26
DYN-IMP/DYN-SIT		2
□ DYN-IMP/DEO	2	4
DYN-IMP/OBLIG	8	8
DYN-SIT		1
DYN-SIT/FUT	1	2
OBLIG	1	3
FUT	2	1
OPT	47	28
TOTAL	102	98

(28) a. OPT — prayer

þis weater mote iwurðe me wunsum & softe

‘MOT this water become mild and agreeable to me’ [eme.marga, 85–86]

b. OPT — oath

I shal don hengen hem ful heye,

So mote ich brouke mi Rith eie!

‘I will have them hanged up high, as I MOT use my right eye!’ [eme.havelok, 2544–2545]

c. OPT — curse

Schame mote þu fonge

And on hiȝe rode anhonge.

‘MOT you have shame and hang on the high cross!’ [eme.horn, 15]

Two examples of the permission use are given in (29). In (29a) the law is explicitly mentioned as the modal source, placing it unambiguously in the PERM category; in (29b) it is evident from the context that Julius Caesar is the one allowing the British chief Cassivellaunus to be released after he has promised to pay tribute:

(29) PERM

- a. *Þe Gywes onswerede. after vre lawe.*
We ne mote nenne mon. do of lyf-dawe.
 ‘The Jews answered: “According to our law we MOT not put any man to death”.’ [eme.passion, 343–344]
- b. *He 3af gret trolliage to Rome*
Þre hundred pound ich 3er,
Er þat he most be quite & sker
 (After Cassivellaunus has been taken captive by Caesar:) ‘He paid a great tribute to Rome, three hundred pounds each year, before he MOT go free’²⁶
 [eme.smchron, 982–984]

Note the negation in (29a), a context where the PERM meaning appears to have been maintained longer. I return to this below.

Dynamic necessity before obligation

Returning to the change from \Diamond to \Box , we observe an interesting pattern in the material: whereas 53 Early Middle English examples were analysed as DYN-IMP \Box , i.e. as expressing participant-imposed (circumstantial) dynamic necessity, only 4 clear obligation examples were found. A number of examples are ambiguous between the two categories. This distribution suggests that the development of the meaning ‘must’ happened first within the domain of dynamic modality, after which the sense of obligation developed. This development (DYN $\Box \rightarrow$ OBLIG) would be in line with the development observed in MAY, where the PERM meaning was found to develop out of DYN-IMP \Diamond (see Chapter 7, section 7.4).

To illustrate, I give three examples of the DYN-IMP \Box use in (30)–(32). In (30), from the guidebook for anchorites known as the *Ancrene Riwe* (or *Ancrene Wisse*), the meditating anchorite is compared to a bird flying towards heaven. However, the writer instructs, just as the bird has to come down to search for food, the anchorite occasionally needs to take a break from her meditations in order to take care of more mundane affairs. This is not a matter of obligation, but rather of the material circumstances necessitating a certain action: the fact that the anchorite is not a purely spiritual being but also has a body forces her to come down to earth from time to time. In (31), from Robert of Gloucester’s *Chronicle*, the pretender Edgar Æþeling and his family are carried off to Scotland by a strong wind so that they have to remain there for a time; this is a circumstantial necessity rather than an obligation. Similarly, in (32), from the verse romance *Sir Beues of Hamtoun*, an earl—one of the villains in the story—has asked all the servants to leave and then realizes that there is no one

²⁶ Literally ‘before he MOT be exempt and blameless’. On the expression *quite and sker*, see the *MED* (s.v. *sker*[e] adj.).

left to take his shoes off for him. Again, this is not a matter of obligation: the earl is not under any obligation to take his shoes off himself, but is forced to do so by the circumstances.

(30) DYN-IMP □

alswa þe gode ancre ne fleo ha neauer se hech3e. ha mot lichten oðerhwiles dun to þeorðe of hire bodi. eoten. drinken. slepen. wurchen. speoken & héren of þ^t hire neodeð. of eorðliche þinges

‘Even so, the good anchorite, no matter how high she may fly [spiritually], she MOT come down to the earth sometimes on account of her body, and eat, drink, sleep, work, and speak and hear of what she needs of earthly things’ [eme.ancre, II.106–107]

(31) DYN-IMP □

*His moder & is sostren tuo · mid him sone he nom ·
To wende a3en to þe lond · fram wan he er com ·
A wind þer com þo in þe se · & drof hom to scotlonde ·
So þat after betere wind · hii moste þere at stonde ·*

‘At once he [sc. Edgar Æþeling] took his mother and his two sisters with him, to return to the country he had come from; a wind then rose on the sea and carried them off to Scotland, so that they MOT remain there and wait for better wind.’ [eme.robgo, 7560–7563]

(32) DYN-IMP □

*Me schon I mot me self ofdrawe
Ase y neuer 3et ne dede.*

(After all the servants have left:) ‘My shoes I [sc. the earl] MOT take off myself, as I have never done before.’ [eme.beues, 3036–3037]

A few obligation examples occur in the Early Middle English material, along with a number of examples that allow both a DYN-IMP and an OBLIG interpretation. One such ambiguous case is given in (33), from *Lazamon’s Brut*. In this passage, Merlin has taken King Arthur’s men to Ireland in order to obtain the stones to build Stonehenge. Merlin instructs the men on how to get the stones aboard the ship. This may be interpreted both as a statement about the necessary action (‘You need to go close ...’) or as Merlin instructing them to do it in this particular way (‘You must go close ...’ or simply ‘Go close ...’). Hence the analysis as ambiguous. In (34) I give an unambiguous

obligation example. It is clear in this passage that the queen is not merely stating that it is necessary to kill Brangaine, but actually commanding the workers to do so. I thus consider this a clear OBLIG instance.

- (33) DYN-IMP □ or OBLIG

*Þa spæc Merlin; & spileden mid þan cnihten.
Cnihtes 3e beoð stronge; þas stanes beoð græte. & longe
3e mote neh gon; & neodliche heom fon on.
3e mote uaste heom wriðen; mid strongen sæil-rapen.*

‘Then Merlin spoke and said to the knights: “Knights, you are strong; these stones are great and long. You MOT go close and take them by force. You MOT bind them securely with strong sail ropes.’ [eme.brutcali, 8680–8683]

- (34) OBLIG

*Þe quen bad her biside
To werkemen on a day;
Sche told hem at þat tide
What was her wille to say:
3e moten slen & hide
Bringwain, þat miri may.*

‘One day the queen summoned two workers; she told them at that time what she wanted to say: “You MOT kill and hide Brangaine, that fair woman.”’ [eme.tristrem, 1750–1755]

The Early Middle English data thus suggest that the necessity meaning appeared first in the domain of dynamic modality, and that the obligation sense only developed out of this afterwards. In other words, Early Middle English MOT seems to have been polysemous, having the sense ‘must’ in some contexts (dynamic necessity) and ‘may’ in others (permission and optative). That this is not merely a reflection of ‘messy’ data is shown by the fact that all three functions may be found within the same text. The debate poem known as *The Owl and the Nightingale* provides a fairly clear example of this. All examples of MOT from this poem were analysed as either dynamic necessity, permission, or optative instances. I give an example of each in (35). (35a) occurs in a series of maxim-like comments by the narrator, who states that whoever wants to win an argument needs to consider his or her words very carefully; I take this to be an unambiguous dynamic necessity instance. (35b) is about sinners who need to repent their sins before they are allowed to enter Heaven. Finally, (35c) occurs in a passage where the two birds are trading insults. The nightingale curses the owl by expressing her hope that the owl’s eyes are going to pop out; hence the analysis as optative.²⁷

²⁷ Note that according to LAEME, the text was copied by one scribe but contains passages of different dialectal provenance (‘language 1’ and ‘language 2’), roughly corresponding to the first and second halves of the poem (see LAEME, ‘Index of sources’, nos. 2, 3). The examples in (35) are all from the parts assigned to language 1 by LAEME. The variation between DYN-IMP □ and PERM also occurs in language 2; compare MOT at [eme.owlcali, 1304] (DYN-IMP □) and [eme.owlcali, 1553] (PERM). I found no OPT examples in this part of the text.

(35) MOT in *The Owl and the Nightingale*

a. DYN-IMP □

*vor he mot hine ful wel biþenche,
þat is aferd of plaite wrenche.*

‘For he MOT think very carefully who is afraid of being tricked in debate.’
[eme.owlcali, 471–472]

b. PERM

*Nai! nai! hi shulle wel auinde
þat hi mid longe wope mote
of hore sunnen bidde bote,
ar hi mote euer kume þare.*

‘No, no! They will surely find out that they need to ask forgiveness for their sins with much lamentation, before they MOT ever get there.’ [eme.owlcali, 856–859]

c. OPT

*Euer mote þu zolle & wepen
þat þu þi lif mote forleten!
an zollen mote þu so heze
þat ut berste bo þin eze!*

‘MOT you always cry and moan, so that you MOT lose your life! And MOT you cry so loudly that both your eyes pop out!’ [eme.owlcali, 987–990]

From the perspective of a Present-Day English speaker this distribution of MOT may appear counterintuitive. However, the system found in *The Owl and the Nightingale* has a close parallel in the distribution of the modal *må* in Present-Day Danish: the main functions of this modal are also dynamic necessity, permission, and optative, and this state of affairs appears to have been more or less stable for several centuries. I return to the Danish situation in Section 8.4.

The first main point to emerge from these observations is that the implicature explanation of the development $\diamond \rightarrow \square$ does not seem to work for Early Middle English MOT. This explanation assumes that the change happened in contexts where permissions were reinterpreted as expressions of obligation by conversational implicature, as in (36) from van der Auwera et al. (2009), repeated from (6) above (see p. 255):

(36) *You may go now.*

implicature: ‘You must go now.’

No such examples occur in the material, however, and as already discussed above, the first □ examples are of the dynamic kind rather than expressions of obligation. For these reasons, I do not think the implicature explanation provides a satisfactory account of the Early Middle English development.

Role of negation and necessity adverbs

Another hypothesis discussed in Section 8.2.2 explains the development of the meaning ‘must’ with reference to negation. That negation may have been a relevant factor is suggested by, among others, the *OED* (s.v. *mote* v.¹), Goossens (1987a), and Standop (1957); see above for details. However, because none of the surveyed works discuss the possible mechanisms involved in the change, it is difficult to evaluate the hypothesis against the data. Goossens (1987a: 232) suggests that ‘denied permission amounts to an obligation-not-to’, but as we have seen above, there is actually no evidence for a change *PERM* → *OBLIG*. As both Standop and Goossens recognize, however, *MOT* also had dynamic possibility uses in Old English, so one might imagine that the dynamic necessity meaning developed in a similar way by a reanalysis of the sense ‘not possible’ ($\neg \Diamond p$) to ‘necessary that not’ ($\Box \neg p$). Presumably, such a change would be covert and as it were undetectable on the surface. If Old English speakers reinterpreted negated *DYN-IMP* instances like (37) as expressing some kind of necessity, we at least have no indications of it in the data.

- (37) 7 *ælmhtig-ne* God *bæd* *ðæt* he *purh* his *godcund-an* *miht*
 and almighty-ACC God pray.PST COMP he through his divine-DEF power
ðæt *deofol+gild* *gebræc-e* 7 *gefyld-e*, *þa* he *hit* for
 DEM.N devil+idol(N) destroy.PST-SBJV and fell.PST-SBJV when he it for
mann-a *teona-n* *gebrec-an* *ne* *moste*
 person-PL.GEN violence-OBL destroy-INF NEG MOT.PST
 ‘... and [St Martin] prayed to the almighty God that He should destroy and
 cast down the idol by His divine power, since he *MOT* not destroy it on
 account of the people’s violence’ [LS 17.1 (MartinMor), 187–190]

The role of negation seems rather to have been one of preservation. In the Early Middle English material, as shown in Table 8.9, the few negated instances that occur were analysed as belonging to the older meaning categories: 9 are *PERM*, one is ambiguous between *DYN-IMP* and *PERM*, and one between *DYN-IMP* and *OPT*. This material is admittedly very limited, but as I will show in Section 8.4, it corresponds to the situation observed in Middle Danish.

Another factor worth considering is the co-occurrence of *MOT* and necessity adverbs like *nede*, *nedes*, and *neodeliche*, all ‘necessarily’. This pattern is noted by both the *MED* (s.v. *moten* v.2) and the *OED* (s.v. *mote*, v.¹, sense 2), which describes it as frequent. Unsurprisingly, such adverbs were only found to co-occur with necessity or obligation uses of *MOT*, as shown in Table 8.9. The question is whether *nede* and similar adverbs were a factor in the development of necessity meaning or were only used to reinforce a meaning which was already possible. The material, again, does not allow any absolutely certain conclusions, but I think the co-occurrence with necessity adverbs is more likely to be a result than a cause of the development of the meaning ‘must’. While 18 attestations of necessity adverbs (out of 87 \Box instances) in the Early Middle English data may well be described as relatively frequent, unambiguous necessity readings are evidently also available without such an adverb

even in the earliest Middle English sources. Note also that 10 of the 18 instances of necessity adverbs are from verse texts, and in some of these the use of *nede* or *nedes* may have been a convenient way to fill the metre, such as the iambic tetrameter in (38):

- (38) ‘Adam,’ *quaþ* god, ‘*wer myȝtou be?*’
Queþ he: ‘lord, þo we herde þe,
 We were of flyȝte;
 And nedes moste, lord, to soþe,
 Al for þat we beþ naked boþe
 “Adam”, said God, “where may you be?” He said, “Lord, when we heard you
 we fled, and we had to of necessity, Lord, in truth, because we are both naked”
 [eme.shoreh, 153]

Moreover, as Section 8.4 will show, the development from ‘may’ to ‘must’ in Middle Danish seems to have happened without any interaction with such necessity adverbs. This, of course, does not force the conclusion that necessity adverbs played no role in Early Middle English, but it at least shows that a development from ‘may’ to ‘must’ does not depend on it and that other factors must be considered as well.

Table 8.9: EME MOT with negations and □ adverbs

	TOTAL	+ NEG	+ □ ADV
DYN-IMP	1		
DYN-IMP/PERM	6	1	
◇ DYN-IMP/OPT	2	1	
PERM	17	9	
PERM/OPT	9		
DYN-INH/DYN-IMP	2		1
DYN-IMP	53		7
DYN-IMP/DYN-SIT	2		1
□ DYN-IMP/DEO	6		2
DYN-IMP/OBLIG	16		
DYN-SIT	1		1
DYN-SIT/FUT	3		3
OBLIG	4		3
FUT	3		
OPT	75		
TOTAL	200	11	18

Participant-imposed before participant-inherent

Finally, I will briefly point to an Early Middle English development within dynamic necessity which is also relevant for the cross-linguistic literature on the diachrony of modal meanings. This relates to the connection between participant-inherent (DYN-INH) and participant-imposed (DYN-IMP) necessity. In their influential 1998 paper, van der Auwera & Plungian suggested that the latter always derives from the former, i.e. that there is a unidirectional pathway $\text{DYN-INH} \rightarrow \text{DYN-IMP}$ (see e.g. van der Auwera & Plungian 1998: 96, 111). This view was later modified by van der Auwera et al. (2009: 297), who note that the development $\text{DYN-IMP} \rightarrow \text{DYN-INH}$ has been observed in a number of languages. The unidirectionality has also been questioned by Loureiro-Porto (2009b: 205–206), who in her investigation of *NEED* observes a development from ‘external’ (DYN-IMP) to ‘internal’ (DYN-INH) meaning. Narrog (2012: 210–221) discusses the evidence from English *NEED* at length along with Chinese *dě/děi*, concluding that *NEED* indeed shows a development from external to internal necessity, whereas Chinese *dě/děi* has never developed an unambiguous participant-internal meaning (as has been suggested in the literature; see Narrog 2012: 214–220).

Participant-inherent meanings are rare in my material for MOT, but the few examples that were found point to a development in the direction $\text{DYN-IMP} \rightarrow \text{DYN-INH}$. As shown in Table 8.4 (p. 263), the two potential DYN-INH examples in Early Middle English, one of which is given in (39), are ambiguous with DYN-IMP. (39), from the *Ancrene Riwe*, concerns God’s love for his anchoresses and how he always listens to their prayers as if he is compelled to do what they ask. A DYN-IMP reading is perhaps more likely here, but I think it could also be read as an inner compulsion. Unequivocal DYN-INH instances like (40) only appear in the Late Middle English material. Here the Wife of Bath explains that she cannot help but think of lovemaking whenever she drinks wine, i.e. this is an inner compulsion on her part:²⁸

- (39) DYN-INH \square OR DYN-IMP \square
Swa ouer swiðe he luueð luue þ' [he] makeð hire his euening; zet ich dear segge mare: he makeð hire his meister; & deð al þ' ha hat as þach he moste nede.
 ‘So exceedingly he loves love that he makes her his equal; and yet I dare say more: he makes her his master and does everything that she bids as if he MOT of necessity.’ [eme.ancrene, 299]

- (40) DYN-INH \square
*And after wyn / on Venus moste I thynke
 ffor also siker / as coold engendreth hayl
 A likerous mouth / moste han a likerous tayl*
 ‘And after wine, on Venus I MOT think—for as surely as cold begets hail, a gluttonous mouth must have a lecherous tail’ [lme.wifebath, 464–466]

Unambiguous DYN-IMP \square examples, by contrast, are numerous in both periods (26.5% and 30% of the analysed examples). I think the most straightforward interpretation of this distribution is that the meaning DYN-IMP \square appeared first, and that DYN-INH

²⁸ The second *moste* in (40), in l. 466, expresses an inevitability, i.e. DYN-SIT \square .

□ then developed out of that in ambiguous contexts, i.e. a similar change to the one observed by Loureiro-Porto (2009b) in the case of *NEED*. Because of the low number of relevant examples, however, this must remain a hypothesis to be explored in future studies.

8.3.4 Developments in Late Middle English

Moving on to the Late Middle English period, we observe a decrease in the relative frequency of optative examples and an increase in the dynamic necessity and obligation categories: dynamic necessity and obligation together make up more than three quarters of the analysed examples from this period ($n = 154$).²⁹ There are only 4 examples of dynamic possibility (DYN-IMP ◇) and 3 of permission (PERM). These will be discussed below.

Two Late Middle English examples are given for illustration in (41)–(42). In the dynamic example in (41), from a cookbook, it is explained why the syrup for pancakes should not be too thick. In the obligation example in (42), from a monastic rule, all members of the order who are able to are instructed to attend mass every day.

(41) DYN-IMP □

And theñ take hem vp oute of the pañ, and caste hem to þe wessell with the sirippe, altogidre, in a dissh; And therefore thi sirripe most be rennyng ynow, and no33t to stiff

‘And then remove them [*sc.* the pancakes] from the pan and mix them with the pot of syrup, all of it together, in a dish; and for this reason your syrup MOT be sufficiently runny, and not too stiff’ [lme.hrlcook2, 91]

(42) OBLIG

Euery brother and suster þat hathe ther helthe, of what countre or place that so euer they be, yf they may goodly, must here masse euery day

‘Every brother and sister who is in good health, no matter which country or place they come from, if they are properly able to, MOT attend mass every day’ [lme.order, 52]

In addition to these types, the first clear attestations of the deontic–moral (DEO) and mandative (MAND) uses are found in the Late Middle English material. The only unambiguous DEO instance in the sample, given in (43), is from Chaucer’s *The Reeve’s Tale*. In this passage an ambitious parson’s plans to have his illegitimate granddaughter married into the gentry are explained. The clause with MOT could either be in-

29 Specifically, all instances analysed as belonging to one of the dynamic □ types, OBLIG, and those ambiguous between them (i.e. DYN-IMP/OBLIG in Table 8.4).

interpreted as a sarcastic comment by the narrator or as an example of free indirect discourse representing the parson's opinion. In either case, MOT expresses what is considered morally desirable or expedient.

