OLD ENGLISH *MOTAN, VARIABLE-FORCE MODALITY, AND THE PRESUPPOSITION OF INEVITABLE ACTUALIZATION

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Abstract: Old English *motan and Middle English *moten, the ancestors of modern must, are commonly described as ambiguous between a possibility and a necessity reading. I argue instead that in the Alfredian Old English prose, *motan was a non-ambiguous, “variable-force” modal with the modal force different from both possibility and necessity. I propose that *motan’s variable-force effect was due to the presupposition of a collapse between possibility and necessity. Informally, motan(p) presupposed “if p gets a chance to actualize, it will”. I then trace the development of *motan into a modal genuinely ambiguous between necessity and possibility in Early Middle English.

Keywords: *motan, Old English, modality, semantic change, variable force

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Without the York-Toronto-Helsinki Parsed Corpus of Old English prose (YCOE) and the Penn Parsed Corpus of Early Middle English (PPCEME), it would have become close to impossible to create the samples used in this chapter. The extensive commentary to Boethius in Godden and Irvine (2009) was of great help in identifying the correspondences between the Latin original and the OE translation for that book. An earlier version of this work appeared as Chapter 4 of my dissertation, written at MIT and advised by Kai von Fintel, Irene Heim and Sabine Iatridou. I gratefully acknowledge the support of the institution and all the help I received from my advisors. The paper was finished when I was a postdoctoral fellow of the Alexander von Humboldt Foundation, whose support I also note with gratitude.
The ancestor of the Present-Day English (PDE) necessity modal *must, Old English (OE) modal *motan, was not a necessity modal. Historical linguists commonly describe OE *motan and Middle English (ME) *moten as ambiguous between a possibility and a necessity reading. When they try to identify which modal force OE *motan or ME *moten had in individual examples in the historical texts, they usually conclude that either the possibility reading fits, but the necessity one doesn’t, or vice versa. Possibility is believed to have been predominant in Early Old English, and necessity, to have become the predominant meaning of the modal at some point during the Middle English period. It is only by the late 15th–early 16th century that ME *moten/Early Modern English *must becomes a pure necessity modal that it is today. I propose a different account of the early historic stages of the semantic evolution of *motan/*moten/*must. On the basis of a primary analysis of Early OE *motan in the Alfredian prose, I argue that around the late 9th century it was an unambiguous modal with a meaning different from either that of (plain) possibility or that of (plain) necessity. Instead, it was an instance of what may be descriptively called variable-force modality. In the recent formal-semantic research, starting from Rullmann et al. (2008), that term was introduced to refer to modals that are unambiguous in the source language, but due to the lack of a perfect correlate in languages like English, would sometimes be rendered in translation by possibility, and other times by necessity modals. (The term variable force thus may be somewhat misleading: it carries no assumption that the modal force truly varies. On the contrary, the term is reserved for modals that show no lexical ambiguity.)

Variable-force modality of different subkinds was recently described in several languages of the North-American Pacific Northwest, namely St’át’ïmcets (Rullmann et al. (2008)), Gitksan (Peterson (2010)) and Nez Perce (Deal (2011)). The meaning I propose for Alfredian OE *motan, however, is different from any of those proposed for the Pacific Northwest modals. I argue that in the Alfredian prose, a statement of the form *motan(p) 1) asserted that situation p is an open possibility, and 2) presupposed that if p is an open possibility,
then that possibility will get actualized. Later in the paper, the terms used in this informal
definition will be made formal and precise within a framework based on Condoravdi (2002).

Section (1) reviews the literature on the semantics of OE *motan and ME *moten. Section (2) describes the distribution of Alfredian OE *motan in a subset of the Alfredian prose (namely CP, Bo and Sol), and proposes a new analysis of the semantics of the modal. I argue that Alfredian *motan was unambiguous, and derive the variable-force effect from the presupposition that causes a collapse of possibility and necessity. In Section (3), I contrast the Alfredian OE distribution of *motan with that of its descendant, Early Middle English *moten. The latter is no longer variable-force, but is truly ambiguous between necessity and possibility. Section (4) compares Alfredian variable-force *motan to the variable-force modals of the Pacific Northwest, namely in St’át’imcets, Gitksan and Nez Perce, and concludes that empirically, the Alfredian OE modal was a different creature. Section (5) discusses three further phenomena that require semantic components similar to the ones used in my analysis for *motan: (i) actuality entailments of root modalities, (ii) “either-or” entailments of ability modals, and (iii) possibility-necessity-ambiguous get-based modals around the Baltic Sea (using data from Norwegian, Swedish, Finnish and Estonian).