(43) DEO

*His purpos was / for to bistowe hir hye
In to som worthy blood of Auncetrye
ffor holicherches good / moot been despended
On holicherches blood / þat is descended*

'His intention was to marry her off well, into some family of high ancestry; for the possessions of the Holy Church MOT be spent for the benefit of the families of the Holy Church that have proper lineage' [lme.reeve, 3981–3984]

A mandative example is given in (44), from a treatise on the seven capital vices. The author describes various aspects (*branchys*) of the vice of sloth, one of which is self-indulgence or an overly luxurious lifestyle (*tendyrhed*). The self-indulgent man desires soft clothes and bedding and insists on being bathed and pampered often; *moste* in (44) thus does not express any obligation to be bathed, combed, and so on, but rather the sinner's demand that this should happen.

(44) MAND

*Tendyrhed is whan a man delitiþ him in softe cloþyng. in nessche beddyng. he
moste ofte be wassche. ofte be bathid. & ofte be kempt.*

'Self-indulgence is when a man takes pleasure in soft clothes and soft bedding; he MOT often be washed, often be bathed, and often be combed.' [lme.treatise, 16]

Both of the types DEO and MAND are infrequent in the material, however. Optative uses are somewhat more frequent ($n = 20$), but the majority of these examples occur in oaths and curses like (45a), which may well be considered fixed expressions at this stage. Note, however, that examples are still occasionally found in complement clauses of predicates expressing wishes and prayers, as in (45b):

(45) OPT

a. *Grett goddys curse mut go with the*

'Great God's curse MOT be upon you!' [lme.ludus, 204]

b. *ȝyf it be þe wyl of þe Holy Gost to fulfyllyn þat I haue seyd, I pray God ȝe
mote consent þerto*

'If it is the will of the Holy Ghost to fulfil what I have said, I pray to God that you MOT agree to it.' [lme.kempe, 24.507]

In such contexts MOT is gradually replaced by MAY, as discussed by Yanovich (2017) and also reflected in my Late Middle English material in Chapter 7, where MAY was occasionally found in optative contexts (see Table 7.8 on p. 226).

Modal meanings in Northern Middle English

As already pointed out, the survival of the possibility and permission uses into Late Middle English is sporadic, with only 7 attestations in four different texts. Two of these, the prose *Brut* [lme.brut] and *Piers Plowman* [lme.piers], are from the first half of the period, both dated c.1400 in the *MED* bibliography.³⁰ The two other texts are somewhat later, being dated a.1500 and c.1450 by the dictionary. These are interesting because they hint at a dialectal distribution of possibility and permission MOT. Both of them are of northerly provenance, one [lme.nmlapi] from North Lincolnshire, the other [nme.alpha] from the very north of England, close to the Scottish border.

The lapidary in [lme.nmlapi] is located in North Lincolnshire before 1500 by the eLALME.³¹ Another, more southerly, version of the same text was also included in my corpus, as [lme.londlapi]. As (46) shows, this version uses MAY where there Lincolnshire lapidary has MOT. The passage describes the properties of the sapphire and explains that it may help to release a prisoner if he can manage to touch the four corners of his cell with it. In (46a) MOT is used to express this, in (46b) MAY:

- (46) a. *and it helps gretly to dolyuer hym & a presoner mote toche ye iiij cornars of ye preson & toche hys bondes*
 ‘And it [sc. the sapphire] greatly helps to free a prisoner if he MOT touch the four corners of the prison and touch his chains’ [lme.nmlapi, 42]
- b. *& yef a man be enprisoned, & he may touche þe þe [sic] iiij corners of þe prisone [...]*
 ‘And if a man is imprisoned and he MAY touch the four corners of the prison ...’ [lme.londlapi, 22]

The final Late Middle English text with examples of possibility MOT is *An Alphabet of Tales* [nme.alpha], a translation of a Latin collection of exempla surviving in a single fifteenth-century manuscript (BL, Add. MS 25,719; c.1450). The eLALME assigns the language to ‘Durham or Northumberland’, but does not include a separate linguistic profile of it, and there seem to be no published studies devoted to it.³² It is

³⁰ Bodleian Library, MS Rawlinson B 171 and Cambridge, Trinity College B.15.17, respectively. The eLALME places the scribal hand of the former in Herefordshire. The latter was not surveyed in the atlas.

³¹ See eLALME (‘Index of Sources’, Oxford, Bodleian Library, Add. A.106, Hand A, language 2). The language is described as ‘N Lincs, mixed with a more southerly component’. The editors of the text locate it at ‘possibly the southern border of Yorkshire’ (Evans & Serjeantson 1933: 4).

³² According to the editor, a third volume of the edition was to provide the ‘introduction, glossary, index and general clearing-up’ (Banks 1904: II, i), but this volume never appeared. Helen Spencer, Editorial Secretary of the EETS, kindly informs me that no records survive relating to its publication (p.c., Oct 2019). The text has been the subject of at least three unpublished dissertations (Stransky 1911; Fittabile 1957; Johnson 1993). I was only able to access the one by Fittabile (1957), which includes a discussion of the language of the text and a comprehensive and very useful glossary.

worth considering it briefly, however, as it deviates in a number of ways from the other Late Middle English texts in my corpus. Two of the examples of MOT are given in (47)–(48), the first of these of DYN-IMP ◇, the second of PERM:

- (47) *God sent hym swilk contricion þat euer when he began to shryfe hym, he sighed & wepid so sore þat he mott not speke a wurd*
 ‘God sent him such a sense of guilt that whenever he was about to confess, he would sigh and weep so bitterly that he MOT not say a single word’ [nme.alpha, 57]
- (48) *And on a tyme he was taken & demyd to be hanged: and as he was led vnto þe galos he desyrid at he mott se his fadur or he dyed; and he was broght.*
 ‘And at one point he [a thief] was caught and sentenced to be hanged; and as he was being led to the gallows he requested that he MOT see his father before he died; and he was summoned.’ [nme.alpha, 152]

These appear to be the usual meanings of MOT in the text. As Fittabile (1957: 74) observes, however, the invariable form *muste* is occasionally found in impersonal uses (see Chapter 5) with the meaning of necessity, as in (49).³³

- (49) *And herefor vs muste som tyme lowse our pithe, & suffre þaim hafe som recreation & disporte emang all þer other chargis*
 ‘And for this reason we MOT sometimes relax our severity and allow them to have some recreation and entertainment between all of their other duties.’ [nme.alph, 5–6]

In addition, impersonal BEHOVE occurs, usually in the reduced form *bus*, as in (50). However, the most frequent verb expressing necessity and obligation appears to be BIREN (← OE (GE)BYRIAN; see Chapter 5, Section 5.4.4), as in (51).

- (50) *Sur, sen me bus nedis dy, I pray þe grawnt me att I may dy what maner of dead at me likis to chese my selfe*
 ‘Sir, since I [sc. Seneca] must necessarily die, I pray that you grant me that I may die in the manner of my own choosing.’ [nme.alph, 156]
- (51) *We rede in þe storie of Barlaam how þer was a kyng þat had a son; and when he was new born, wyse lechis þat saw it told hym þat hym burde gar kepe it to it war x yere olde*
 ‘We read in the story of Barlaam how there was a king who had a son; and when he was newly born, wise physicians that saw him told him [sc. the father] that he had to put it into care until it was ten years old.’ [nme.alph, 119]

³³ The only exception to this is ‘personal’ *pou muste*, which occurs four times. However, for some reason the 2SG pronoun does not seem to enter into impersonal constructions at all in the text; in contexts where we would expect the OBL form *þe*, NOM *pou* is invariably found: *pou bus pardon* ‘you have to pardon’ [nme.alph, 234]; *pou vggid* ‘you were disgusted’ [nme.alph, 478]; *if pou myster* ‘if you need’ [nme.alph, 480]. This ought to be investigated further.

For obvious reasons—the text runs to almost 180,000 words—I have not carried out an analysis of all modal expressions in *An Alphabet of Tales*, but I do wish to note its potential value for future investigations of variation in TMA expressions in Late Middle English. Not only is it a very substantial text, it also appears to be written in a plain and colloquial style with many dialogues. Needless to say, this text alone cannot be taken as a representative of Northern Middle English as a whole, but should be compared with other texts from the same area. This may also reveal to what extent the differences observed above are characteristic of Northern Middle English in general or idiosyncrasies of *An Alphabet of Tales*. A reading of another Northern text in my corpus, the *Prose Life of Alexander* (Lincoln Cathedral MS 91; c.1440) revealed that this does not use the verb BIREN at all, but contains 9 examples of BEHOVE in various forms (e.g. *buse, byhoue3*), as in (52):

- (52) *And 3if 3e will no3te submytt 3owe vn-till vs, 3ow buse oper be strangere þan we, or ells submytt yow to sum lordechip, þat be strangere þan oures*
 ‘And if you refuse to submit to us, you need to either be stronger than us or else submit to some lordship that is stronger than ours’ [nme.lifealex, 33]

This suggests that the impersonal necessity constructions—such as the use of BEHOVE in Chapter 5—may indeed have survived longer in Northern Middle English dialects. I discuss this and a number of other topics for future research in the concluding Chapter 9.

8.3.5 Interim summary

The preceding sections have presented and discussed the results of my study of MOT in Old and Middle English. I first gave a general overview of the observed changes and then discussed a number of topics in chronological order: the meaning of MOT in Old English, the development from ‘may’ to ‘must’ in Early Middle English, and the changes and variation observable in the Late Middle English material. I have argued that the change from ‘may’ to ‘must’ was not a change from permission to obligation, either through conventionalized implicature or in contexts of negation. When the meaning ‘must’ first appears, it does not express obligation, but participant-imposed dynamic (‘circumstantial’) necessity (DYN-IMP □). The obligation meaning only develops after—and most likely out of—the dynamic necessity meaning.

Having thus presented the findings from my Old and Middle English material, I now turn to the development of the Middle Danish modal MÅ and the similarities and differences that may be observed between this and early English MOT. I will show that the semantic development of Middle Danish MÅ follows a similar trajectory to MOT by developing from a possibility to a necessity modal. Unlike MOT, however, MÅ never seems to have developed an obligation sense.

8.4 From 'may' to 'must' in Middle Danish

8.4.1 Introduction

The impetus for the following small-scale investigation was the observation that the behaviour of MOT in my Early Middle English material shows a number of similarities with the Present-Day Danish modal MÅ, the cognate of English MAY. As discussed in connection with (35) above (see p. 283), in some Early Middle English texts MOT occurs with dynamic necessity, permission, and optative meanings. This polysemy is quite unlike what is found in the Present-Day English modals, but has a close parallel in Danish MÅ, which is also used in these three functions. In the earliest Middle Danish sources, by contrast, MÅ does not express dynamic necessity, but possibility. The question I will investigate here is how the necessity meaning developed, and what, if anything, this change in Danish may teach us about the Early Middle English situation.

The etymon MOT has no reflex in the Scandinavian languages, but is found only in West Germanic and Gothic (see *EDPG*, s.v. **motan-*). The MAY etymon, on the other hand, is found across Scandinavian. The Old West Norse reflex *mega* was discussed in Chapter 7. In the following I will limit myself to the cognate in Danish, an East Scandinavian language, for two reasons: first, Present-Day Danish has kept the poly-functionality necessity/permission/optative intact in MÅ, whereas at least some of the other languages show different developments. In Swedish, for instance, MÅ is not a necessity modal, but is used primarily to express optative and concessive meanings.³⁴ Second, it is the Scandinavian language I know best, both in purely linguistic terms and with respect to the historical sources. A comparison of the history of MÅ across the Scandinavian languages falls outside the scope of this investigation, but would certainly be an interesting topic for future work.

I first give a very brief overview of the meanings of MÅ and the other modals in Early Middle and Present-Day Danish and then present the study of the development of MÅ. From the available literature the change from possibility to necessity seems to have happened in the late fifteenth and early sixteenth century, so I decided to investigate it in a small selection of texts from c.1500. After presenting this investigation I discuss the possible implications for the history of English MOT. I will follow the traditional periodization used by Brøndum-Nielsen (1950). 'Early Middle Danish' refers to the period c. 1100–1350, 'Late Middle Danish' to c. 1350–1525, and 'Modern Danish' to the language from c.1525 onwards. I refer to the modals with their modern present-tense forms: MÅ for the cognate of MAY, KAN for the cognate of CAN, and SKAL for the cognate of SHALL.³⁵

³⁴ See Beijering (2011, 2017) for details (but note that her semantic categories differ in a number of ways from the ones used here). The Present-Day Swedish necessity modal *måste* 'must, have to' is a Middle Low German loanword (*SAOB*, q.v.).

³⁵ The modern infinitive forms are *måtte*, *kunne*, and *skulle*. The infinitive *måtte* is secondary, being derived from the past-tense form on analogy with the other modals; in Middle Danish the infinitive is *mughe* (with spelling variants); see Brøndum-Nielsen (1950: §774) for details on the paradigm.

8.4.2 Modality in Danish

Early Middle Danish modals

The modal system of Early Middle Danish is treated briefly in Bjerrum's (1966) grammar of the thirteenth-century Scanian Law (Stockholm, Kungliga biblioteket, B 74 4°). Bjerrum notes that the modal verbs at this stage did not have any formal oppositions between possibility and permission, which were both expressed by MÅ 'can, may, be allowed to', or between necessity and obligation, which were both expressed by SKAL 'must, have to, be obliged to' (Bjerrum 1966: 53; see also Hansen & Heltoft 2011: 785–786). Table 8.10 represents this situation in stylized form.

Table 8.10: Early Middle Danish modals

Dynamic ◇	Permission
MÅ	MÅ
Dynamic □	Obligation
SKAL	SKAL

The system in Table 8.10 appears to have been relatively stable until the end of the Middle Danish period. Obe (2013) investigates the semantics of the modal verbs in three Middle Danish texts and finds only dynamic possibility and permission uses of MÅ in the earliest of these. This text, a translation of the Latin *Lucidarius*, is from a fifteenth-century manuscript (Copenhagen, Arnamagnæanske Samling, AM 76 8°), but the language of the text appears to represent an earlier stage, perhaps from the mid-fourteenth century (see Obe 2013: 69 and references there). (53) shows a dynamic possibility example (either DYN-INH or DYN-IMP), (54) an example of the permission sense:

- (53) DYN-INH ◇ or DYN-IMP ◇
Hwat er guth oc hwar skal man vnderstand-æ hanum men wy moæ
 what COP God and how SKAL one understand-INF him when we MÅ:PL
hanum ey see
 him NEG see-INF
 'What is God, and how is he to be understood when we are not able to see him?' (*Lucidarius*; cited from Obe 2013: 71)
- (54) PERM
Maa prest-en ey en steth weth altær-eth sy-æ al messe-n
 MÅ priest-DEF NEG one.C place(c) at altar-DEF say-INF all mass-DEF
 'Is the priest not allowed to say the whole mass in one place at the altar?'
 (*Lucidarius*; cited from Obe 2013: 78)

Towards the end of the fifteenth century, the system appears to be changing. In the youngest of Obe's texts, the *Chronicle of Charlemagne* (*Karl Magnus' Krønike*) from c.1480, the emerging modal KAN is replacing MÅ in the dynamic possibility use,

and MÅ now occurs with dynamic necessity meaning alongside SKAL. In addition, MÅ is found in optative uses. Obe analyses 17 of the 77 examples of MÅ in the *Chronicle of Charlemagne* as expressing dynamic necessity. She points out that MÅ and SKAL are distributed differently across clause types, but concludes that the material is too limited for any definite statements about the difference between them (Obe 2013: 190–192). As for the change from dynamic possibility to necessity in MÅ, she suggests that this may have happened in contexts where the possibility was reinterpreted as more or less certain (Obe 2013: 195–196). Heltoft & Nielsen (2019b) make a similar point in a recent contribution (an online appendix to their handbook chapter in Heltoft & Nielsen 2019a). This explanation is comparable to the one that has been proposed for German *müssen* by Fritz (1997) and Diewald (1999), i.e. the 'restricted possibility' explanation discussed in Section 8.2.2.

The Present-Day Danish system

The change from dynamic possibility to necessity which began in the fifteenth century eventually ran its course, and in the contemporary language MÅ has replaced SKAL in this function. However, unlike English MOT and its cognates in German, Dutch, and West Frisian, Danish MÅ has never lost its permission meaning. Instead, Present-Day Danish MÅ shows a polysemy similar to the one observed in *The Owl and the Nightingale* (see the discussion of [35] in Section 8.3.3). In addition to its permission sense, exemplified in (56), it may express all three subtypes of dynamic necessity, as illustrated in (55), as well as optative meaning, such as in (57) with the subjective particle *gid* 'I wish, I hope'.

(55) a. DYN-INH □

Visse menneske-r må bare prøv-e grænse-r af!
 some person-PL MÅ just try-INF limit-PL off
 'Some people just have to push the limits!' (KorpusDK, 2001 *Krop og Fysik*)

b. DYN-IMP □

Mit fly var aflys-t, så jeg måtte vent-e til kl. 18.35.
 my flight COP.PST cancel-PTCP so I MÅ:PST wait-INF until clock 6.35
 'My flight was cancelled, so I had to wait until 6.35 p.m.' (KorpusDK, 1998 private text)

c. DYN-SIT □

I begyndelse-n så flod-en fredelig ud, men vi opdag-ede hurtigt, at det måtte gå galt.
 in beginning-DEF look.PST river-DEF calm out but we discover-PST quickly COMP it MÅ:PST go-INF wrong
 'In the beginning the river looked calm, but we soon discovered that it was bound to go wrong.' (KorpusDK, 1998 *Jyllands-Posten*)

- (56) PERM
Det eneste, han måtte skriv-e i fængsl-et, var et ugentlig-t
 DEM.N only he MÅ:PST write-INF in prison-DEF COP.PST INDF.N weekly-N
brev til sin kone
 letter(N) to REFL.POSS.C wife(C)
 ‘The only thing he was allowed to write in prison was a weekly letter to his wife’ (KorpusDK, 1991 *Berlingske Tidende*)
- (57) OPT
Gid du må fald-e overbord og bliv-e spis-t af fisk-ene.
 PTCL 2SG MÅ fall-INF overboard and become-INF eat-PTCP by fish-PL.DEF
 ‘I hope you’ll fall overboard and get eaten by the fish.’ (KorpusDK, n.d. fyldepennen.dk)

A simplified overview of the meanings of MÅ, KAN, and SKAL in Present-Day Danish is shown in Table 8.11. It is worth stressing that the necessity and permission variants of MÅ are clearly distinct and have even been analysed as separate lexemes by some scholars (see Brandt 1999: 51–54 for references and discussion). As we will see below, this polysemy appears to have been stable for several centuries. The stability may to some extent be due to the distribution of the meaning variants, which is partly complementary. In negative, interrogative, and conditional clauses, dynamic necessity is expressed by BEHØVE ‘need’, and hence MÅ in these contexts can only have permission meaning.³⁶ On the other hand, in combination with an adverbial expressing direction, only the necessity reading is available (e.g. *jeg må hjem* ‘I have to go home’).³⁷ In addition, a number of particles—including the polarity item *godt* discussed in Chapter 6 (Section 6.3.2)—only co-occur with one of the senses of MÅ.

Table 8.11: Present-Day Danish modals

Dynamic ◇ KAN	Permission MÅ	Optative MÅ
Dynamic □ MÅ (BEHØVE)	Obligation SKAL	

For additional information on the Present-Day Danish situation I refer to the detailed treatment in Hansen & Heltoft (2011: 765–819), the most comprehensive grammar of contemporary standard Danish. A number of studies in German and English are also available, such as Jensen (1987), Davidsen-Nielsen (1990), Brandt (1999, 2002), and Boye (2001).

³⁶ Note that BEHØVE—while obviously related to English BEHOVE and Dutch (*be*)hoeven—is a borrowing from Middle Low German and thus not a true cognate (Kalkar, s.v. *behove*; ODS, s.v. *behøve* v.)

³⁷ In other words, *jeg må hjem* can only translate Dutch *ik moet naar huis*, not *ik mag naar huis*. See Brandt (1999: 72–74), Boye (2001), and Hansen & Heltoft (2011: II, 808–814) for details on modals and directional expressions in Danish.

8.4.3 Late Middle Danish *må*

In order to identify the possible contexts of the change from possibility to necessity, I analysed the use of *må* in four texts from the early sixteenth century, i.e. from the time of the Reformation and the earliest printed sources. This is the very end of the Middle Danish period according to the traditional definition (see above). A corpus of four texts is obviously very limited, but since my main goal here was to identify possible contexts for the semantic change, I decided that it was reasonable to limit the study to a small selection of texts. I will first describe the investigated texts and then provide an overview of the uses of *må* in them. The possible contexts for the change are then discussed.

Description of the material

Because there are no ready-made historical corpora of Danish, I relied on a number of digital editions published by the Society for Danish Language and Literature (DSL). I have used texts from the repositories Arkiv for Dansk Litteratur (ADL) and tekstnet.dk, a collection of digital editions of medieval and early modern texts. The texts from tekstnet.dk are single-witness editions which do not modernize the spelling or punctuation; the texts in ADL are generally based on earlier editions, some of which modernize the punctuation and silently emend typographical errors. I chose a text from ADL which included editorial notes in order to be able to check if anything had been emended in the excerpted examples.³⁸

The texts were chosen to represent different genres and audiences: two fictional texts, a medical handbook, and a political treatise. Two of them are from manuscripts from the early sixteenth century, the other two from early prints. The following four texts were included:

JPræst *Jon Præst* ('Prester John'), a description of India written in the form of a letter from Prester John, the legendary Christian king of India, to Manuel Komnenos, the Byzantine emperor from AD 1143 to 1180. The letter is obviously fabricated ('uden tvivl et falsum'; Nielsen 2015b) and describes such wonders as the Fountain of Youth and a palace made entirely of gold. The text survives in two Danish versions, both of them adaptations of a Swedish text, which in turn is a translation from Latin. The Danish, Swedish, and Latin texts are published synoptically by Karker (1978). For my investigation, I used the edition of the manuscript Thott 585 8° by Nielsen (2015b), but compared it with the other versions where relevant. According to the editor, Thott 585 8° is from c.1500, but the language of the text may be somewhat older.

JesuB. *Jesu Barndoms Bog* ('Childhood of Jesus'), a chapbook with apocryphal legends about the childhood of Christ and the lives of Mary and her parents, Anne and Joachim. Printed in Copenhagen in 1508. It was meant for popular consumption and

³⁸ The texts from tekstnet.dk were downloaded from the GitHub repository of DSL (github.com/dsldk). The text from ADL was downloaded directly from the website adl.dk. The text files were searched for possible spellings of *må* with AntConc and the concordances exported to a spreadsheet. Irrelevant hits (such as the epistemic adverb *maa ske* 'perhaps') were then removed manually.

is written in a plain and unassuming style with many direct quotations. According to the earlier editors (Jacobsen & Paulli 1915), most of the text is based on the rhymed *Marienleben* by the Carthusian Philipp von Seitz, a monk living in southern Styria in the early fourteenth century. However, the Danish version is most likely not a direct translation from High German: some Danish words appear both in historically older and younger forms, so it seems to have gone through a number of recensions before it was printed. One of the earlier versions was most likely in verse, as there are remnants of rhyme scattered throughout the text, such as *lad ihesus komme til LÆRE theth motte komme til stor ÆRE* ‘let Jesus go to school, that would result in great honour’ (Jacobsen & Paulli 1915: xxx–xxxvii)

KvUrteg. *Kvindens Urtegård* (‘Herb garden of women’), a Danish adaptation of *Der Schwangern frawen vnd hebammen rosztgarten* by Eucharius Rößlin (Strasbourg 1513), the first printed handbook on childbirth and midwifery. The Danish version survives in a manuscript in the Royal Library in Copenhagen. It includes a translation of the German text along with an appendix, translated from other sources, containing astrological advice for pregnant women.

HelieKr. *Om kranke og fattige Mennesker* (‘Concerning the sick and destitute’), a treatise by the Carmelite friar Paulus Helie (Poul Helgesen), printed in Copenhagen in 1528. It is addressed to Niels Stemp, the mayor of Copenhagen, and gives advice on the treatment of the poor and needy. Unlike the other texts, it is not based on a foreign original, but the style is more elaborate and rhetorically embellished (e.g. using chiasmuses like *then haarde wmildhedt oc wmildhe haardhedt* ‘the harsh callousness and callous harshness’). The ADL text is from the standard edition of the works of Paulus Helie (Helgesen 1933).

Table 8.12 gives an overview of the texts and editions in condensed form; the full references are included in the bibliography. I will refer to them in the following with the abbreviated titles used above and in the first column of Table 8.12.

Table 8.12: Late Middle Danish sources

	Title	Date	Edition	Words
JPræst	<i>Jon Præst</i>	c.1500	Nielsen 2015b	c.1,600
JesuB.	<i>Jesu Barndoms Bog</i>	1508	Boeck 2015	c.15,000
KvUrteg.	<i>Kvindens Urtegård</i>	c.1515	Hasager et al. 2017	c.17,000
HelieKr.	<i>Om kranke og fattige Mennesker</i>	1528	Helgesen 1933	c.10,000

Meanings of MÅ

The four texts contain 103 instances of MÅ between them, as shown in Table 8.13. KvUrteg. contains the most examples, but is also a somewhat repetitive text where MÅ is used several times in the same construction, as discussed below. By contrast,

JesuB. and HelieKr. show a rather more diverse range of meanings of *mÅ*. Because of these differences between the texts and the limited material, I will present the findings per text.

Table 8.13: MDa *mÅ*: hits per text

	<i>n</i>
JPræst	8
JesuB.	32
KvUrteg.	36
HelieKr.	27
TOTAL	103

For each instance of *mÅ*, I analysed the type of modality, the modal ‘force’ (necessity or possibility), and the presence of negations and necessity adverbs. The modal meaning categories were the same as those used in the investigation of Old and Middle English and introduced in Chapter 3. Several categories were represented: dynamic, permission, optative, future–predictive, and eventuality. The category ‘other’ was used for a few examples that could not be classified, for instance because they were part of idiomatic expressions or because the text was corrupt. The large majority of the dynamic instances belonged to the participant-imposed subtype (DYN-IMP). For ease of exposition I will use the cover term ‘dynamic’ (DYN) in the following. The three dynamic subtypes DYN-INH, DYN-IMP, and DYN-SIT are distinguished in the concordances, which can be downloaded from the project repository.

The shortest text included in the investigation, JPræst, also has the fewest examples of *mÅ*. There are 8 examples in the text, all of which have a dynamic possibility meaning. One of these, given here in (58), also allows a future–predictive reading:

- (58) *Hoo som dryck-er aff then keldæ en dryck fast-ennæ / tha*
 who REL drink-PRS of DEM.C spring(c) INDF.C drink(c) fast-PROG then
fangh-er han enghen sot / Och maa han leffu-æ soo wnggh som han
 catch-PRS he no.C disease(c) and *mÅ* he live-INF so young as he
wore men xxx aar gamel
 COP.SBJV only 30 year[PL] old
 ‘Whoever has a drink from that spring while fasting, he will catch no disease,
 and he *mÅ* live on as youthful as if he was only thirty years old’ (JPræst 3)

JesuB. contains examples of dynamic, permission, optative, and future–predictive meanings. Some examples clearly belong to one of these categories, but more often they are ambiguous between two categories. (59) gives an example ambiguous between a dynamic and an optative reading. An angel brings food to the Virgin Mary

so that she can devote more time to praying. The final clause expresses either a possibility enabled by the circumstances (DYN-IMP) and an intended or desired result (OPT):

- (59) *Engel-in før-de henne mad at hon motthe thes ytermere tiæn-e*
 angel-DEF bring-PST her food COMP she MÅ:PST the further serve-INF
gudh oc wær-e gud tacknemelig
 God and COP-INF God grateful
 'The angel brought her [Mary] food in order that she could/would serve God even more and be grateful to him' (JesuB. 3)

I found 36 examples in KvUrteg., of which 33 allow a dynamic reading. A few of these are ambiguous with a permission or future–predictive reading, but most are unambiguous. A single example was classified as unambiguously future–predictive (see [61] below). The large number of dynamic instances can be explained by the nature of the text. Being a medical handbook, KvUrteg. gives advice about what is safe to eat and what should be avoided under particular circumstances. This very often takes the form 'she can also eat x' (or 'she should not eat x'). A representative example of MÅ in such a context is given in (60):

- (60) *Ok tis_ligest mo hwn ok vel æd-e vnge hønse kød vel sodne*
 and likewise MÅ she also well eat-INF young hens' meat well cooked
 'And likewise, she can also eat well-cooked chicken' (KvUrteg. 7)

Although one could argue that the modality in such instances is to some extent grounded in the writer's authority, I do not consider them examples of the permission sense. Rather than granting permission, they express what is possible for the woman to do without negative consequences. Hence they are unambiguously dynamic, even if they may be considered a special subtype of this category.

One example was analysed as having an unambiguous future–predictive meaning. The passage concerns the prediction of future childbirths by the inspection of the umbilical cord. As the corresponding passage in the original in (61b) shows, the German text has a periphrastic future with *werden*. The Danish text in (61a) uses MÅ:

- (61) a. *Er thet so, at ther er ingen knwder poo, tha fonger hwn aldri*
 COP it so COMP there COP no knot:PL on then get:PRS she never
flere børn, men er ther fult knuder po, tha mo hwn fonge it
 more child.PL but COP there full knot:PL on then MÅ she get:INF INDF.N
barn for hwor knwde.
 child(N) for every knot
 'Is it so that there are no knots on it [sc. the umbilical cord], then she will
 get no more children, but are there knots on it, then she will get a child
 for every knot.' (KvUrteg. 17)
- b. *Siend aber rüntzlin od(er) knöpf dar an/ so würt sie nach*
 COP.PL however fold.PL or knot.PL there on then FUT.3SG she after
de(m)selben kind so vil kinder mache(n) so vil der nabel
 the.same:DAT child as many child:PL make:INF as many DEM.M navel(M)
ru(n)tzlen od(er) knöpf hat
 fold.PL or knot.PL have.3SG
 'But are there folds or knots on it, then she will bear as many children
 after this one as the navel has folds or knots.' (Rößlin 1513: 74)

The different categories are all present in *HelieKr.*, though 'future–predictive' and 'eventuality' are only found in uses ambiguous with a dynamic reading. An example of the latter type is given in (62), which also gives an impression of the somewhat discursive style of the text:

- (62) *Oc at trenghe thenom som icke haffu-e noghen besmittelig krankhet til at*
 and to force-INF them REL NEG have-PL any contagious illness for to
far-e wdi hospital, er icke heller stor almwse [...] fordi thet er at
 go-INF in hospital COP NEG either big kindness because that COP to
kort-e liffu-et, paa thenom ther lenge motte leffu-e
 shorten-INF life-DEF on them REL long MÅ:PST live-INF
 'And to force those without contagious illnesses in hospital is no great act of
 kindness either, for that is to shorten the life of anyone who could/would
 [otherwise] have lived on for a long time' (*HelieKr.* 28–29)

The author's argument here is that only people suffering from contagious illnesses should be hospitalized, so that they do not infect any healthy people who would otherwise have survived (or, under a dynamic reading, who would have been able to survive).

The meaning categories represented in the four texts are summed up in Table 8.14. 103 examples were analysed, including three in the 'other' category (see above). If these are excluded, there are exactly 100 examples. As the table shows, there are unambiguous instances of the four categories 'dynamic', 'permission', 'optative', and 'future–predictive'. The most frequent category is clearly the first of these: 53 examples, more than half, are unambiguously dynamic. However, as the table also makes clear, this is to a large extent due to the overrepresentation of the category in a single

text, KvUrteg. I take this to be another clear example of the importance of text type and corpus composition in the attestation of particular expressions, as discussed in Chapter 5 (see also Fritz 1997: 83–85). Had the corpus consisted of only narrative or administrative texts, a very different picture might have emerged.

Table 8.14: MDa MÅ: meaning categories per text

	JPræst	JesuB.	KvUrteg.	HelieKr.	TOTAL
DYN	7	8	31	8	54
DYN/PERM		2	1	2	5
DYN/OPT		3		4	7
DYN/FUT	1	13	1	2	17
DYN/EVT				3	3
PERM		3		4	7
OPT		2		3	5
FUT		1	1		2
other			2	1	3
TOTAL	8	32	36	27	

More categories (and more ambiguity) are present in JesuB. and HelieKr. than in the other two texts. The ambiguity is almost always between a dynamic reading and one of the other categories. This is in line with earlier findings on Dutch *mogen*, where ambiguity is also most frequently between ‘dynamic’ and another category (see Byloo & Nuyts 2011: 53–55). In addition to the 54 unambiguously dynamic examples, a further 32 allow a dynamic reading. These 86 examples form the basis of the examination of possibility and necessity in the following.

Possibility and necessity

After analysing the type of modal meaning, I classified the 86 examples which allowed a dynamic reading according to their modal force, i.e. whether they express possibility or necessity. It soon became clear that a significant number of examples could not be classified straightforwardly as either one or the other. In the overview in Table 8.15, these are labelled ‘◇/□’. As the table shows, the least frequent modal force is necessity (8 hits), and the most frequent is possibility (52 hits). The 8 examples which were analysed as ‘DYN/PERM’ and ‘DYN/EVT’ all clearly express possibility. Across the other categories, however, there are 26 examples which allow either a possibility or a necessity interpretation.

A number of different types of ambiguous instances may be distinguished. In some cases, there seems to be genuine ambiguity between a possibility and a necessity reading because there is only one possible course of action. An example from JesuB. is given in (63):

Table 8.15: MDa MÅ: modal force in dynamic uses

	◇	◇/□	□	TOTAL
DYN	33	17	4	54
DYN/PERM	5			5
DYN/OPT	4	2	1	7
DYN/FUT	7	7	3	17
DYN/EVT	3			3
TOTAL	52	26	8	

- (63) *Tha sagdhe iomfrw maria thijll iosep huor komm-e wij offuer thenne*
 then say:PST virgin Mary to Joseph how come-PL we across this.c
beck? iosep swar-edē wi mo wad-e oss scal intheth skad-e.
 stream(c) Joseph reply-PST we MÅ wade-INF us shall nothing hurt-INF
 ‘Then the Virgin Mary said to Joseph, “How are we going to get across this
 stream?” Joseph replied, “We can [or have to] wade; nothing is going to hurt
 us.’ (JesuB. 13)

The text makes little use of punctuation and often connects clauses asyndetically, meaning that the precise relation between them is left implicit. In (63) this may have consequences for the interpretation of MÅ. If the clause following it (*oss scal intheth skade*) is interpreted as providing epistemic support, a possibility reading of MÅ seems more likely (‘we can wade, because nothing is going to hurt us’). If it is interpreted as adversative or mitigating, a necessity reading may be more appropriate (‘we will have to wade, but nothing is going to hurt us’). The two interpretations seem to make equal sense in the context.

In other cases, dynamic MÅ rather seems to express a meaning between ‘pure’ possibility and necessity, which might be paraphrased ‘have reason to’. This use is found several times in KvUrteg. in instances like (64). Here it is of course not the woman’s inherent ability to worry which depends on her feebleness, but rather the reasonableness of worrying about giving birth prematurely. Substituting a necessity modal like ‘should’ or ‘needs to’ leaves the meaning virtually unchanged. Unfortunately, the German original does not give any indication as to what the Danish translator may have had in mind. In the German, it is merely said that feeble, dry, and thin women ‘often miscarry’ (*mißlingt gewonlich*; Rößlin 1513: 59). The Danish expression with *rædis* ‘worry’ seems to be the translator’s addition.

- (64) *en qwynne, som megit vansomectigh er ok toor ok mager, hwn mo*
 INDF.C woman(c) REL very feeble COP and dry and thin she MÅ
ok ræd-is for vtidig-t barn
 also worry-INF about premature-N child(N)
 ‘a woman who is very feeble, dry, and thin, she MÅ worry about premature
 birth as well’ (KvUrteg. 10)

Finally, there seems to be a tendency for necessity meanings to be possible especially when a future-predictive reading is also available. More than half of the examples analysed as ‘DYN/FUT’ allow a necessity reading. Two of these occur in the same passage in (65):

- (65) *hennes aadreslag er-e snar-e ok smo ok aadre-ne skelffu-e,*
 her heartbeat[PL] COP-PL quick-PL and faint.PL and vein-PL.DEF tremble-PL
beffw-e ok røst-es, tha ma man befall-e henne vdi gud-z vold,
 shiver-PL and shake-PASS then MÅ one leave-INF her in God-GEN power
thi_at hwn mo tha dø, ok hennes seng mo tha red-es i
 because she MÅ then die-INF and her bed MÅ then make-PASS-INF in
then sort-e mwld.
 DEM.C black-DEF soil(C)
 ‘[and if] her heartbeat is quick and faint and her veins are trembling,
 shivering, and shaking, then one must leave her in God’s power, because she
 MÅ then die, and her bed MÅ be made in the dark ground.’ (KvUrteg. 13)

The passage is from the chapter on prenatal death and describes how to assess the health of the miscarrying woman. If her pulse is very weak, according to the passage in (65), the only thing one can do is hope for God’s mercy, for she is—inevitably or at least very likely—going to die. Again the Danish translator seems to have added material for rhetorical effect, as the German original does not include the reason clause: *Darumb muß man sie got beuelhen* ‘In that case one must leave her to God’ (Rößlin 1513: 67).

Finally, I also noted the presence or absence of necessity adverbs and negations in the clauses with dynamic MÅ. The first of these can be dealt with swiftly: no necessity adverbs were found in any of the 86 clauses. As for negation, this was found in 12 examples, all of them with unambiguous possibility meaning, as shown in Table 8.16. Both clausal and constituent negation was included. Of the 8 clauses with unambiguous necessity meaning and the 26 clauses which allow a necessity reading, none was negated.

Table 8.16: MDa MÅ: negation and modal force

	◇	◇/□	□	TOTAL
AFFIRMATIVE	40	26	8	74
NEGATIVE	12			12
TOTAL	52	26	8	

8.4.4 Pathway of the change

Having looked at the functions of MÅ in the four Late Middle Danish texts, I now return to the various hypotheses about the development from possibility to necessity in the various Germanic languages. As discussed at the beginning of this chapter (see Section 8.2.2), at least four different explanations have been proposed: the 'negation', 'implicature', 'variable-force', and 'restricted possibility' explanations.

I have already pointed out that the 'implicature' explanation proposed for English MOT does not fit the Early Middle English data. This explanation posits a reinterpretation from permission to obligation in certain pragmatic contexts, but as I have shown in Section 8.3.3, Early Middle English MOT primarily expresses dynamic necessity, not obligation. It should be clear from the discussion in the preceding section that the 'implicature' explanation is even less likely for Middle Danish: MÅ does not occur with the meaning 'obligation' in the Middle Danish material and has apparently never developed it. An explanation depending on the notion of obligation thus seems very unlikely for the Danish development.

A version of the 'variable-force' explanation is also difficult to reconcile with the Middle Danish data. As discussed in Section 8.2.2, this hypothesis depends on a particular analysis of the meaning of Old English MOT. I am not aware of any comparable analyses of the meaning of Middle Danish MÅ, but based on the examples in the literature there seems to be no reason to assume a special 'variable-force' semantics of Middle Danish MÅ. In its possibility and permission uses, MÅ appears to express the more familiar semantic values, not the special 'variable-force' modality proposed by Yanovich (2013, 2016a) for Old English MOT.³⁹

The 'negation' explanation is less easily discounted, but the data from the four Late Middle Danish texts at least suggest that negation is a preserving factor rather than a trigger of change: in negated clauses the older possibility meaning (i.e. 'cannot, may not') is preserved in the material. Examples which allow a necessity reading are never negated. However, given the covert nature of the hypothesized change (see my remarks in Section 8.3.3) and the admittedly limited corpus used here, no clear evidence can be presented against it. As a preliminary conclusion we may say that this study at least does not find any evidence in support of the 'negation' explanation.