It turns out that in all three cases those similar semantic components are put together rather differently than in the semantics of Alfredian *motan. Section (6) concludes.

1. Earlier accounts of the semantics of Old English *motan and Middle English *moten

The Oxford English Dictionary OED (2002) lists OE *motan under motev.1 with “possibility or permission” as the first meaning, and “necessity or obligation” as the second one. For both meanings, the oldest OED examples are from Beowulf, one of the earliest Old English texts of substantial length:2

(1) Listed under OED sense 1, “expressing possibility or permission”: 
Gif he us geunnan wile, þæt we hine swa godne gretan moton.  
if he us grant will that we him so good greet mot.prn.pl  
`If he will grant to us that we moton greet him, the good one.'  
(1)  
\[(1)\]

(2)  
\[\text{Listed under OED sense 2, `expressing necessity or obligation':}\]

Londrihtes mot þære mægburge monna æghwylc idel hweorfan.  
of.landright mot.prn.ind.3sg of.that kin of.men each idle wander  
`Every man of that kin mot wander without the rights of the rightful residents.'  
(2)  
\[(2)\]

It is easy to see what logic is behind OED’s characterization of (1) as an example where *motan conveys possibility (which, in the logical tradition, we will mark with ♦ below), and of (2) as one where it conveys necessity (marked □). If we substitute moton in (1) with modern ♦-modal *may or can, the example makes sense, but if we use have to or must, the result does not sound very natural:

\[\text{(3)}\]

\[\begin{align*}
\text{a. } &\text{OK `If he will grant to us that we may/can greet him'} \\
\text{b. } &\text{* `If he will grant to us that we must/have to greet him'} 
\end{align*}\]

But if we apply the same substitutions to mot in (2), the pattern is the opposite, cf. (4): the passage from which this sentence is taken describes a disastrous situation after the death of Beowulf, with many terrible things for “that kin” which have just became inevitable. In that context, simply being able to wander without rights is clearly not what the speaker is talking about.

\[\text{(4)}\]

\[\begin{align*}
\text{a. } &\text{* `Every man of that kin may/can wander without the rights of the rightful residents.'} \\
\text{b. } &\text{OK `Every man of that kin must/has to wander without the rights of the rightful residents.'} 
\end{align*}\]

Viewed from the perspective of the modern English modal system, the meanings of *motan in (1) and (2) may appear irreconcilably different: it looks like the modal is lexically
ambiguous between ♦ and □. This ambiguity analysis is expressed by OED, other historical dictionaries of English, and most scholarly works on the subject as well. For example, the standard Old English dictionary Bosworth and Toller (1898)\textsuperscript{3} lists “to be allowed, may, mote” as sense I for OE *motan, and “to be obliged, must” as sense II. (A smaller number of examples is listed under sense II than under sense I both in the original dictionary and in its supplement Toller (1921), which indicates in part the authors’ judgement as to which meaning was more frequent.) The Middle English Dictionary MED (2002) lists a wide range of both possibility and necessity senses for ME *moten, but the number of necessity examples recorded in MED (2002) for this later period is greater than that of possibility examples. Moreover, there are very few possibility examples from the 15th century recorded in MED (2002).

The near-consensus view on the semantics of OE *motan and ME *moten is thus as follows: 1) in OE, *motan was predominantly a possibility modal; 2) at some point it started to have necessity uses as well (most researchers argue that it already happens in the earliest OE texts, cf. the position of OED (2002) regarding (2) from *Beowulf*); 3) from around the 10th century, the percentage of necessity uses grew slowly but steadily, so that by the end of the Middle English period in the 15th century, possibility uses became very marginal, and disappeared completely in the 16th century.