The Middle Danish material fits better with the scenario envisaged by Obe (2013) for MÅ and Fritz (1997) and Diewald (1999) for German *müssen*. According to this hypothesis, the development from possibility to necessity happened in contexts with only one possibility. In the preceding section I have noted that there are several examples in the Late Middle Danish corpus where possibility and necessity are more or less indistinguishable. In a number of these a future-predictive reading was also possible. This is interesting in light of the findings from Old English discussed in Section 8.3.2, where the four potential DYN-IMP □ examples were all found to allow a FUT reading as well. I think there are at least two possible interpretations of these data:

³⁹ See e.g. the PERM example in (54) and the DYN-IMP example in (60) above. In (54) there seems to be no presupposition that priests are inevitably going to say mass in one place if they are allowed to. In (60) it is not presupposed that the pregnant woman is inevitably going to eat chicken if she can—this is merely mentioned as one option among others.

either the change from possibility to necessity happened through an intermediate future–predictive stage, or the future–predictive meaning developed out of a meaning intermediate between possibility and necessity. These two alternative routes are illustrated in Figure 8.3.

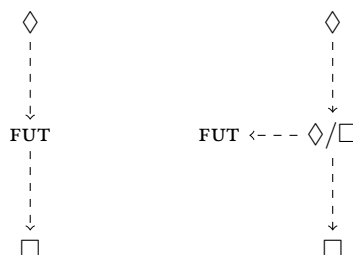


Figure 8.3: Possible developments of *MÅ*

Unfortunately, I do not think the Old English or Middle Danish data presented here allow any definite conclusions on the precise trajectory of the development. Determining the exact interplay between these semantic categories and the role of the future–predictive meaning would require a more thorough diachronic investigation of a larger corpus of texts. What should be clear from the above discussion is that the future–predictive uses of both early English *MOT* and Middle Danish *MÅ* must be taken into account in explaining their history, even if this semantic category is not traditionally considered to belong to the domain of modality.

8.5 Conclusions

This chapter has provided an in-depth investigation of the semantic development of *MOT* from Old to Late Middle English and a comparison with the modal *MÅ* ‘may, must’ in Late Middle Danish. Although I have not been able to answer all of the many remaining questions about the history of *MOT*, I hope that I have at least been able to shed some light on it by putting the historical material under close scrutiny. Perhaps most importantly, I have tried to evaluate the competing hypotheses about the development from ‘may’ to ‘must’, most of which were proposed without any accompanying corpus investigations. The Old and Middle English material strongly suggest that this was not a change from permission to obligation—as several scholars have taken for granted—but happened within the domain of dynamic modality, specifically from participant-imposed possibility to necessity.

As in Chapter 7 on *CAN* and *MAY*, I present a stylized diachronic map of the meanings of *MOT* in Figure 8.4. The three most frequent meaning categories in the Early Middle English material are highlighted with blue rectangles (see below). It must be stressed that many of the diachronic developments are inferred rather than directly attested in the data. In the earliest sources, the dynamic possibility, permission, and

optative senses are all already found alongside each other, and the change from possibility to necessity seems to have happened between Old and Early Middle English, in a historical period with a less than ideal *Quellenlage*; the less certain diachronic pathways are indicated with dashed lines in the figure. A few conclusions can be drawn with reasonable certainty, however. The change from ‘may’ to ‘must’ happened in participant-imposed modality (DYN-IMP) and then appears to have spread to DYN-INH, DYN-SIT, and OBLIG. In this way necessity MOT differs from possibility CAN and MAY, which both showed a development DYN-INH → DYN-IMP → DYN-SIT (see Chapter 7).

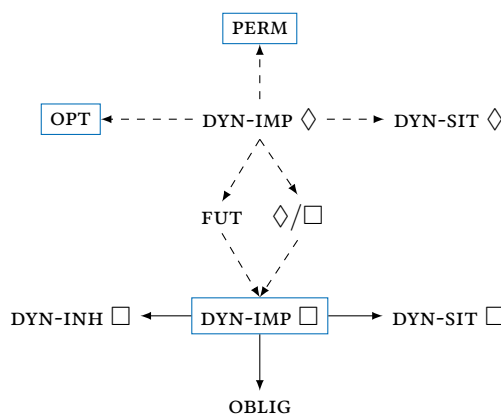


Figure 8.4: Reconstructed semantic development of MOT

A number of additional conclusions may be drawn about the semantics of MOT in early English. First, the data show that this modal was polysemous in all investigated periods. In Old English its most frequent meaning was that of permission, but dynamic, optative, and future–predictive uses are also found. I have argued that while the ‘variable-force’ semantics proposed by Yanovich (2013, 2016a) for early Old English MOT can often be made to work, there are also examples in the material where the meaning is clearly one of open possibility or permission. I have suggested that the patterns observed by Yanovich—both with regard to the low frequency and the usage contexts of MOT—are possibly due to genre-related factors, and that future studies might profitably examine the expression of permission and possibility in the Old English laws. For a comparative West Germanic perspective, the Old Frisian laws also seem like promising territory.

Concerning the use of MOT in Early Middle English, the most frequent meaning category in the data was optative rather than any type of necessity, possibility, or other ‘core’ modal meanings. In addition, it was shown that the polysemy between dynamic necessity, permission, and optative meaning—indicated by blue rectangles in Figure 8.4—does not necessarily reflect an unstable system or ‘messy’ data, but is also found within the same texts. This state of affairs has a close parallel in Danish MÅ, which has had the same three functions for several centuries.

As for the Late Middle English material, I have argued that this attests to dialectal variation in the expression of modality. The older possibility and permission uses of MOT, which had largely become obsolete by the end of the Middle English period, were found to occur in some of the Northern and North Midlands texts in the corpus. An examination of examples from one very substantial Northern text, *An Alphabet of Tales* from the mid-fifteenth century, revealed that this indeed uses MOT consistently to express possibility and permission, whereas necessity is expressed with a number of impersonal constructions. It would be most interesting to investigate this and other localizable texts to attempt to reconstruct the dialectal variation between different modal expressions in Late Middle English.

Finally, the comparison with Danish MÅ revealed that the change from possibility to necessity is not unique to English MOT and its West Germanic cognates, but could also happen to the cognate of MAY in a Scandinavian language. The Middle Danish material strongly suggests that the notion of obligation played no role in the development, which have happened within the domain of dynamic modality. I have argued that both the Old English and Middle Danish data suggest that future–predictive uses may have played a role, but that the material examined here is too limited to say this with certainty. Some possible ways to investigate this in the future will be discussed in the final chapter.

CHAPTER 9

Conclusions and perspectives

HAMLET

Madam, how like you this play?

QUEEN

The Lady doth protest too much mee
thinks.

— *Hamlet* (Q2), III. ii.

This chapter concludes the dissertation. It will first provide a summary of each of the preceding chapters, after which I present a condensed overview of the central findings and discuss how they supplement—or differ from—the findings of earlier studies. Finally, I consider a number of questions that the investigation has brought up and suggest how these may be dealt with in future work.

9.1 Summary of chapters

In Chapter 1, I introduced the topic of the English modals and briefly illustrated some of the differences between the Old English and the contemporary language. A number of guidelines for the reader were then laid out concerning the periodization of the history of English, various symbols and glossing abbreviations used in the dissertation, and a few important terminological distinctions. The distinction between primary and secondary verbs suggested by Dixon (2005) was introduced as a way to avoid the ambiguous and potentially misleading term ‘auxiliary’.

Chapter 2 provided an overview of the most important literature on the development of the English modals and grammaticalization. As the chapter should have demonstrated clearly, this topic has attracted the attention of numerous scholars, and hence the existing literature is extensive. While it was not feasible to discuss all the earlier findings, theories, and controversies in detail, I hope to have given a relatively comprehensive overview of this field of research. I distinguished three traditions or perspectives on the modals in the existing literature: the ‘descriptive–lexicographical’, the ‘formal–syntactic’, and the ‘grammaticalization’ perspective. I stressed that these perspectives are not necessarily incommensurable, but place different emphases on the study of the modals. Under the descriptive–lexicographical perspective, the modals are treated first and foremost as lexical items, whose various meanings should be described exhaustively. The issue of grammatical and semantic change and how to explain it is either of secondary or no importance. The formal–syntactic perspective, by contrast, treats the modals mainly as a syntactic phenomenon, and their grammatical behaviour and category status take centre stage rather than their meaning. Change is primarily accounted for with reference to formal–structural factors. The grammaticalization perspective, finally, views the modals as items ‘in flux’, gradually moving from the lexical to the grammatical domain. Change is of central importance in this tradition and is often explained with reference to the functional–semantic properties of the modals. Because of the great influence of the grammaticalization perspective in recent decades, the second part of the chapter discussed this research tradition in more detail, in particular how it has dealt with the English modals and how developments in English and other Germanic languages have been used to argue both for and against universal ‘pathways’ of grammaticalization. I also pointed out some of the changes in the history of the modals which the grammaticalization literature has either overlooked or not accounted for satisfactorily.

Chapter 3 then moved on to the notional category of modality itself and the questions of how to define and subdivide it. A number of different approaches to the notion of modality were discussed: the traditional ‘possibility-and-necessity’ approach, which takes modality to be the linguistic realization of these two semantic values; the ‘speaker-attitude’ view, which defines modality as the expression of the speaker’s subjective opinions and attitudes; and the conception of modality in terms of factuality, i.e. the reality status of propositions. I concluded that while the factuality approach may have a number of advantages over the other two, the precise delineation of the notional field is of lesser importance in a historical semasiological study. Because this kind of investigation is concerned with all meanings recorded for particular items, whether an individual meaning category is truly ‘modal’ or not is only of secondary importance. Accordingly, a number of meaning categories were distinguished in my investigation which not all linguists would consider to belong to the domain of modality. The semantic classification used, which largely follows the one found in Nuyts and colleagues’ work on Dutch, was presented at the end of the chapter. A number of differences between this framework and more traditional approaches were pointed out:

- Rather than one or two types of dynamic modality, the framework makes a three-way distinction between participant-inherent, participant-imposed (circumstantial), and situational dynamic meanings.
- The term 'epistemic' is restricted to expressions of degrees of likelihood. English *MUST* in its inference use is considered an evidential expression.
- The framework distinguishes the notions of permission and obligation from deontic modality proper ('moral' modality), which concerns the moral acceptability or expediency of states of affairs.
- Several meaning categories are distinguished which are not always considered part of modality, such as optative, future, mandative, and eventuality meanings.

Chapter 4 introduced the material and search methods used in the investigation and discussed some of the problems connected with the use of historical corpora. The early English material was gathered from several existing electronic corpora and text repositories, such as the *Dictionary of Old English Corpus in Electronic Form* (DOEC), the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2), the *Innsbruck Corpus of Middle English Prose* (ICMEP), and the *Corpus of Middle English Prose and Verse* (PPCME2). The sources of Danish, Dutch, and other examples from Germanic languages were also presented, as well as the LAEME and eLALME, two linguistic atlases of Middle English. To search the electronic corpora for examples the programs CorpusSearch and AntConc were used. Before moving on to the empirical investigation, I discussed three methodological issues relating to the use of historical corpora: the issue of comparability between historical periods, the prose-verse distinction and the influence of text type, and the 'philologist's dilemma' (Rissanen 1989) that a larger corpus usually implies a less detailed knowledge of the texts included in it.

Part II then presented the empirical investigation itself, which consisted of four interconnected studies on early English modals. The first of these concerned a number of morphosyntactic changes in Middle English, the second both the functional and formal properties of *DARE*, and the last two the semantic development of the 'core' modals *CAN*, *MAY*, and *MOT* (*MUST*).

Chapter 5 on morphosyntactic changes investigated three developments that have been observed in the Middle English modals which are not readily explicable in grammaticalization terms. The three developments in question were:

1. The apparent development of new non-finite forms of some modals which are only found in finite forms in the Old English record, e.g. participles of *MAY* and *WILL*.
2. The development of regularized ('weak') present indicative plural endings in some modals in Early Middle English, such as *shulleþ* and *conneþ* for expected *shullen* and *connen*.
3. The emergence of 'impersonal' modals with an oblique experiencer argument rather than a canonical nominative subject, such as *us must* and *him ought*.

The first of these was argued not to be a grammatical change to the modals themselves, but to reflect the larger body of surviving texts in Middle English along with more general linguistic changes. I suggested that there is no compelling evidence that any of the modals developed new non-finite forms in Middle English which had been ungrammatical in the Old English period. First, the presence of a form in the Middle English record need not necessarily imply that it was actually used in the vernacular language; in the case of the progressive participle *mowing*, it was found that this is only attested in texts translated from Latin or showing a high degree of Latin influence. Second, the absence of a form from the Old English record need not mean that it did not exist. The ostensible metalinguistic evidence provided by the translations of Latin forms in Ælfric's eleventh-century *Grammar* was argued to be equivocal and allow alternative interpretations. I hope to have shown that the translations in the *Grammar* are sensitive to subtle semantic and grammatical differences between Latin and Old English, and that the absence of a given Old English form cannot be taken as direct evidence of the absence of the form in the grammar of Old English. However, I have also suggested that the *Grammar*—even if it does not provide us with unambiguous grammaticality judgements from a native speaker of Old English—has much to teach us yet about the study of Latin and its relation to the vernacular in the eleventh century. Finally, concerning the increasing number of attestations of non-finite modals in Middle English, I argued that two factors may account for this: the size of the extant written record, which is several times larger in Middle English than in Old English, and the increasing use of periphrastic verbal constructions in Middle English. A small-scale study using the YCOE and PPCME2 showed that, at least in the material included in these corpora, the overall frequency of infinitives and past participles almost doubles from Old to Late Middle English.

The second and third developments, by contrast, were argued to reflect actual innovations to the modals. The regularization of the present plural indicative forms of some of the modals was investigated with the help of the LAEME and eLALME atlases and a number of electronic corpora. The change was observed in the three modals *SHALL*, *CAN*, and *MAY*, but not nearly to the same extent: whereas the regularized *PRS.IND.PL* form of *SHALL* is attested across a large part of southern and central England, the corresponding forms of *CAN* and *MAY* were shown to be rare and largely restricted to the southwest Midlands (specifically, Gloucestershire and neighbouring counties). I suggested that this difference was due to analogical factors. Because of the functional and formal similarity between *SHALL* and *WILL*, the plural ending of *WILL* could more easily spread to *SHALL* than to the other modals.

Finally, the development of impersonal modals was investigated with the syntactically annotated corpus PPCME2. The innovation was found to affect the necessity modals *OUGHT* and *MOT*, but to different degrees: impersonal *OUGHT* is regularly found in the Late Middle English texts included in the corpus, whereas impersonal *MOT* is very rare. A case was made for analogy with *BEHOVE* and other impersonal necessity expressions in explaining the innovation. The impersonal use of *BEHOVE* first appears in the twelfth century and is the only pattern attested in the PPCME2. However, the evidence from the PPCME2 also turned out to leave several questions unanswered, both relating to the frequency of the impersonal modals and their di-

alectal distribution. Notably, variation between nominative and oblique experiencer arguments was observed in all texts where impersonal OUGHT and MOT were attested, with only a single exception, a sermon by the Yorkshire monk John Gaytryge in the Thornton manuscript. I suggested that future studies ought to look more closely at the patterns found in individual scribal texts in order to determine to what extent the distribution reflects dialectal differences, free variation, *Mischsprachen*, or other factors.

In Chapter 6, I ventured onto well-trodden territory and considered the history of the ‘marginal’ modal DARE, which has been much discussed in the grammaticalization literature. Rather than offering a systematic corpus investigation, I reconsidered a number of—more or less contested—issues concerning DARE: its meaning and co-occurrence with other ‘courage’ verbs in Old English, the interaction between DARE and THARF in Middle English, the emergence of *to*-infinitive complements after DARE, and the development of a transitive use in Early Modern English. On the first point, I suggested that DARE in Old English is functionally very similar to its Present-Day English descendant, being a secondary verb with the participant-internal meaning ‘have sufficient courage’ to realize a state of affairs. The co-occurrence of DARE with other ‘courage’ verbs in Old English—which several authors have interpreted as evidence of semantic ‘bleaching’ and a highly grammaticalized status of Old English DARE—was argued to reflect semantic compositionality, and DARE in such contexts had its usual meaning. An analysis of the Present-Day Danish verbs *turde* ‘dare’ and *vove* ‘dare, venture’ showed that it is possible to have more than one ‘courage’ verb without these being exact synonyms.

The interaction or ‘confusion’ of DARE and THARF in Middle English was compared to the developments observed in four other West Germanic languages. It was shown that while the English development is not an isolated case, the fates of the cognates of DARE and THARF were by no means predetermined: in English and West Frisian THARF eventually died out; in German the cognate of DARE disappeared; in Sölring North Frisian both verbs survived; and in Dutch, finally, the verbs merged, so that Present-Day Dutch *durven* is a ‘multiple-source’ construction (Van de Velde et al. 2013) with the meaning of one etymon (DARE) but the form of another (THARF). As I suggested later in the same chapter, something similar appears to have happened to DARE in Early Modern English, where a number of attestations could be either examples of the meaning ‘challenge’ known from Present-Day English or the verb DARE v.² ‘daunt, frighten’; this would account for the otherwise unexplained development of the transitive pattern still found in Present-Day English.

The chapter also surveyed the occurrence of *to*-infinitives after DARE. It was shown that several apparent attestations that have been cited in the literature do not stand up to closer scrutiny. In some cases, the adposition or preverbal particle *to* has been misidentified as the infinitive marker; in other cases, linguistic or editorial ellipses have been overlooked. In one particular case, an erroneous example from Visser (1963) has been cited several times in the literature, but simply looking it up in the edition revealed that there was no *to*-infinitive after DARE. The earliest examples of DARE with a *to*-infinitive that I identified were two attestations in late fifteenth-

century sources, both of them of northerly provenance. It was suggested that future studies might look more systematically at localizable sources from the fifteenth and sixteenth centuries to investigate where the innovation originated and how it spread.

Chapter 7 investigated the semantic development of *CAN* and *MAY* from Old to Late Middle English. The material consisted of 200 instances of both of the two modals from each of the three periods. The general developments were shown to run along broadly the same lines as their German and Dutch cognates, following the trajectory *DYN-INH* → *DYN-IMP* → *DYN-SIT*. The epistemic meaning of *MAY* was argued to have developed out of its situational dynamic use. A number of less frequent patterns were also discussed: the possible habitual use of *CAN* in some Old English sources, the gradual loss of the primary-verb senses of the two verbs, and the sporadic attestation of an ‘autonomous’ modal use of *MAY* in Old English. The last of these was compared to similar patterns in Present-Day Dutch and Old West Norse.

Chapter 8 was devoted to the history of *MOT*, the ancestor of Present-Day English *MUST*. I first provided an overview of the relevant literature on this modal, especially concerning its meaning in Old English and the development ‘may’ → ‘must’ in Early Middle English. As this overview demonstrates, there are competing theories on both of these topics. On the meaning of *MOT* in Old English, one analysis holds that this was always ‘may’ (Solo 1977), another that ‘may’ was the usual meaning but that ‘must’ is also found (Standop 1957 and many others), and yet another that *MOT* had a special ‘variable-force’ meaning, which can be rendered by either Present-Day English ‘may’ or ‘must’ depending on the context, but does not correspond exactly to either of them (Yanovich 2013, 2016a). Concerning the development of the meaning ‘must’, four different factors were discussed: conventionalized implicature, negation, the special ‘variable-force’ meaning, and reinterpretation in ‘restricted possibility’ contexts.

My own semantic analysis was then presented, which followed the same general outline as the investigations of *CAN* and *MAY*. 200 examples of *MOT* were analysed from each of the three periods Old, Early, and Late Middle English. This evidence shed more light on the semantic pathway travelled by *MOT*. It strongly suggests that the development ‘may’ → ‘must’ was not a reinterpretation from permission to obligation, but happened in expressions of participant-imposed dynamic (‘circumstantial’) necessity. This subtype of modality is not always distinguished in the literature on the English modals, but is evidently necessary for an adequate description of *MOT* in Early Middle English. It was shown that the meanings ‘dynamic necessity’ and ‘permission’ co-occur in the same texts, suggesting that at some point in the Early Middle English period *MOT* was ambiguous between these two functions. This state of affairs closely mirrors the polysemy found in Present-Day Danish *MÅ*, the cognate of English *MAY*. In Early Middle Danish, *MÅ* was a possibility and permission modal like its English cognate, but in Present-Day Danish it expresses dynamic necessity rather than possibility. In order to get a better picture of the development of the dynamic necessity function, I investigated the meanings of *MÅ* in a small selection of texts from the early sixteenth century. The change from ‘may’ to ‘must’ appears

to have happened in dynamic modal contexts where both possibility and necessity are appropriate readings; in many of these the modal also allows a future–predictive reading.

In addition to these findings on the change ‘may’ → ‘must’, a number of other observations were made on the history of *MOT*. It was found that the participant-inherent (DYN-INH) necessity meaning seems to have developed out of the participant-imposed (DYN-IMP) meaning rather than the other way round. This would provide an additional example of the development from ‘external’ to ‘internal’ necessity discussed by Loureiro-Porto (2009b) and Narrog (2012). I have also suggested that the older possibility and permission functions of *MOT* survived longer in Northern Middle English, and that texts from this dialect area seem to express modal necessity primarily with various impersonal constructions. This would be in line with the observations on impersonal modals made in Chapter 5, but of course needs to be investigated in more detail.

9.2 Main findings and their implications

Some of the findings presented in this dissertation and summarized above are relevant mainly for English historical morphology and syntax, whereas others may have more general implications for the study of language change and modality. This section distils the main findings and points out how they supplement the existing literature or, in a few cases, challenge commonly held opinions.

‘New’ non-finites I have argued—*pace* a significant number of scholars (van Kemenade 1992, 1993; Warner 1993; Beths 1999; Molencki 2005; Schlüter 2010; Coupé & van Kemenade 2009)—that there is no compelling evidence for the development of new non-finite forms of the modals in Middle English. To be sure, a number of non-finite forms appear which are not recorded in Old English, but as discussed in Chapter 5, we usually cannot know for certain whether this reflects actual change to the modals or accidents of the written record. I have cautioned against the use of Ælfric’s *Grammar* as a source of metalinguistic judgements, pointing out that there are several possible reasons for the attestation or non-attestation of a given form in this text. Finally, following a suggestion by Fischer & van der Wurff (2006) and Fischer (2004, 2007), I have argued that the apparently innovative non-finite forms in Middle English reflect the larger size of the extant corpus and the increasing use of periphrastic TMA expressions.

Weak morphology The investigation of regularized present indicative plural endings showed that this innovation is found in southern and southwest Midlands dialects in *SHALL* and—much more sporadically—in *CAN* and *MAY*. Few authors have dealt with this innovation in any detail. I supplemented the brief remarks in Warner (1993: 101) and the surveys in the *LAEME* and *eLALME* atlases with a search for regularized plural forms of *MAY* in a large collection of Middle English sources and a discussion of the factors causing the change. Whereas Warner suggests that *WILL* was not the most important factor, I have proposed that it is precisely the formal and

functional similarity between *WILL* and *SHALL* which explains why the innovation spread across a large area in the case of *SHALL*, but failed to gain traction in *CAN* and *MAY*. It was pointed out that the locus of innovation appears to have been the area where the stem vowels of the *PRS.IND.PL* forms of *WILL* and *SHALL* had become identical in Early Middle English.

Impersonal modals The development of impersonal modals was investigated with the help of the PPCME2. It was found, broadly in accordance with Allen's (1995) account, that *OUGHT* as an impersonal modal was more frequently attested than *MOT*, and that the earliest impersonal examples of both of these appear in the record in the latter half of the fourteenth century. I suggested that Denison's (1993: 134) characterization of these impersonal modals as 'sporadic' ought to be qualified: it may be accurate in the case of *MOT*, but downplays the frequency of impersonal *OUGHT*. Following Plank (1984) and Fischer (2007), I argued that analogy with other impersonal necessity expressions—such as *BEHOVE* investigated in Chapter 5—was the main cause of the change.

The development of *DARE* In the case of *DARE*, I have argued that the notion of grammaticalization—along with degrammaticalization—has limited descriptive value and little to no explanatory potential. I have suggested that the secondary verb *DARE* in Old English was not more grammaticalized or semantically 'bleached' than it is today; indeed, the history of *DARE* has been quite stable from a functional point of view. The morphosyntactic changes undergone by *DARE* in Middle and Modern English are, I contend, much more readily explicable with reference to analogy than in (de)grammaticalization terms. This is *pace* the earlier accounts by Beths (1999) and Schlüter (2010) but in line with the treatment of *DARE* in Warner (1993) and Krug (2000), even if the latter two authors do not explicitly refer to analogy as a mechanism of change.

Epistemic *MAY* In contrast to a number of studies which have assumed that epistemic *MAY* in English developed out of the permission sense (e.g. Shepherd 1982; Goossens 1987a; Traugott 1989; Sweetser 1990), my Middle English material strongly suggests that the source of the epistemic meaning was the situational dynamic (*DYN-SIT*) use of *MAY*, i.e. *DYN-SIT* ◇. As mentioned in Chapters 3 and 7, a profusion of terms has been used for this meaning category, such as 'wide-scope possibility' (Gamon 1993), 'general situation possibility' (Depraetere & Reed 2011), 'objective epistemic' (Warner 1993), and 'existential' modality (Narrog 2012). My findings on Middle English *MAY* are in line with the changes observed by Gamon (1993) on earlier High German *mögen* and Nuyts & Byloo (2015) on earlier Dutch *mogen*, although the epistemic use of the latter eventually became obsolete.

Possibility → necessity The semantics of Old English *MOT* and its development from 'may' to 'must' has been the subject of much speculation and a number of competing hypotheses. In Chapter 8 I supplemented the existing literature with a more systematic analysis of Old and Middle English corpus data and evaluated the earlier proposals against this material. I have argued, *pace* Yanovich (2013, 2016a),

that the ‘variable-force’ analysis does not provide an accurate account of the meaning of *MOT*, and that several examples can be found both in earlier and later Old English texts where *MOT* clearly expresses an open possibility or permission. The change from the meaning ‘may’ to ‘must’ was shown, *pace* numerous authors (e.g. Traugott & Dasher 2002: 123–126; van der Auwera et al. 2009: 281; Kuteva et al. 2019: 344), not to progress through the obligation sense, but most likely within participant-imposed dynamic modality. The change from possibility to necessity in Late Middle Danish *MÅ* appears to have followed the same or a very similar trajectory.

Finally, on a more general level, I hope that the methodological discussion of corpus size and composition in Chapters 5 and 8 may also be of interest to linguists working on other languages and linguistic phenomena. The problems of comparability and representativity are not unique to Old and Middle English—or the historical stages of other languages—but are relevant to anyone attempting to describe the reality of a language on the basis of limited data. In historical linguistics, our data are often more limited than we might like, but the better we are aware of these limitations, the more realistic our goals and findings may be.

9.3 Perspectives for future work

I finish this chapter and the dissertation as a whole with a few suggestions for future work. One point which should be abundantly clear from this book is that the history of the English modals—despite the numerous earlier studies devoted to them—still has things to teach us about language change, modality, and the grammar of Old and Middle English. I will discuss one possible direction for future work on each of these three topics.

One very promising avenue for future investigations relates to the contingency of change and the factors that cause a language to develop in a particular way. In this dissertation the role of formally and functionally motivated analogy has been stressed repeatedly. The development of weak plural *SHALL*, impersonal *OUGHT* and *MOT*, *DARE* with *to*-infinitive complements, and the transitive use of *DARE* were all argued to be analogically motivated in one way or another. One of the advantages of the analogical perspective, as argued by De Smet & Fischer (2017), is that it takes the synchronic linguistic reality of the speakers seriously and allows—and indeed expects—an innovation to have multiple different causes. This may make it more unruly and unconstrained than the ‘cline’-based grammaticalization perspective, but it also, in my opinion, provides us with a more realistic and less superficial model of language change. This dissertation has proposed analogy-based explanations for a number of observations, but it will also necessarily have to leave many questions unanswered. Why is *OUGHT* more frequently attested in impersonal constructions than *MOT*? Why did the conflation of *DARE* and *THARF* have different outcomes in English, Dutch, and German, while apparently not affecting Sölring North Frisian? And why was the innovative *to*-infinitive after *DARE* only a partial success, leading to

the present situation with variable usage between *to*-infinitives and \emptyset -infinitives? I will not attempt to answer these questions here, but I will suggest that an analogical approach to language change may be the most fruitful way to address them.

A closely related point concerns the pathways of change between modal meanings and, no less importantly, between modality and meanings not usually considered part of this notional domain. The change in English *MOT* from 'may' to 'must' has attracted the attention of many scholars and been the object of much speculation. The data on Middle Danish *MÅ* presented in this dissertation show that the change from possibility to necessity was not limited to *MOT* and its West Germanic cognates, suggesting that it may not be as strange or unexpected as it appears. Still, the question remains how the change from possibility to necessity happened and what, if any, the intermediate steps were. I have argued that there is no evidence that the notion of obligation played a role, and instead suggested that the change happened either entirely within the domain of dynamic modality or through an intermediate 'future-predictive' meaning. Future studies could put this hypothesis to the test either by looking at a larger corpus of Late Middle Danish texts or by investigating the development of *MOT* in other West Germanic languages, such as Old Frisian and Middle Low German. In addition, work on languages beyond the Germanic family is necessary to determine whether the change 'may' → 'must' is a peculiarity of these languages, which in addition to being genetically related have of course also been in close contact for several centuries. The brief survey of possible parallels in the literature in Chapter 8 (p. 277) suggests that it need not be a cross-linguistically exceptional change.

Finally, a point which has been made repeatedly throughout the dissertation is the morphological and syntactic variation found especially in the Middle English sources. For instance, the spread of the present indicative plural ending *-eþ* was suggested to have begun in the southwestern part of England. Data from the LAEME and eLALME atlases showed that this was also broadly the same area where the stem vowels of plural *WILL* and *SHALL* had become identical. I doubt that I would have been able to make this observation without these two invaluable resources, which together form a veritable treasure trove for Middle English dialectology. Yet, as acknowledged by the LALME editors, it is less obvious how such a linguistic atlas is to be used to investigate syntactic variation, and in fact it seems to be a recurring motif in English historical linguistics that dialect syntax is either very difficult or badly neglected (or both).¹ Throughout this work I have made observations on apparent dialectal differences between different modal expressions. This type of variation may not be considered to belong to 'core' syntax by all linguists, but it is also not generally covered by the linguistic atlases or noted in the *MED* entries. I suspect that a more systematic investigation of the expression of modality in localizable texts is likely to yield very interesting results. A few possible topics for such an endeavour have

¹ Consider Mustanoja's (1960: 41) suggestion that 'this important aspect of ME dialectology has received less attention than it deserves', Blake's (1992: 14) complaint that '[a]lmost nothing has been done in this respect with regard to syntax', or the assessment by Fischer et al. (2001: 69) that 'the study of regional syntactic variation [...] is still in its infancy'. There has recently been some movement in this field, however, as events like the conference workshop by de Haas & Walkden (2014) attest to.

already been mentioned. In the investigation of *MOT*, I suggested that the older possibility and permission senses survived longer in Northern Middle English, and that Northern dialects apparently preferred impersonal constructions for the expression of necessity, e.g. with the impersonal verbs *BEHOVE* and *BIREN*. This is in line with an observation made in the study of impersonal modals, namely that the only text in the corpus which consistently uses impersonal *OUGHT* is from Yorkshire. Whether this variation is due to the idiosyncracies of a few individual scribes or reflects wider dialectal differences—like so many other questions—will have to remain a topic for future work.

Appendices

APPENDIX A

Old and Middle English corpus

A.1 Old English

Table A.1 lists the Old English texts which were searched for the investigation in Chapters 7 and 8. Only the abbreviated title (known as the ‘short short title’ in the DOEC and *DOE*), the name of each text, and the edition(s) used by the corpus compilers are included. Additional metadata are available in the project repository and in the online bibliography of the *DOE* project. The editions by Krapp and Dobbie (Dobbie 1942, 1953; Krapp 1931, 1932a,b; Krapp & Dobbie 1936) comprise the Anglo-Saxon Poetic Records, which contain most extant Old English verse. The remainder of the corpus consists almost exclusively of prose.

Table A.1: Old English sources

Abbreviation	Text	Edition(s)
Ad	Adrian and Ritheus	Cross & Hill 1982
Aldhelm	Aldhelm	Dobbie 1942
Alex	Alexander’s Letter to Aristotle	Orchard 1995
Alms	Alms-Giving	Krapp & Dobbie 1936
And	Andreas	Krapp 1932b
ApT	Apollonius of Tyre	Goolden 1958
Az	Azarias	Krapp & Dobbie 1936
ÆCHom	Ælfric, Catholic Homilies	Godden 1979; Clemoes 1997
ÆGram	Ælfric, <i>Grammar</i>	Zupitza 1880
ÆHom	Ælfric, Homilies (suppl.)	Pope 1968
ÆLet	Ælfric, letters to Wulfstan	Fehr 1914

OE sources, continued

ÆLS	Ælfric, Lives of Saints	Skeat 1881
ÆTemp	Ælfric, <i>De temporibus anni</i>	Henel 1942
Bede	Bede, <i>Historia ecclesiastica</i>	Miller 1959
BenR	Rule of St Benedict	Schröer 1888
Beo	Beowulf	Dobbie 1953
Bo	Boethius	Sedgefield 1899
Brun	The Battle of Brunanburh	Dobbie 1942
ByrM	Byrhtferth's <i>Enchiridion</i>	Baker & Lapidge 1995
Capt	Capture of the Five Boroughs	Dobbie 1942
CEdg	Coronation of Edgar	Dobbie 1942
Ch	Anglo-Saxon Charters	Harmer 1914; Whitelock 1930; Robertson 1939
ChristA,B,C	Christ I, II, III	Krapp & Dobbie 1936
ChrodR	Rule of Chrodegang	Napier 1916b
ChronC	Anglo-Saxon Chronicle	Rositzke 1940
CP	Gregory, <i>Cura pastoralis</i>	Sweet 1871
DAlf	The Death of Alfred	Dobbie 1942
Dan	Daniel	Krapp 1931
Days	Lucky and Unlucky Days	Förster 1929; Henel 1934
DEdg	The Death of Edgar	Dobbie 1942
DEdw	The Death of Edward	Dobbie 1942
Deor	Deor	Krapp & Dobbie 1936
Deut	Deuteronomy	Crawford 1922
Dream	The Dream of the Rood	Krapp 1932b
El	Elene	Krapp 1932b
Ex	Exodus (verse)	Krapp 1931
Exod	Exodus	Crawford 1922
Fates	The Fates of the Apostles	Krapp 1932b
Finn	The Battle of Finnsburh	Dobbie 1942
Fort	The Fortunes of Men	Krapp & Dobbie 1936
GD	Gregory's Dialogues	Hecht 1900
Gen	Genesis	Crawford 1922
GenA,B	Genesis I, II	Krapp 1931
Gifts	The Gifts of Men	Krapp & Dobbie 1936
GuthA,B	Guthlac	Krapp & Dobbie 1936
Hell	The Descent into Hell	Krapp & Dobbie 1936
HomFr	Homiletic Fragment I, II	Krapp 1932b; Krapp & Dobbie 1936
HomM/S/U	Homilies	Morris 1967; Scragg 1992
Husb	The Husband's Message	Krapp & Dobbie 1936
JDay	The Judgment Day I, II	Dobbie 1942
Jn (WSCp)	Gospel of John	Skeat 1871
Josh	Book of Joshua	Crawford 1922
Jud	Judith	Dobbie 1953
Jul	Juliana	Krapp & Dobbie 1936
KtHy	The Kentish Hymn	Dobbie 1942
KtPs	The Kentish Psalm	Dobbie 1942
LawAf	Laws, Alfred	Liebermann 1903

OE sources, continued

LawICn	Laws, I Cnut	Liebermann 1903
LawIICn	Laws, II Cnut	Liebermann 1903
LawNorthu	Northumbrian Priests' Law	Liebermann 1903
LawVAtr	Laws, V Æthelred	Liebermann 1903
LawVIAtr	Laws, VI Æthelred	Liebermann 1903
Lch I (Herb)	Pseudo-Apuleius, <i>Herbarium</i>	de Vriend 1984
Lch II	Bald's Leechbook	Cockayne 1864
Lev	Leviticus	Crawford 1922
Lk (WSCp)	Gospel of Luke	Skeat 1871
LPr	The Lord's Prayer I, II	Krapp & Dobbie 1936; Dobbie 1942
LS	Lives of Saints	Skeat 1881; Rypins 1924; Magennis 1994; Clayton & Magennis 1994
Mald	The Battle of Maldon	Dobbie 1942
Mart 5	Martyrology	Kotzor 1981
Marv	Marvels of the East	Orchard 1995
Max	Maxims I, II	Krapp & Dobbie 1936; Dobbie 1942
MCharm	Metrical Charms	Dobbie 1942
Med 1.1	<i>Medicina de quadrupedibus</i>	de Vriend 1984
Med 3	<i>Lacnunga</i> ('Remedies')	Grattan & Singer 1952
Men	The Menologium	Dobbie 1942
MEp	Metrical Epilogue	Dobbie 1942
Met	Metres of Boethius	Krapp 1932a
Mk (WSCp)	Gospel of Mark	Skeat 1871
MRune	The Rune Poem	Dobbie 1942
MSol	Solomon and Saturn	Dobbie 1942
Mt (WSCp)	Gospel of Matthew	Skeat 1871
Nic (D)	Gospel of Nichodemus	Hulme 1904
Notes 2	<i>Monasterialia indicia</i>	Kluge 1885
Num	Numbers	Crawford 1922
Or	Orosius	Bately 1980
OrW	The Order of the World	Krapp & Dobbie 1936
Pan	The Panther	Krapp & Dobbie 1936
Part	The Partridge	Krapp & Dobbie 1936
Pha	Pharaoh	Krapp & Dobbie 1936
Phoen	The Phoenix	Krapp & Dobbie 1936
PPs	The Paris Psalter	Krapp 1932a
Prec	Precepts	Krapp & Dobbie 1936
Prog 3.1–10	Prognostics	Förster 1908, 1912, 1916, 1925; Cockayne 1864
Res	Resignation	Krapp & Dobbie 1936
Rewards	The Rewards of Piety	Robinson 1994
Rid	Riddles	Krapp & Dobbie 1936
Rim	The Riming Poem	Krapp & Dobbie 1936
Ruin	The Ruin	Krapp & Dobbie 1936
Sat	Christ and Satan	Krapp 1931
Sea	The Seafarer	Krapp & Dobbie 1936
Seasons	The Seasons for Fasting	Dobbie 1942

OE sources, continued

Soul	Soul and Body I, II	Krapp 1932b; Krapp & Dobbie 1936
Thureth	Thureth	Dobbie 1942
Vain	Vainglory	Krapp & Dobbie 1936
Wald	Waldere	Dobbie 1942
Wan	The Wanderer	Krapp & Dobbie 1936
WCan 1.1.1	Wulfstan, Canons of Edgar	Fowler 1972
Whale	The Whale	Krapp & Dobbie 1936
WHom	Wulfstan, Homilies	Bethurum 1957
Wid	Widsith	Krapp & Dobbie 1936
Wife	The Wife's Lament	Krapp & Dobbie 1936
WPol 2.1.2	Wulfstan, Institutes of Polity	Jost 1959
Wulf	Wulf and Eadwacer	Krapp & Dobbie 1936

A.2 Middle English

A.2.1 PPCME2 texts

Table A.2 lists the Middle English texts which were searched for the investigation of impersonal modals in Chapter 5. The text identifiers are the ones used by the compilers of the PPCME2. The periods are the ones used in the PPCME2 and HC; see Chapter 4 for details. Some of the texts were also included in the custom corpus which I used for the investigation in Chapter 7 and 8 (see Tables A.3 to A.5 below). These are identified in the final column, where I give the 'alias' used in the custom corpus. The approximation symbol (\approx) indicates texts which were included in a different version, i.e. where my custom corpus uses another edition than the PPCME2; for further explanation see Chapter 4.