The above description in terms of the relative frequency of possibility vs. necessity readings presupposes that each instance of the modal belongs to one of the two categories. For instance, Ono (1958) studies the ratio of possibility to necessity uses of *motan* starting from *Beowulf* through *Ancrene Wisse* to Chaucer and Malory. In *Beowulf*, Ono finds 31 instance of possibility *motan, 1 instance of necessity *motan, namely example(2), and one “doubtful” use for which Ono could not decide which interpretation makes better sense. 13th-century *Ancrene Wisse* is the earliest text considered by Ono where, according to him, necessity uses become more numerous than possibility uses. In late 14th-century
Chaucer, Ono finds the necessity meaning in 84% of all instances of ME *moten, and in late 15th-century *The Tale of King Arthur* by Malory, he finds no possibility uses at all.

Tellier (1962) paints a very similar picture. Having examined the poetry of *Beowulf, Andreas, Judith* and *Elene*, and the prose of roughly the first half of king Alfred’s *Cura Pastoralis*, Tellier argues that in Early OE the sense of necessity for *motan* is “rarissime et exceptionnel par rapport au sens de pouvoir”. Tellier describes the primary meaning of *motan* in this period as that of possibility created by “circumstances, fate, or divine grace”.

Tracking the further development of *motan*, Tellier argues that in the 10th century, the modal “develops an ambiguity”, with the necessity sense becoming “well attested”. For the (late entries of the) Peterborough Chronicle (the 12th cent.), Tellier argues that the majority of uses are still possibility ones, but in *Ancrene Wisse* (the 13th cent.), the possibility sense “se fixe dans des propositions où cette signification ne risque pas d’être ambiguë.” The two types of contexts in *Ancrene Wisse* where there is no such risk, according to Tellier, are complements of verbs of asking, and prayers to God. Regarding the language of Chaucer’s *Canterbury Tales*, Tellier argues that the possibility sense of *moten* is similarly restricted to several particular environments, namely to matrix wishes, complements of verbs of asking, and the collocation *mot as wel*. Finally, in Malory’s 15-century works, Tellier does not find any examples of *moten* conveying possibility, just as the extensive study of Malory’s language by Visser (1946) did not.

Most other studies either address the semantics of *motan* during a shorter period (e.g., Solo (1977) or Goossens (1987)), or contain more general descriptions of the semantic evolution of *motan/*moten (e.g., (Visser, 1963-1973, §1689, 1693), (Warner, 1993, Ch. 7), (Traugott and Dasher, 2002, Ch. 3)). They generally support the picture sketched above. That is not to say that there are no disagreements, be such about the interpretation of individual examples or about the precise timing of particular developments. For instance, Solo (1977) argues, against the more popular position, that before year 1000, the sense
of necessity/obligation for *motan is hardly attested. But on the whole, there is a wide consensus about the general lines of the development.

It is important for the argument I am going to make, however, that side by side with this general analysis, there are also numerous statements in the cited literature that suggest a more nuanced semantics for the modal than that of pure necessity or pure possibility. A more complex view is explicitly and extensively advocated for by Standop (1957), who proposes that in addition to the meaning of possibility, and perhaps that of necessity, OE *motan also had a third meaning, which he paraphrases as “mir ist vergönnt, mir wird zuteil” (p. 69), “mir est bestimmt” (p. 75), “mir ist zugemessen” (p. 169) (“it is granted to me, it is bestowed upon me”, “it is determined for me”, “it is measured out for me”). Standop argues that the meanings of possibility and necessity in the case of *motan both developed from that initial general meaning which combined possibility and necessity into an “Einheit”, where “Rechte und Pflichten” (“rights and duties”) coincide. Other informal characterizations of Standop’s third meaning for *motan include: “expression of human dependence (Ausdruck menschlicher Abhängigkeit)” (Standop’s p. 68), “it is destined (beschieden)” (pp. 70, 78), “what is measured out (geschaffen) by fate (wyrd)” (p. 77). Standop argues that even though “no dictionary gives [it]”, his third meaning “falls into one’s eyes” as soon as one notices how the distribution of *motan differs from that of any other modal (p. 68). Standop writes that “die Belege sind so zahlreich — vor allem weil viele nach unserer Deutung in neuem Licht erscheinen —, daß man nur recht wahllos einige Beispiele herausgreifen kann”5, (Standop, 1957, p. 70). Once my formal analysis of Alfredian *motan is defined in the next section, I will return to Standop’s characterizations of his “third reading”.