Table A.2: PPCME2 sources

Abbreviation	Text	Period	Alias
cmaelr3	Rielvaulx, <i>De inst. incl.</i> (Vernon MS)	M3	
cmaelr4	Rielvaulx, <i>De inst. incl.</i> (Bodley MS)	M4	lme.rielvaulx
cmancriw	Ancrene Riwe	M1	eme.ancrene
cmastro	Chaucer, Treatise on the Astrolabe	M3	\approx lme.astske
cmayenb	Ayenbite of Inwyrt	M2	\approx eme.ayenb
cmbenrul	Rule of St Benet (Northern)	M3	nme.benrul
cmboeth	Chaucer, Boethius	M3	
cmbrut3	Prose Brut	M3	lme.brut
cmcapchr	Capgrave's Chronicle	M4	lme.capchr
cmcapser	Capgrave's Sermon	M4	lme.capser
cmcloud	Cloud of Unknowing	M3	lme.cloud
cmctmeli	Tale of Melibee (CT)	M3	
cmctpars	Parson's Tale (CT)	M3	\approx lme.persbla
cmearlps	Psalter (prose)	M2	eme.earlps

PPCME2 sources, continued

cmedmund	Life of St Edmund	M4	lme.edmund
cmedthor	Mirror of St Edmund (Thornton MS)	M4	nme.edthor
cmedvern	Mirror of St Edmund (Vernon MS)	M3	
cmequato	Equatorie of the Planets	M3	
cmfitzja	Fitzjames, <i>Sermo die Lune</i>	M4	lme.fitzja
cmgaytry	Gaytryge, Sermon	M4	≈ nme.gaytry
cmgregor	Gregory's Chronicle	M4	lme.gregor
cmhali	Hali Meidhad	M1	eme.hali
cmhilton	Hilton, Eight Chapters on Perfection	M4	lme.hiltperf
cmhorses	Treatise on Horses	M3	≈ lme.horses
cminnoc	<i>In die innocencium</i>	M4	lme.innoc
cmjulia	St Juliana	M1	eme.juliana
cmjulnor	Julian of Norwich, Revelations	M4	lme.julnor
cmkathe	St Katherine	M1	eme.kathe
cmkempe	Book of Margery Kempe	M4	lme.kempe
cmkenth	Kentish Homilies	M1	eme.kenthom
cmkentse	Kentish Sermons	M2	eme.kentse
cmlamb	Lambeth Homilies	M1	eme.lamb
cmmalory	Malory, <i>Morte Darthur</i>	M4	lme.malory
cmmandev	Mandeville's Travels	M3	lme.mandev
cmarga	St Margaret	M1	eme.marga
cmmir	Mirk's Festial	M4	lme.mirk
cmntest	New Testament (Wycliffite)	M3	lme.ntest
cmorm	Ormulum	M1	≈ eme.ormulum
cmotest	Old Testament (Wycliffite)	M3	lme.otest
cmpeterb	Peterborough Chronicle	M1	≈ eme.peterb
cmpolych	Trevisa, Polychronicon	M3	
cmpurvey	Purvey, Prologue to the Bible	M3	lme.purvey
cmreynar	Caxton, Reynard the Fox	M4	lme.caxreyn
cmreynes	Reynes, Commonplace Book	M4	lme.reynes
cmrollep	Rolle, Epistles	M4	
cmrolltr	Rolle, Prose Treatises	M4	
cmroyal	Sermons (Royal MS)	M4	lme.royserm
cmsawles	Sawles Warde	M1	eme.sawles
cmsiege	Siege of Jerusalem	M4	lme.siege
cmthorn	Thornton medical book	M4	nme.thorn
cmtrinit	Trinity Homilies	M1	eme.trinity
cmvices1	Vices and Virtues	M1	≈ eme.vices
cmvices4	Book of Vices and Virtues	M4	lme.vices
cmwycser	Sermons (Wycliffite)	M3	lme.wycser

A.2.2 Early Middle English

Table A.3 lists the Early Middle English texts which were searched for the investigation in Chapters 7 and 8. The text identifiers are given in the first column. The dates are the approximate manuscript dates according to the *MED* bibliography. The column ‘Corpus’ lists the source corpora of the text files. For further details on the individual texts, see the project repository.

Table A.3: Early Middle English sources

eme.	Text	Date	Corpus	Edition
amiloun	Amis and Amiloun	c.1330		Burnley & Wiggins 2005
ancrene	Ancrene Riwe	c.1230	PPCME2	Ackerman & Dahood 1984; Dobson 1972
ayenb	Ayenbite of Inwit	1340	CMEPV	Morris 1965a
bernard	Sayings of St Bernard	a.1300	CMEPV	Furnivall 1901
bestia	Bestiary	a.1300	CMEPV	Morris 1872
beues	Beues of Hamtoun	c.1330		Burnley & Wiggins 2005
brutcali	Lazamon, Brut (C)	c.1275	CMEPV	Brook & Leslie 1963
brutotho	Lazamon, Brut (O)	c.1300	CMEPV	Brook & Leslie 1963
charter	Charter, Henry II	1155		Hall 1920
declhen	Proclamation, Henry III	1258	HC	Dickins & Wilson 1959
dreambk	Book of Dreaming	c.1325		Förster 1911
earlps	Psalter (prose)	c.1350	PPCME2	Bülbring 1891
foxwo	The Fox and the Wolf	a.1300	HC	McKnight 1913
genexod	Genesis and Exodus	a.1325		Morris 1873b
hali	Hali Meidhad	c.1225	PPCME2	d’Ardenne 1977
hare	Names of a Hare	a.1300		Ross 1933
harlyr	Harley lyrics	c.1325	CMEPV	Brook 1948
harrow	Harrowing of Hell	c.1330		Burnley & Wiggins 2005
havelok	Havelok the Dane	c.1300	CMEPV	Skeat 1868
horn	King Horn	c.1300	HC	Lumby 1965
hornch	Horn Childe	c.1330		Burnley & Wiggins 2005
hymns	Wooing Group hymns	a.1250	CMEPV	Morris 1969
iacob	Iacob and Iosep	a.1300	CMEPV	Napier 1916a
interl	Interlude (Clerk & Girl)	a.1325	HC	McKnight 1913
juliana	St Juliana	c.1225	PPCME2	d’Ardenne 1977
kathe	St Katherine	c.1225	PPCME2	d’Ardenne 1977
kenthom	Kentish Homilies	a.1150	PPCME2	Warner 1917
kentse	Kentish Sermons	c.1275	PPCME2	Hall 1963
lamb	Lambeth Homilies	a.1225	PPCME2	Morris 1969
luueron	Luue Ron	a.1300	CMEPV	Morris 1872
lyricseg	Egerton lyrics	c.1250	CMEPV	Morris 1872
marga	St Margaret	c.1225	PPCME2	d’Ardenne 1977
orfeo	Sir Orfeo	c.1330		Burnley & Wiggins 2005
orislady	Cristes milde moder	a.1250	CMEPV	Morris 1969
orislord	Orison of Our Lord	a.1250	CMEPV	Morris 1969
ormulum	Ormulum	c.1200	CMEPV	Holt 1878

EME sources, continued

owlcali	Owl & Nightingale	c.1275	CMEPV	Atkins 1922
pains	Pains of Hell	a.1300	CMEPV	Morris 1872
passion	Passion of Our Lord	a.1300	CMEPV	Morris 1872
patern	Rhymed Pater Noster	a.1225	CMEPV	Morris 1969
peterb	Peterborough Chron.	c.1150	ICMEP	Clark 1958
pmor	Poema Morale	a.1225	CMEPV	Morris 1969
poemh	Harley 2253 poems	c.1325	HC	Robbins 1959
prophecy	Erceldoune, prophecy	c.1325		Murray 1875
recipes	Recipes for paint etc.	c.1325		Wright 1844
robglo	Robert of Gloucester	c.1325	CMEPV	Wright 1887
rood	Legend of the Rood	c.1175	ICMEP	Napier 1894
sawles	Sawles Warde	c.1225	PPCME2	d'Ardenne 1977
saybede	Sayings of St Bede	a.1300	CMEPV	Morris 1872
seleg	South Eng. Legendary	c.1300	CMEPV	Horstmann 1887
shires	Shires and Hundreds	a.1300	CMEPV	Morris 1872
shoreh	Shoreham, poems	c.1350	CMEPV	Konrath 1902
sirith	Dame Sirith	a.1300	HC	McKnight 1913
smchron	Metrical Chronicle	c.1330		Burnley & Wiggins 2005
specguy	Sp. Guy de Warwick	c.1330		Burnley & Wiggins 2005
thrush	Thrush & Nightingale	a.1300	HC	Brown 1932
trinity	Trinity Homilies	a.1225	PPCME2	Morris 1873a
tristrem	Sir Tristrem	c.1330		Burnley & Wiggins 2005
vices	Vices and Virtues	a.1225	ICMEP	Holthausen 1888
wohunge	Wooing of Our Lord	a.1250	ICMEP	Morris 1969

A.2.3 Late Middle English

Table A.4 lists the majority of the Late Middle English sources which were searched for Chapters 7 and 8. The texts of Northern provenance are listed separately in Table A.5. The text identifiers are given in the columns 'lme.' and 'nme.', respectively. The dates are the approximate manuscript dates according to the *MED* bibliography. The column 'Corpus' lists the source corpora of the text files. The abbreviation 'CT' between brackets indicates texts from Chaucer's *Canterbury Tales* (both the prologues and tales were included). For further details on the individual texts, see the project repository.

Table A.4: Late Middle English sources (non-Northern)

lme.	Text	Date	Corpus	Edition
agnus	Agnus Castus	?a.1450	ICMEP	Brodin 1950
arthunt	Art of Hunting	c.1450	ICMEP	Danielsson 1977
ashmcook	Ashmole recipes	?a.1450	ICMEP	Austin 1888
ashmlapi	Ashmole lapidary	a.1500	ICMEP	Evans & Serjeantson 1933
astske	Chaucer, Astrolabe	c.1400	ICMEP	Skeat 1899
awntyrs	Awntyrs of Arthur	a.1500	CMEPV	Amours 1892

LME sources (non-Northern), continued

bekynton	Bekynton Letters	1442–47	ICEL	Williams 1872
bookque	Book of Quintessence	a.1475	ICMEP	Furnivall 1889
brut	Prose Brut	c.1400	PPCME2	Brie 1906
capchr	Capgrave, Chronicle	a.1464	PPCME2	Lucas 1983
capser	Capgrave, Sermon	c.1452	PPCME2	Munro 1910
caxpro	Caxton, prologues etc.	1477–84	HC	Crotch 1928
caxreyn	Reynard the Fox	1481	PPCME2	Blake 1970
cely	Cely Letters	1476–87	ICEL	Hanham 1975
chauli	Chauliac, Cyrurgie	?c.1425	HC	Ogden 1971
cloud	Cloud of Unknowing	a.1425	PPCME2	Hodgson 1944
dccook	Douce 55 recipes	c.1450	ICMEP	Austin 1888
deathjas	Death of King James	a.1475	CMEPV	<i>Miscellanea Scotica</i>
deposit	Depositions	1428–37	HC	Fisher et al. 1984
dicts	Dicts & Sayings	a.1475	ICMEP	Bühler 1941
digby	Digby Plays	?c.1500	HC	Baker et al. 1982
edmund	Life of St Edmund	c.1450	PPCME2	Blake 1972
fistula	Arderne, <i>Fistula in ano</i>	c.1425	ICMEP	Power 1910
fitzja	Fitzjames, sermon	?1495	PPCME2	Jenkinson 1907
gamelyn	Gamelyn	c.1415	CMEPV	Furnivall 1868
gawain	Gawain (Pearl MS)	c.1400	CMEPV	Tolkien & Gordon 1967
generydes	Generydes	a.1500	CMEPV	Wright 1873
genprol	General Prologue (CT)	c.1405	CMEPV	Furnivall 1868
george	Life of St George	c.1450	ICMEP	Hamer 1978
gestarom	Gesta Romanorum	a.1500	ICMEP	Herrtage 1879
gregor	Gregory, Chronicle	c.1475	PPCME2	Gairdner 1876
hiltperf	Chapters on Perfection	a.1450	PPCME2	Kuriyagawa 1967
horses	Treatise on horses	a.1450	ICMEP	Svinhufvud 1978
hrlcook1	Harley 279 cookbook	a.1450	ICMEP	Austin 1888
hrlcook2	Harley 4016 cookbook	c.1450	ICMEP	Austin 1888
indent	Royal indenture	1441	HC	Fisher et al. 1984
innoce	<i>In die innocencium</i>	1497	PPCME2	Nichols 1875
julnor	Julian of Norwich	c.1450	PPCME2	Beer 1978
kempe	Margery Kempe	c.1438	PPCME2	Meech & Allen 1940
kingscam	Three Kings of Cologne	c.1450	ICMEP	Horstmann 1886
ldcook	Laud Misc. 553 recipes	a.1500	ICMEP	Austin 1888
lincdoc	Lincoln documents	1450–64	ICMEP	Clark 1914
londlapi	Lapidary (London)	a.1450	ICMEP	Evans & Serjeantson 1933
londlet	Letters (London)	1417–19	ICEL	Chambers & Daunt 1931
ludus	Ludus Coventriae	?a.1475	HC	Block 1922
lydgods	Assembly of Gods	c.1500	CMEPV	Triggs 1896
lydreas	Reason & Sensuality	c.1450	CMEPV	Sieper 1901
malory	Malory, Morte Darthur	a.1470	PPCME2	Vinaver 1954
mandev	Mandeville's Travels	?a.1425	PPCME2	Hamelius 1919
mankind	Mankind (Macro Plays)	c.1475	HC	Eccles 1969
merch	Merchant's Tale (CT)	c.1405	CMEPV	Furnivall 1868
merlin	Prose Merlin	a.1500	CMEPV	Wheatley 1865
metmoon	Days of the Moon	c.1450	ICMEP	Craig 1916

LME sources (non-Northern), continued

metpaz	Metham, Palmistry	a.1500	ICMEP	Craig 1916
metphys	Metham, Physiognomy	c.1450	ICMEP	Craig 1916
millar	Miller's Tale (CT)	c.1405	CMEPV	Furnivall 1868
mirk	Mirk, Festial	a.1500	PPCME2	Erbe 1905
mirror	<i>Speculum vitae</i>	c.1425	ICMEP	Nelson 1981
nichol	St Nicholas	c.1450	ICMEP	Hamer 1978
nmlapi	Lapidary (NMidland)	a.1500	ICMEP	Evans & Serjeantson 1933
nstest	NT (Wycliffite)	a.1425	PPCME2	Forshall & Madden 1879
nunpriest	Nun's Priest's Tale (CT)	c.1405	CMEPV	Furnivall 1868
octavian	Octavian	a.1500	CMEPV	McSparran 1986
order	3rd Order of St Francis	a.1500	ICMEP	Chambers & Seton 1914
oseney	Oseney Abbey register	c.1460	ICMEP	Clark 1907
otest	OT (Wycliffite)	a.1425	PPCME2	Forshall & Madden 1850
paston	Paston Letters	1426–65	ICEL	Davis 1971
pater	Paternoster (Ermyte)	a.1450	ICMEP	Aarts 1967
patience	Patience (Pearl MS)	c.1400		Morris 1965b
pearl	Pearl	c.1400	CMEPV	Gordon 1953
persbla	Parson's Tale (CT)	c.1405	ICMEP	Blake 1980
petelapi	Peterborough Lapidary	a.1500	ICMEP	Evans & Serjeantson 1933
petitions	Petitions (London)	1424–50	HC	Fisher et al. 1984
phlebo	Latin Phlebotomy	?c.1425	HC	Voigts & McVaugh 1984
purity	Purity (Pearl MS)	c.1400	CMEPV	Menner 1920
purvey	Purvey, prologue	a.1450	PPCME2	Forshall & Madden 1850
reeve	Reeve's Tale (CT)	c.1405	CMEPV	Furnivall 1868
reynes	Commonplace book	1470–99	PPCME2	Louis 1980
rielvaux	Rielvaux (Bodley MS)	a.1450	PPCME2	Ayto & Barratt 1984
royserm	Sermons (Royal MS)	c.1450	PPCME2	Ross 1940
rule	Isabelline Rule	a.1500	ICMEP	Chambers & Seton 1914
secrete	Secreta Secretorum	c.1450	ICMEP	Steele 1898
sermworc	Sermon on the Passion	a.1450	ICMEP	Grisdale 1939
shilldoc	Shillingford documents	a.1450	HC	Moore 1871
shillet	Shillingford Letters	1447	ICEL	Moore 1871
siege	Siege of Jerusalem	c.1500	PPCME2	Kurvinen 1969
specchri	<i>Speculum Christiani</i>	c.1450	ICMEP	Holmstedt 1933
statutes	Statutes II	1488–91	HC	<i>The Statutes of the Realm</i>
stbarth	St Bartholomew	c.1450	ICMEP	Hamer 1978
stonor	Stonor Letters	1429–82	ICEL	Kingsford 1919, 1924
summ	Summoner's Tale (CT)	c.1405	CMEPV	Furnivall 1868
treatise	Seven Deadly Sins	c.1450	ICMEP	Zutphen 1956
trevdia	Trevisa, Dialogue	a.1402	ICMEP	Perry 1925
vices	Vices and Virtues	c.1450	PPCME2	Francis 1942
warwick	Guy of Warwick	a.1500	CMEPV	Zupitza 1875
wheat	Life of Adam and Eve	a.1425	ICMEP	Day 1921
wifebath	Wife of Bath (CT)	c.1405	CMEPV	Furnivall 1868
wycser	Wycliffite Sermons	?a.1425	PPCME2	Hudson 1983

Table A.5: Late Middle English sources (Northern)

nme.	Text	Date	Corpus	Edition
abbey	Abbey of the Holy Ghost	c.1440	ICMEP	Perry 1914
alpha	Alphabet of Tales	c.1450	ICMEP	Banks 1904
benmetr	Rule of St Benet, verse	a.1450	CMEPV	Kock 1902
benrul	Rule of St Benet, prose	a.1425	PPCME2	Kock 1902
coldingh	Coldingham Letters	1441–72	ICEL	Raine 1841
edthor	Mirror of St Edmund	c.1440	PPCME2	Perry 1969
gaytry	Gaytryge, sermon	c.1440	ICMEP	Perry 1969
hiltang	Hilton, Angels' Song	c.1400	ICMEP	Takamiya 1980
lifealex	Life of Alexander	c.1440	ICMEP	Westlake 1913
middlet	Middleton, petition	1424–26	HC	Fisher et al. 1984
norhom	Northern Homilies	var.	HC	Nevanlinna 1972
thorn	Thornton medical book	c.1440	PPCME2	Ogden 1969
towneley	Towneley Cycle	a.1500	CMEPV	England & Pollard 1897
trevmead	Pseudo-Methodius	a.1450	ICMEP	Perry 1925

APPENDIX B

Manuscripts cited

This appendix lists those manuscripts which are quoted directly or discussed at some length in the dissertation. ‘Ker no.’ refers to the item number of manuscripts included in the *Catalogue of manuscripts containing Anglo-Saxon* (Ker 1957). The hyperlinks (last accessed on 28 June 2020) are to the catalogue of the British Library or the online facsimiles which were consulted.

Cambridge University Library

MS Ii. 1. 33. [Ker no. 18]. <https://cudl.lib.cam.ac.uk/view/MS-II-00001-00033/1>

London, British Library

Additional MS 27944. http://searcharchives.bl.uk/IAMS_VU2:IAMS032-002019228

Cotton MS Caligula A. ix. http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Cotton_MS_Caligula_A_IX

Cotton MS Otho C. i/2. [Ker no. 182]. http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Cotton_MS_Otho_C_I/2

Cotton MS Nero A. x/2 (‘Pearl Manuscript’). http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Cotton_MS_Nero_A_X/2

Cotton MS Tiberius A. iii. [Ker no. 186]. http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Cotton_MS_Tiberius_A_III

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Royal MS 12 D. xvii. [Ker no. 264]. http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Royal_MS_12_D_XVII

Oxford, Bodleian Library

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BNC = Mark Davies (comp.). 2004–. *British National Corpus*. Originally published by Oxford University Press. <https://www.english-corpora.org/bnc/>.

CHN = *Corpus Hedendaags Nederlands*. 2013. Published by the Instituut voor de Nederlandse Taal. <http://chn.inl.nl>.

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CorpusSearch = Beth Randall. 2005–2007. *CorpusSearch 2: A tool for linguistic research*. Philadelphia. <http://corpussearch.sourceforge.net>.

DBNL = *Digitale Bibliotheek voor de Nederlandse Letteren*. 1999–. <https://www.dbnl.org>.

DOEC = Antonette di Paolo Healey (comp.). 2005. *Dictionary of Old English Corpus in Electronic Form*. Distributed by the Oxford Text Archive. <http://ota.ox.ac.uk/desc/2488>.

EEBO = *Early English Books Online*. 2011–. <https://quod.lib.umich.edu/e/eebogroup/>.

EEBOCorp = Peter Petré (comp.). 2013. *Early English Books Online Corpus*. Version 1.0. Leuven.

HC = *Helsinki Corpus of English Texts*. 1991. Distributed by the Oxford Text Archive. <http://ota.ox.ac.uk/desc/1477>.

HCOS = Anneli Meurman-Solin (comp.). 1995. *Helsinki Corpus of Older Scots*. Distributed by the Oxford Text Archive. <http://ota.ox.ac.uk/desc/2081>.

- ICEL = Manfred Markus (comp.). 2009. *Innsbruck Corpus of English Letters*. Version 2.1. Part of the Innsbruck Computer Archive of Machine-Readable English Texts.
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Summaries

English summary

Early English modals

Form, function, and analogy

This dissertation investigates the early history of the English modals, in particular their morphosyntactic and semantic development in the Old English (c. AD 800–1100) and Middle English (c. AD 1100–1500) periods. The English modals have played an important role in both synchronic and diachronic linguistic work in the last decades, but a number of contested issues concerning their development remain unresolved. This dissertation attempts to answer some of the open questions through careful analysis of the extant Old and Middle English sources and comparison with other Germanic languages, such as Old Norse, Middle Danish, and Middle Dutch.

The dissertation consists of nine chapters in two parts. Part I (Chapters 1–4) provides a theoretical and methodological introduction to the study of the early English modals, the semantics of modality, and the historical corpora and other textual sources used for the investigation. Part II presents the investigation itself. This consists of four interconnected studies of the development of the modals in early English (Chapters 5–8) along with a conclusion with a summary of the main findings and suggestions for future work (Chapter 9).

Chapter 1, ‘Preliminaries’, introduces the topic of the English modals and illustrates some of the major differences between these items in Present-Day English and their Old English ancestors. The periodization of the history of English, various symbols and glossing conventions used in the dissertation, and a number of terminological distinctions are also introduced.

In Chapter 2, ‘Grammaticalization and the English modals’, I provide an overview of relevant literature, first on the development of the English modals, then on the notion of grammaticalization and some of the problems with it. I identify and discuss three main strands or perspectives in the literature on early English modals: the ‘descriptive–lexicographical’, the ‘formal–syntactic’, and the ‘grammaticaliza-

tion' perspective. The first of these views the modals primarily as members of the lexicon, whose various uses are to be described as exhaustively as possible. Under the second perspective, the modals are treated mainly as a syntactic phenomenon, and the main task of the linguist is to account for their category status and syntactic behaviour. The third perspective is more explicitly diachronically oriented than the other two and views the modals as items in flux, which gradually become increasingly 'grammaticalized' or 'auxiliarized' throughout their history. Because of the great influence of the grammaticalization perspective—both on work on the English modals and on historical linguistic research more generally—the second part of the chapter surveys the theoretical and cross-linguistic literature on grammaticalization and modality in greater detail. I pay particular attention to the ways the modals in English and other Germanic languages have been used to argue both for and against universal 'pathways' of grammaticalization.

Chapter 3, 'The semantics of modality', surveys some of the most influential works on linguistic modality, beginning with the various attempts at delineating the notional field of modality, and continuing with some of the most important works on the analysis and classification of modal meanings from the last decades. A number of different approaches to modality are discussed, such as the traditional 'possibility-and-necessity' view and definitions in terms of speaker attitude and factuality, i.e. the reality status of propositions. It is concluded that while the factuality approach may be the most promising one, the precise delineation of modality is of lesser importance in a historical semasiological study such as the present dissertation. This kind of study is concerned with all recorded meanings of the item or items under investigation, and hence whether the individual meaning categories are truly 'modal' or not is only of secondary importance. Accordingly, a number of meaning categories are distinguished in my investigation which not all linguists would consider to belong to the domain of modality. An overview of these categories is given at the end of the chapter.

In Chapter 4, 'Material and methods', I introduce the material from Old English, Middle English, and the other Germanic languages which were investigated, along with the methods used to search these sources and excerpt examples for analysis. The material was gathered from a number of existing corpora and text repositories—such as the DOEC, PPCME2, CMEPV, and ICMEP corpora—and searched with the programs CorpusSearch and AntConc. A number of issues relating to the selection and comparability of the corpus data are also discussed.

Chapter 5, 'Morphosyntactic changes in Middle English', investigates three formal changes to the modals in the Middle English period which are not readily explicable in grammaticalization terms. The changes in question are:

1. The apparent development of new non-finite forms of some modals which are only found in finite forms in the Old English record, such as participles of *MAY* and *WILL*.
2. The development of regularized ('weak') present plural indicative endings in some modals in Early Middle English, e.g. *shulleþ* and *conneþ* for expected *shullen* and *connen*.

3. The emergence of ‘impersonal’ modals with an oblique experiencer argument rather than a canonical nominative subject, such as *us must* and *him ought*.

The first of these is argued to be, as it were, a pseudo-change. I suggest that there is no compelling evidence that any of the modals developed new non-finite forms in Middle English which had been unavailable in Old English. The fact that some forms are unattested in the earlier period is argued to reflect the smaller size of the corpus and the fact that Old English had fewer periphrastic verb constructions, meaning that there are fewer contexts of attestation of non-finite forms. The second and third changes, by contrast, are argued to be real innovations in the language. I survey the development of regularized morphology with the help of the linguistic atlases LAEME and eLALME and the development of ‘impersonal’ modals with the parsed corpus PPCME2. A case is made for analogy as the main factor bringing about these changes. In the case of the regularized present plural indicative endings, the analogical model was the anomalous verb *WILL*; in the case of the impersonal modals, the model was a class of impersonal necessity expressions which continued to recruit new members throughout the Middle English period.

Chapter 6 is titled ‘Reconsidering the history of *DARE*’. This chapter focusses on a single verb, the ‘marginal’ modal *DARE*, and its development in Middle and Early Modern English. Four aspects of its history are discussed: its meaning in the Old English record, the ‘confusion’ between *DARE* and the verb *THARF* ‘need’ in Middle English, the emergence of *to*-infinitives after *DARE*, and the emergence in Early Modern English of the transitive use exemplified in (1):

- (1) Present-Day English

To see Edward again, she would have dared the Devil himself!

(British National Corpus, 1990 W_fict_prose)

I argue that the history of *DARE* is not an instance of ‘degrammaticalization’—as has been repeatedly claimed in the literature—but that it cannot be characterized as a case of grammaticalization in any meaningful way either. I suggest that its history, despite a number of morphosyntactic changes, is essentially one of stability, and that from a functional perspective, the characteristics of *DARE* in Old and Present-Day English are in fact remarkably similar. The observed formal changes are most easily accounted for as instances of analogy. A new etymology is proposed for the transitive use of *DARE* exemplified in (1), which I suggest is a ‘multiple-source’ construction deriving partly from another verb, *DARE* ‘daunt, frighten’.

Chapters 7 and 8 focus on the semantic development of the ‘core’ modals *CAN*, *MAY*, and *MOT* (*MUST*) from Old to Late Middle English. Chapter 7 investigates ‘The development of *CAN* and *MAY*’, with particular attention to the semantic changes happening in the Middle English period. These are shown to develop along similar lines, in a way comparable to what has been observed in the literature on their German and Dutch cognates. I also discuss a number of more specific issues, such as a possible

habitual use of CAN in Old English, the loss of primary-verb senses of CAN ('know') and MAY ('prevail'), the development of epistemic uses of MAY, and the attestation of an 'autonomous' modal use of MAY in Old English, as in (2):

(2) Old English (10th c.)

Eaðe mæg þæt me Drihten þurh his geearnung milts-igan
 easily MAY COMP me.DAT Lord through his merit have.mercy-INF
wille.
 WILL:SBJV
 'It may easily [be] that the Lord is going to have mercy on me for his merits.'
 (Bede, *Historia ecclesiastica* [MS Tanner 10], III. xi)

I compare this to similar patterns in Present-Day Dutch and Old Norse and suggest that the traditional conception of 'modal' as a type of auxiliary verb may be somewhat too restrictive.

Chapter 8, 'The development of MOT', investigates the history of the ancestor of Present-Day English MUST. Because of the many unresolved issues and earlier works devoted to MOT, I begin with a relatively detailed overview of the existing literature on the meaning of MOT in Old and Middle English. My own analysis is then presented. First the attested meanings in the Old English material are discussed and compared to the earlier descriptions in the scholarly literature, after which I trace the semantic development of MOT in the Middle English material. I argue that the development from possibility to necessity meaning ('may' → 'must') was not a reinterpretation from permission to obligation, but happened in expressions of participant-imposed dynamic ('circumstantial') necessity such as (3):

(3) Early Middle English (c.1325)

A wind þer com þo in þe se · & drof hom to scotlonde ·
So þat after betere wind · hii moste þere at stonde ·
 'A wind then rose on the sea and carried them off to Scotland, so that they had to remain there and wait for better wind.' (Chronicle of Robert of Gloucester [Cotton MS Caligula A. xi], ll. 7562–7563)

I then suggest that a very close parallel can be observed several centuries later in the Late Middle Danish modal MÅ, the cognate of English MAY. A small selection of Late Middle Danish texts from the early sixteenth century is used to investigate the possible contexts of the change.

Finally, Chapter 9 summarizes the findings of the dissertation and points out a number of questions that it has brought up. I suggest three possible avenues for future research relating to the contingency of language change, the historical relation between different modal meanings, and syntactic variation in Middle English.

Nederlandse samenvatting

Modale werkwoorden in het middeleeuws Engels

Vorm, functie en analogie

In dit proefschrift wordt de ontwikkeling van de modale werkwoorden in het Oudengels (ong. 800–1100 n.Chr.) en het Middelen-gels (ong. 1100–1500 n.Chr.) onderzocht. De Engelse modale werkwoorden hebben in de laatste decennia een belangrijke rol gespeeld in zowel de historische als de synchrone taalkunde, maar een aantal kwes-ties rondom hun ontwikkeling is nog altijd niet bevredigend verklaard. Dit proef-schrift probeert een aantal van de open vragen te beantwoorden met behulp van een diepgaande analyse van het Oud- en Middelen-gelse bronmateriaal en vergelijkingen met ontwikkelingen in andere Germaanse talen, waaronder het Oudnoors, het Mid-deldeens en het Middelnederlands.

Het proefschrift bestaat uit negen hoofdstukken in twee delen. Deel I (hoofdstuk 1–4) geeft een theoretische en methodologische inleiding tot de studie van de Engelse modale werkwoorden, de semantiek van modaliteit en de historische corpora en an-dere bronnen die voor het onderzoek werden gebruikt. Deel II presenteert de be-vindingen van het onderzoek. Dit deel bestaat uit vier onderling verbonden studies van ontwikkelingen in het Oud- en Middelen-gels (hoofdstuk 5–8) samen met een af-rondend hoofdstuk met een samenvatting van de belangrijkste bevindingen en een aantal voorstellen voor verder onderzoek (hoofdstuk 9).

Hoofdstuk 1, ‘Inleiding’, presenteert het onderwerp van het proefschrift en illu-streert de belangrijkste verschillen tussen de modale werkwoorden in het huidige Engels en hun Oudengelse voorlopers. Het hoofdstuk geeft ook een toelichting bij de periodisering van de geschiedenis van het Engels en een aantal afkortingen en symbolen die in het proefschrift worden gebruikt.

In hoofdstuk 2, ‘Grammaticalisatie en de Engelse modale werkwoorden’, geef ik een overzicht van relevante literatuur met betrekking tot de geschiedenis van de En-gelse modale werkwoorden en het begrip ‘grammaticalisatie’ en sommige van de

problemen die hiermee verbonden zijn. Ik maak een onderscheid tussen drie stromingen of perspectieven in de literatuur over de Engelse modale werkwoorden: het ‘descriptief-lexicografisch’ perspectief, het ‘formeel-syntactisch’ perspectief en het ‘grammaticalisatieperspectief’. Vanuit het eerste van deze drie perspectieven worden de modale werkwoorden in de eerste plaats beschouwd als lexicale ingangen – d.w.z. als zelfstandige onderdelen van de woordenschat – en de belangrijkste taak van de taalkundige is hun verschillende betekenissen en gebruiken zo grondig mogelijk te beschrijven; taalverandering speelt hier slechts een beperkte ofwel geen rol. Vanuit het tweede perspectief worden de modale werkwoorden eerder als een syntactisch fenomeen beschouwd, en de voornaamste linguïstische taak is het geven van een adequate analyse van hun syntactisch gedrag en woordklasselidmaatschap. Het derde perspectief is voornamelijk diachroon georiënteerd en beschouwt de modale werkwoorden als een woordklasse in voortdurende beweging, die geleidelijk meer ‘gegrammaticaliseerd’ ofwel ‘hulpwerkwoordelijk’ zijn geworden gedurende hun geschiedenis. Omdat dit perspectief in de laatste decennia van grote invloed is geweest – zowel in de Engelse historische taalkunde als in de linguïstiek in het algemeen – is het tweede deel van het hoofdstuk gewijd aan de grammaticalisatie-literatuur en de behandeling van modale hulpwerkwoorden binnen deze traditie. Ik besteed in het bijzonder aandacht aan discussies rondom universele grammaticalisatie‘paden’ en de manier waarop de modale werkwoorden in het Engels en andere Germaanse talen zijn gebruikt om te argumenteren voor of tegen dit soort cross-linguïstische generalisaties.

Hoofdstuk 3, ‘De semantiek van modaliteit’, geeft een inleiding tot de studie van modale betekenissen en een beknopt overzicht van de relevante literatuur. Ik begin bij de verschillende pogingen tot een afbakening van het betekenisveld ‘modaliteit’ en ga dan verder met een bespreking van een aantal typologieën van modale betekenissen. De benaderingen die ter sprake komen omvatten de traditionele opvatting van modaliteit als uitdrukkingen van mogelijkheid en noodzakelijkheid en alternatieve definities in termen van subjectiviteit en factualiteit, d.w.z. de status van de stand van zaken als werkelijk of verondersteld. Ik concludeer dat – alhoewel de factuali-teitsbenadering mijns inziens de veelbelovendste is – de preciese afbakening van het betekenisveld van minder belang is in een historisch-semasiologische studie zoals dit proefschrift. In een studie als deze wordt gekeken naar alle geattesteerde betekenissen van de onderzochte vormen, en het is dus in eerste instantie niet cruciaal of een bepaalde betekenis categorie ‘modaal’ is of niet. Bijgevolg wordt in het proefschrift ook een aantal semantische categorieën onderscheiden die voor veel taalkundigen niet als prototypisch modaal gelden. Een overzicht van deze betekenis categorieën wordt gegeven aan het einde van het hoofdstuk.

In hoofdstuk 4, ‘Materiaal en methoden’, geef ik een inleiding tot de bronnen uit het Oudengels, Middelen-gels en andere Germaanse talen die ik voor het onderzoek heb gebruikt. De zoekmethodes worden ook toegelicht. Het Oud- en Middelen-gelse materiaal werd verzameld uit meerdere beschikbare corpora en digitale tekstcollec-ties, zoals het *Dictionary of Old English Corpus in Electronic Form* (DOEC), het *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2), het *Corpus of Middle English Prose and Verse* (CMEPV), en het *Innsbruck Corpus of Middle English Prose* (ICMEP). De

voorbeelden voor analyse werden geëxcerpeerd met de computerprogramma's CorpusSearch en AntConc. Aan het einde van het hoofdstuk bespreek ik kort drie methodologische vragen m.b.t. de representativiteit en vergelijkbaarheid van het bronmateriaal.

Hoofdstuk 5, 'Morfosyntactische veranderingen in het Middelen-gels', onderzoekt drie formele innovaties in de Middelen-gelse periode die niet direct verklaarbaar zijn in termen van grammaticalisatie. De veranderingen in kwestie zijn:

1. De ontwikkeling van nieuwe infinitieve vormen van een aantal modale werkwoorden die alleen finiet overgeleverd zijn in de Ouden-gelse periode, zoals voltooid deelwoorden van *MAY* en *WILL*.
2. De ontwikkeling van regelmatige ('zwakke') meervoudsvormen van een aantal modale werkwoorden in het Vroegmiddelen-gels, zoals *shulleþ* '(wij/jullie/zij) zullen' en *conneþ* '(wij/jullie/zij) kunnen' i.p.v. de verwachte vormen *shullen* en *connen*.
3. Het verschijnsel 'onpersoonlijke' modale werkwoorden (Eng. *impersonal modals*), waar het werkwoord een argument in de derde naamval neemt in plaats van een gewoon onderwerp in de eerste naamval. In het Middelen-gels zijn voorbeelden geattesteerd zoals *us must* 'wij moeten' (letterlijk 'ons moet') en *him ought* 'hij zou' (letterlijk 'hem zou').

De eerste van deze veranderingen wordt geïnterpreteerd als een pseudo-ontwikkeling. Ik betoog dat er geen overtuigend bewijs is dat sommige van de modale werkwoorden nieuwe infinitieve vormen ontwikkelden in het Middelen-gels die niet grammaticaal waren in het Ouden-gels. Dat sommige vormen niet geattesteerd zijn in de oudere periode kan worden verklaard als een gevolg van het beperktere nog bestaande materiaal samen met het feit dat het Ouden-gels in mindere mate gebruik maakte van samengestelde tijdsvormen. Dit laatste betekent dat er minder relevante contexten zijn waar infinitieve vormen overgeleverd zouden kunnen worden. De tweede en derde verandering beschouw ik echter wel als ware innovaties in de taal. De ontwikkeling en geografische verspreiding van regelmatige meervoudsvormen worden onderzocht met behulp van de LAEME en eLALME, twee dialectatlassen van het Middelen-gels. De onpersoonlijke modale werkwoorden worden onderzocht met het syntactisch geannoteerde corpus PPCME2. Ik beargumenteer dat analogie de cruciale factor is die deze veranderingen heeft veroorzaakt. In het geval van de regelmatige meervoudsvormen was de analogische basis het werkwoord *WILL*; bij de onpersoonlijke werkwoorden was het een reeds bestaande groep onpersoonlijke uitdrukkingen van noodzakelijkheid die zich in de Middelen-gelse periode steeds verder uitbreidde.

Hoofdstuk 6, 'De geschiedenis van *DARE* opnieuw bekeken', concentreert zich op één werkwoord, *DARE* '(aan)durven, uitdagen', en zijn ontwikkeling tussen de Ouden-gelse periode en de vroegmoderne tijd. Vier aspecten van de geschiedenis van *DARE* komen aan bod: de betekenissen ervan in de Ouden-gelse bronnen, de verwarring van *DARE* en het werkwoord *THARF* 'hoeven' in het Middelen-gels, het gebruik van de *to*-infinitief na *DARE*, en de verschijning van een transitief patroon met de betekenis 'uitdagen, tarten' in het Vroegmodern Engels, zoals in (1):

(1) Huidig Engels

To see Edward again, she would have dared the Devil himself!