Some of the later scholars also acknowledge the complexity of the meaning that OE *motan conveyed. (Visser, 1963-1973, p. 1794), citing Standop, mentions paraphrases for *motan such as “Fate has allotted to me to do this” (Standop’s third meaning) and “Fate has granted me the freedom to do this” (the possibility/permission meaning), and writes that “all these shades of meaning may have been present in Old English mote”. (Warner, 1993, p. 160)
briefly suggests that Standop’s meaning could still have been present in the Alfredian-prose
Gregory’s Dialogues, translated into OE by Wærferth in the late 9th/early 10th cent., and
in Wulfstan’s Homilies from the early 11th century. Solo (1977), not mentioning Standop’s
work, writes in the conclusion of his paper: “In none of these instances, except, perhaps, in
very late Old English prose, does the verb [i.e. *motan — IY] signify necessity or obligation
in and of itself, although the contexts in which it appears at times imply necessity or duty
as well as permission” [emphasis the present author’s].

In my analysis of *motan in the Alfredian prose, I will capture those intuitions formally
by assigning to the modal a “variable-force” meaning that asserts openness of a possibility,
and at the same time presupposes that if that possibility gets a chance to be actualized, it
will. My proposal will differ from the proposals from the historical literature cited above
in two respects: first, I restrict its scope to a particular, relatively narrow time period,
and to a particular genre of texts; second, for that time period and for the corpus of texts
considered, I argue that rather than having a range of different available readings, *motan
was an unambiguous modal.

2. ALFREDIAN *MOTAN AS A VARIABLE-FORCE MODAL

My conclusion that *motan in the Alfredian prose was an unambiguous variable-force
modal with a particular semantics is based on the examination of all 72 instances of *motan
in three books: the prose translations into OE of Gregory’s Cura Pastoralis (CP), Boethius’s
Consolatio Philosophiae (Bo), and Augustine’s Soliloquies (Sol). All three books in the
main sample are translations from Latin, but made with such freedom that they may be
considered independent texts. Those texts form a part of the corpus of “Alfredian prose”,
after king Alfred the Great, who in the late 9th century initiated an impressive program
of translation from Latin into the Anglo-Saxon vernacular. The three books chosen are
as good a shot at a dialectally and temporally consistent dataset as possible: Bo and Sol
were most likely translated into Old English by the same person; moreover, the translators
of Alfredian books, presumably, were from relatively close circles. There are linguistic differences between Bo and Sol on the one hand and CP on the other, but I did not detect any difference regarding the use of *motan. Online Appendix features all Old English examples from this sample, together with their philological translations and the original Latin passages for CP and Bo.

2.1. **Examples motivating the analysis.** Examples in (5)-(11) illustrate the pattern common for all instances of *motan in the selected Alfredian books Bo, Sol and CP: the context surrounding the examples is always such that if it is possible for the argument situation of the modal to actualize, it is assumed in the context that it will inevitably do so.

Specifically, in (5), if it becomes possible for the person involved to live on, they will, of course, continue to live.

(5) Ac se se Ḟe unwærlice Ḟone wuda hiewð, & sua his freond ofslieð, but that that which unwarily that wood hews, and so his friend slays, him bið nidðearf ðæt he fleo to ðara ðreora burga anre, to.him is necessary that he flee.SUBJ to those.GEN three.GEN city.GEN one.DAT ðæt on sumere ðara weorðe genered, ðæt he mote that in some of.those become.SUBJ saved, that he motan.PRS.SUBJ.3SG libban; live  
‘But he who unwarily hews wood and by that slays his friend, it is necessary for him that he flee to one of those three cities, so that he be saved in one of them, so that he mote live.’ (CP:21.167.15)

In (6), it is assumed that given the possibility, people would indeed do what they want, and then be judged according to what they chose to do.