‘Om Edward weer te zien zou ze de duivel zelf hebben uitgedaagd!’ (British National Corpus, 1990 W_fict_prose)

Ik pleit in het hoofdstuk tegen een analyse van DARE als een geval van ‘degrammaticalisatie’ – zoals herhaaldelijk gesuggereerd in de literatuur – maar betwijfel ook of het zinvol is dit werkwoord te karakteriseren als een voorbeeld van grammaticalisatie. Ik wijs erop dat de geschiedenis van DARE ondanks een aantal formele veranderingen in feite overwegend stabiel is, en dat vanuit een functioneel perspectief de kenmerken van DARE in het Oudengels en de huidige taal min of meer dezelfde zijn. De veranderingen die het werkwoord wél heeft doorlopen, kunnen het best worden verklaard als analogisch gemotiveerd. Ik suggereer ook een nieuwe etymologie voor het transitieve gebruik van DARE in (1), dat mogelijk teruggaat op een ander werkwoord DARE met de betekenis ‘vrees aanjagen’.

Hoofdstuk 7 en 8 behandelen de ontwikkeling van de drie ‘centrale’ modale werkwoorden CAN, MAY en MOT (MUST) van het Oudengels tot het Laatmiddelenengels. Hoofdstuk 7 gaat over ‘De ontwikkeling van CAN en MAY’ en schenkt in het bijzonder aandacht aan de semantische ontwikkelingen in de Middelenengelse periode. De twee werkwoorden volgen een vergelijkbaar traject van ‘interne’ naar ‘externe’ vormen van mogelijkheid, wat overeenkomt met de ontwikkeling van hun cognaten in het Duits en Nederlands. Ik bespreek ook een aantal meer specifieke vragen, zoals een mogelijke habitualisatiebetekenis (‘plegen’) van CAN in het Oudengels, het verdwijnen van hoofdwerkwoordelijke gebruiken van CAN (‘kennen’) en MAY (‘gedijen, baten’), het ontstaan van de epistemische betekenis van MAY, en het gebruik van MAY als een ‘autonoom’ modaal werkwoord in het Oudengels, zoals geïllustreerd in (2):

(2) Oudengels (10e eeuw)

Eaðe mæg þæt me Drihten þurh his geearnung miltsigan wille.
 makkelijk kan dat mij.DAT Heer door zijn verdienste ontfermen wil:SBJV
 ‘Het zou makkelijk/misschien kunnen dat de Heer zich over mij wil
 ontfermen wegens zijn verdiensten.’ (Bede, *Historia ecclesiastica* [MS Tanner 10], III. xi)

Ik vergelijk dit ‘autonome’ gebruik met gelijksoortige patronen in het huidige Nederlands en het Oudnoors, die suggereren dat de traditionele opvatting van modale werkwoorden als inherent hulpwerkwoordelijk wellicht te beperkt is.

Hoofdstuk 8, ‘De ontwikkeling van MOT’, richt zich op een ander werkwoord, de voorloper van het huidige Engelse MUST. Omdat er een groot aantal omstreden kwesties betreffende de geschiedenis van dit werkwoord is, begin ik het hoofdstuk met een redelijk gedetailleerd overzicht van de bestaande literatuur over MOT in het Oud- en Middelenengels. Mijn eigen analyse van het corpusmateriaal wordt dan gepresenteerd. Eerst wordt gekeken naar de geattesteerde betekenissen van MOT in het Oudengelse materiaal, die vergeleken worden met analyses in de eerdere literatuur. Daarna on-

derzoek ik de semantische ontwikkeling van *MOT* in het Middelenlengelse materiaal. Ik suggereer dat de ontwikkeling van mogelijkheid naar noodzakelijkheid ('mogen' → 'moeten') niet gebeurde door een herinterpretatie van toestemming naar plicht, maar zich voltrok in uitdrukkingen van een noodzakelijkheid veroorzaakt door de omstandigheden ('circumstantial necessity'), zoals in (3):

(3) Vroegmiddelenlengels (ong. 1325)

A wind þer com þo in þe se · & drof hom to scotlonde ·

So þat after betere wind · hii moste þere at stonde ·

'Toen kwam er een sterke wind op zee en nam ze mee naar Schotland, zodat ze daar moesten wachten op gunstigere wind.' (Kroniek van Robert van Gloucester [Cotton MS Caligula A. xi], l. 7562–7563)

Omdat deze ontwikkeling kennelijk gebeurde in de periode tussen het Oud- en Middelenlengels – waarvan er amper bronnen zijn overgeleverd – suggereer ik dat een comparatief perspectief nodig is om de preciese stappen beter te begrijpen. Ik wijs op een parallelle ontwikkeling in het Laatmiddelenlengelse modale werkwoord *MĀ*, het cognaat van het Engelse *MAY*. Een kleine selectie van Laatmiddelenlengelse teksten uit de vroege zestiende eeuw wordt vervolgens onderzocht om de mogelijke contexten van de verandering van mogelijkheid naar noodzakelijkheid te identificeren.

Tenslotte geeft hoofdstuk 9 een beknopt overzicht van de belangrijkste uitkomsten van het onderzoek en wijst op een aantal nieuwe vragen die het heeft opgeleverd. Ik suggereer drie mogelijke wegen voor toekomstig onderzoek omtrent de toevalligheid of regelmatigheid van taalverandering, het historisch verband tussen verschillende modale betekenissen en het in kaart brengen van syntactische variatie in het Middelenlengels.

Modalverber i old- og middelengelsk

Form, funktion og analogi

I denne afhandling undersøges modalverbernes grammatiske og semantiske udvikling i oldengelsk (ca. 800-1100 e.v.t.) og middelengelsk (ca. 1100-1500 e.v.t.). De engelske modalverber har spillet en central rolle i både synkront og historisk orienteret sprogvidenskab i det tyvende århundrede, men en række spørgsmål er endnu ikke tilfredsstillende besvaret. Denne afhandling forsøger at give svar på nogle af disse åbne spørgsmål gennem en grundig analyse af old- og middelengelsk tekstmateriale og sammenligning med udviklinger i andre germanske sprog, herunder oldnordisk, middeldansk og middelnederlandsk.

Afhandlingen består af ni kapitler i to dele. Del I (kapitel 1-4) giver en teoretisk og metodisk introduktion til studiet af de engelske modalverber, modale betydninger og det historiske kildemateriale der er anvendt i undersøgelsen. Del II præsenterer undersøgelsen selv. Denne del omfatter fire studier af modalverbernes historie (kapitel 5-8) og et sammenfattende afsnit med en oversigt over undersøgelsens vigtigste resultater og enkelte idéer til fremtidig forskning (kapitel 9).

Kapitel 1, »Indledning«, giver en kort introduktion til modalverberne i moderne engelsk og illustrerer nogle af de vigtigste forskelle mellem disse og de former der er overleveret i de oldengelske kilder. Kapitlet introducerer også periodiseringen af det engelske sprogs historie og en række symboler, forkortelser og termer der er anvendt i afhandlingen.

Kapitel 2, »Grammatikalisering og de engelske modalverber«, giver en oversigt over et udvalg af den relevante sprogvidenskabelige litteratur, først i forhold til de engelske modalverber specifikt og siden med hensyn til grammatikalisering og grammatisk forandring mere generelt. Jeg inddeler den eksisterende litteratur i tre traditioner eller hovedstrømninger, som kan kaldes den »deskriptivt-leksikografiske« tradition, den »formelt-syntaktiske« tradition og »grammatikaliseringstraditionen«.

Den første betragter modalverberne primært som et leksikalsk fænomen, altså som selvstændige ord, hvis forskellige brug og betydninger skal beskrives så dækkende som muligt; sprogforandring spiller her kun en begrænset eller ingen rolle. Den formelt-syntaktiske tradition ser i højere grad modalverberne som et syntaktisk fænomen, og sprogforskerens vigtigste opgave er at redegøre for deres syntaktiske egenskaber og ordklassetilørsforhold. Endelig behandles modalverberne i grammatikaliseringstraditionen som et primært diakront fænomen, nemlig som en ordklasse der gradvis er blevet mere grammatisk eller funktionel gennem dens historie. På grund af grammatikaliseringstraditionens betydelige indflydelse i de seneste årtiers sprogforskning giver den anden halvdel af kapitlet en oversigt over nogle af de vigtigste værker fra denne litteratur, især i forhold til modalverbernes udvikling i engelsk og andre germanske sprog. Der redegøres blandt andet for hvordan disse modalverber er blevet brugt til både at argumentere for og imod universelle grammatikaliseringstendenser.

I kapitel 3, »Betydningsfeltet modalitet«, behandler jeg nogle af de mest indflydelsesrige værker om modale betydninger. Jeg begynder med forskellige forsøg i litteraturen på at afgrænse betydningsfeltet modalitet og diskuterer så en række forslag til underinddelinger af modale betydninger. De forskellige tilgange til modalitet der behandles, omfatter blandt andet det traditionelle syn på modalitet som mulighed og nødvendighed og senere definitioner med henvisning til subjektivitet og faktualitet, d.v.s. sagforholds status som virkelige eller forestillede. Omend dette faktualitetsperspektiv i mine øjne er det mest lovende, argumenterer jeg for at der i et historisk-semasiologisk studie som denne afhandling ikke er nogen tvingende grund til at lægge sig fast på én bestemt definition af modalitet. I en undersøgelse af denne art er alle belagte betydninger af de undersøgte leksemer relevante, hvad end de kan klassificeres som egentligt modale eller ej. I overensstemmelse med dette synspunkt skelner undersøgelsen også mellem en række betydningskategorier som af en del sprogforskere ikke betragtes som modale. I slutningen af kapitlet præsenteres en samlet oversigt over de relevante betydningskategorier.

Kapitel 4, »Materiale og metoder«, introducerer det anvendte materiale fra oldengelsk, middelengelsk og andre germanske sprog og redegør for undersøgelsens metoder. Det old- og middelengelske materiale stammer fra en række digitale korpusser og tekstsamlinger, blandt andet det oldengelske *Dictionary of Old English Corpus in Electronic Form* (DOEC) og de middelengelske korpusser *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2), *Corpus of Middle English Prose and Verse* (CMEPV) og *Innsbruck Corpus of Middle English Prose* (ICMEP). De analyserede eksempler blev exciperet med computerprogrammerne CorpusSearch og AntConc. Jeg diskuterer også kort en række metodiske problemer angående materialets repræsentativitet og sammenlignelighed på tværs af sproghistoriske perioder.

Kapitel 5, »Grammatiske forandringer i middelengelsk«, undersøger tre grammatiske udviklinger i den middelengelske periode som ikke umiddelbart lader sig analysere som øget grammatikalisering af modalverberne. De tre udviklinger er:

1. En tilsyneladende udvikling af nye infinitte former for nogle af de middelen-gelske modalverber som ikke er belagt i den oldengelske periode, såsom parti-cipiumsformer af *MAY* og *WILL*.
2. Udviklingen af en regelmæssig (»svag«) flertalsform for nogle af modalver-ber i den tidlige middelen-gelske periode, blandt andet *shulleþ* »(vi/I/de) skal« i stedet for forventet *shullen* og *conneþ* »(vi/I/de) kan« for forventet *connen*.
3. Udviklingen af upersonlige modalverber med et oblikt førsteargument i stedet for et kanonisk nominativt subjekt, såsom *us must* »vi må« (egl. »os må«) og *him ought* »han bør« (egl. »ham bør«).

Den første af disse analyseres som en pseudoforandring, m.a.o. en ændring som til-syneladende kan observeres i materialet, men som ikke afspejler en egentlig sprog-forandring. Jeg argumenterer for at der ikke er nogen klare beviser for at nogen af modalverberne udviklede nye infinitte former i den middelen-gelske periode som de ikke havde haft i oldengelsk. At nogle former ikke er belagt i den tidligere periode, kan forklares med henvisning til det mere sparsomme materiale og den mindre ud-bredte brug af perifrastiske udtryk for tempus og aspekt i oldengelsk. Denne sidste kendsgerning betyder at der er færre relevante kontekster hvor infinitte former af modalverberne kunne forekomme.

Den anden og tredje forandring analyseres derimod som virkelige innovationer i middelen-gelsk. Ved hjælp af de middelen-gelske dialektatlasser LAEME og eLAL-ME kortlægger jeg udbredelsen af regelmæssige flertalsformer. Det viser sig at de regelmæssige former af *SHALL* – langt det hyppigste af de nye »svage« modalver-ber – i deres udbredelse klart overlapper med den svage flertalsform af *WILL*, som i visse dialekter havde udviklet samme rodvokal som *SHALL*. Den tredje forandring, udviklingen af upersonlige brug af bl.a. *MOT* og *OUGHT*, undersøges ved hjælp af det syntaktisk anoterede korpus PPCME2. Det vises at begge disse verber er belagt i den upersonlige brug fra midten af det 14. århundrede til slutningen af det 15. år-hundrede, og at konstruktionen er væsentlig hyppigere med *OUGHT* end med *MOT*. Konstruktionen bruges kun når de to verber har nødvendighedsbetydning. Der ar-gumenteres for analogisk indflydelse som den mest oplagte forklaring på begge disse morfosyntaktiske forandringer. I tilfældet regelmæssige flertalsformer var det verbet *WILL* der udøvede analogisk indflydelse; for de upersonlige modalverbers vedkom-mende var det en gruppe af upersonlige nødvendighedsudtryk som allerede fandtes i oldengelsk, men som fortsatte med at rekruttere nye medlemmer i den middelen-gelske periode.

Kapitel 6, »DARES historie i nyt lys«, stiller skarpt på et enkelt verbum, det »pe-rifere« modalverbum *DARE*, og dets udvikling fra oldengelsk til moderne engelsk. Fire forskellige aspekter af dets historie tages under behandling: dets betydning i de oldengelske kilder, forvirringen mellem *DARE* og verbet *THARF* »behøve« i middel-engelsk, brugen af *to*-infinitiv efter *DARE*, og udviklingen af en transitiv brug af *DARE* »udfordre, tirre« efter den middelen-gelske periode, som eksemplificeret i (1):

(1) Moderne engelsk

To see Edward again, she would have dared the Devil himself!

»For blot at se Edward igen ville hun have udfordret fanden selv!« (British National Corpus, 1990 W_fict_prose)

Jeg foreslår at DARES historie ikke er et eksempel på »degrammatikalisering«, som det ofte er blevet hævdet i litteraturen, men at den heller ikke på nogen meningsfuld måde kan karakteriseres som et eksempel på grammatikalisering. Det vises at DARES historie – trods en række morfosyntaktiske forandringer – først og fremmest må karakteriseres som stabil, og at DARE fra en funktionel betragtning har ændret sig meget lidt fra oldengelsk til i dag. De observerede formelle forandringer kan bedst forklares som analogisk motiverede. Jeg foreslår også en ny etymologi for den transitive brug af DARE vist i (1), som muligvis går tilbage til et helt andet middelengelsk verbum, DARE »skræmme«.

Kapitel 7 og 8 fokuserer på de tre »centrale« modalverber CAN, MAY og MOT (MUST) og deres udvikling i old- og middelengelsk. I kapitel 7, »Udviklingen af CAN og MAY«, undersøger jeg de to første, især med henblik på at karakterisere deres forskellige betydninger i den middelengelske periode. De to modalverber vises at udvikle sig på samme måde, fra »interne« til »eksterne« mulighedsbetydninger. Dette stemmer overens med udviklingen af deres kognater i tysk og nederlandsk. Jeg diskuterer også en række mere specifikke spørgsmål omkring de to modalverber, herunder en mulig habitualisbetydning (»pleje«) af CAN i oldengelsk, de nu forsvundne hovedverbumbetydninger af CAN (»vide, kende«) og MAY (»trives, klare sig«) og udviklingen af epistemisk betydning. Det påpeges også at MAY tilsyneladende havde en »selvstændig« brug uden infinitiv i oldengelsk som ikke er mulig i moderne engelsk (eller dansk), som vist i (2):

(2) Oldengelsk (10. årh.)

Eaðe mæg þæt me Drihten þurh his geearnung milts-igan
sagtens kan at mig.DAT Herre gennem hans fortjeneste forbarme-INF
wille.
vil:KONJ

»Det kan sagtens [være] at Herren vil forbarme sig over mig på grund af hans gode gerninger« (Bede, *Historia ecclesiastica* [MS Tanner 10], III. xi)

Jeg sammenligner denne brug med lignende konstruktioner i moderne nederlandsk og oldnordisk og foreslår at det traditionelle syn på modalverber som »fødte« hjælpeverber i lyset af disse germanske sprog synes at være for restriktivt.

Kapitel 8, »Udviklingen af MOT«, handler igen om et enkelt verbs historie, nemlig forfaderen til moderne engelsk MUST. Eftersom dette modalverbs historie har været heftigt omdiskuteret i den engelske sproghistoriske litteratur, begynder kapitlet med en forholdsvis grundig litteraturoversigt hvor de vigtigste stridspunkter og åbne spørgsmål skitseres. Derefter præsenterer jeg min egen analyse af det old- og middelengelske materiale. Det vises at udviklingen af en nødvendighedsbetydning i

MOT (»kunne« → »måtte«) ikke foregik i kontekster med tilladelses- eller pligtbetødning, men i udtryk hvor omstændighederne nødvendiggør et bestemt sagforhold (»circumstantial necessity«), som i eksemplet i (3):

(3) Tidlig middelengelsk (ca. 1325)

*A wind þer com þo in þe se · & drof hom to scotlonde ·
So þat after betere wind · hii moste þere at stonde ·*

»Så rejste der sig en vind over havet og blæste dem helt til Skotland, så de måtte blive der og vente på medvind.« (Robert af Gloucesters Krønike [Cotton MS Caligula A. xi], l. 7562-7563)

Jeg foreslår at udviklingen af middelengelsk MOT har en nær parallel i det danske modalverbum *måtte*, som udviklede sig fra en muligheds- til en nødvendighedsbetødning i slutningen af den middeldanske periode. Denne forandring skete altså flere århundreder efter den middelengelske udvikling, i en periode med et væsentlig mere omfattende kildemateriale. Jeg forsøger at identificere de relevante kontekster for forskydningen fra mulighed til nødvendighed i et udvalg af middeldanske tekster fra reformationstiden, d.v.s. det tidlige 16. århundrede, hvor betydningsændringen synes at have fundet sted.

Endelig afrundes afhandlingen i kapitel 9, hvor jeg giver en samlet oversigt over undersøgelsens vigtigste resultater og kort diskuterer nogle af de nye spørgsmål den har bragt op. Jeg foreslår tre potentielt frugtbare områder for fremtidige undersøgelser, nemlig spørgsmålet om semantiske og syntaktiske forandrings vilkårlighed, de diakrone forbindelser mellem forskellige modale betydninger, og syntaktisk variation i middelengelske dialekter.

Curriculum vitae

Sune Gregersen (Denemarken, 1988) studeerde historische en algemene taalkunde aan de Universiteit van Kopenhagen waar hij in 2014 afstudeerde op een scriptie over woordvolgorde in het huidige gesproken Deens. Van 2015 tot 2019 was hij als promovendus verbonden aan de Universiteit van Amsterdam, waar hij o.a. Oudengels en academisch schrijven doceerde. Dit proefschrift is het resultaat van het onderzoek dat hij in die periode uitvoerde.

Gedurende zijn tijd als promovendus heeft hij zijn onderzoek gepresenteerd op een aantal internationale congressen en symposia, zoals het jaarlijks congres van de Societas Linguistica Europaea (SLE), de International Conference on Middle English (ICOME), en het Gezelschap voor Oost-Scandinavische Filologie (Selskab for østnordisk filologi, SØF). Zijn onderzoek is o.a. verschenen in de tijdschriften *Notes and Queries*, *Folia Linguistica Historica*, *Nederlandse Taalkunde* en *Danske Studier*.

Naast het Oud- en Middelenengels heeft hij grote belangstelling voor vragen rondom taalverandering, -contact en -variatie in het algemeen, de uitdrukking van TMA-categorieën (tijd, modaliteit en aspect) in de talen van de wereld en de geschiedenis van de taalkunde en haar verband met filologie en andere aangrenzende disciplines. Sinds augustus 2020 is hij als wetenschappelijk assistent verbonden aan de Universiteit van Kopenhagen.