(6) He sealde swiðe fæste gife and swiðe fæste æ mid þære gife ælcum menn he gave very firm gift and very firm law with that gift every.DAT man.DAT [oð] his ende. þæt is se frydom þæt ðe mon mot don þæt he until his end. that is the freedom that man motan.PRS.IND.3SG do what he
wile, and þæt is sio æ þæt [he] gínt ælcum be his gewyrhtum, ægðer ge wants.to and that is the law that he pays to.each by his works, both and on þisse worulde ge on þære toweardan, swa god swa yfel swaðer he deð. in this world and in that future.one, or good or evil whichever he does

‘He [=God] gave to every man until his end a very firm gift and a very firm law with that gift. The gift is the freedom that one mot do what he wants to, and that law is the law that God pays to each one according to his works, both in this world and in the future world, be it good or evil that he does.’ (Bo:41.142.11)

In (7), if God makes it possible for the speaker to see them, then obviously the speaker would use that chance.

(7) and gedo me þæs wyrðne þæt ic þe mote geseon.
and make me that.GEN worthy that I you mot.an.PR.SBJ.1SG see
‘and make me worthy of it that I mote see you.’ (Sol:1.55.23)

In (8), the soul in question, having been removed from the earthly things, really does not have much choice but to make use of the heavenly things:

(8) Heo forseohð þonne ealle ðas eorðlican þing and fagenað þæs þæt heo she despises then all these earthly things and rejoices that.GEN that she mot brucan þæs heofonlican [siððan] heo bið abrogden from þam mot.an.PR.IND make.use that heavenly.one since she is removed from that eorðlican.
earthly.one
‘At that time she [=a soul] despises all these earthly things and rejoices that she mot make use of the heavenly things after she is removed from the earthly ones.’ (Bo:18.45.28)

In (9), if the addressee grants the speaker permission, then the speaker clearly would follow up by actually investigating the addressee’s degree of resolve.

(9) Mot ic nu cunnian hwon þin fæstrædnesse þæt ic þanon mot.an.PR.IND.1SG I now test a.little your resolution that I thence ongiton mæge hwanan ic þin tilian scyle and hu?
learn can whence I you tend.to shall and how
‘Motan I now test your resolution a little so that I could learn from what side I should be curing you and how?’

(Bo:5.12.12)

In a different rhetorical construction in (10), the speaker expects that if the addressee is granted an opportunity to determine what is more worthy of punishment, they would actually determine that, so the speaker uses an irrealis conditional to indirectly ask for the addressee’s opinion.

(10) Gif þu nu deman mostest, hwærærne woldest þu deman if you now to judge motan.PST.IND.2SG which.of.two would you judge wites wyrran, þe [þone þe þone unscyldgan] witode, þe of.punishment worthier the that.ACC which the innocent tormenteþe ðone þe þæt wite þolode, that.ACC which that torment suffered

‘If you mostest pass a judgement, which would you find worthier of punishment: the one who tormented the innocent, or the one who suffered the torment?’

(Bo:38.122.28)

In (11), we first learn that a particular group of people is always weeping, and then we are told how this happens: they weep, and after that they make it possible for them to weep again. As we now know from the beginning of the passage that they are always weeping, it follows that each subsequent weeping is not just possible, but in fact will actually happen.

(11) Hwæt, se ðonne ne recð hwærðer he clæne sie, [ðe ne sie], se why! that.one then not cares whether he clean is.SUBJ or not is.SBJ that.one ðe æfter ðære hreowsunga hine ryhtlice & clænlice nyle gehealdan: that after their repentance him rightly & cleanly not.wants.to keep ealne weg hi hi ðweað, & ne beoð hie næfre clæne, ðeah hi ealneg all way they them wash & not are they never clean though they always wepen; ealneg hi wepað, & æfter ðæm wope hi gewyrceð ðæt hi weop.SUBJ; always they weep & after the weeping they obtain that they motan eft wepan.

‘Why, then he does not care whether he is clean or not, he who does not want to hold himself in proper ways and clean: always they are washing, and they are never
clean, even though they are always weeping; always they are weeping, and after the weeping they make it so that they moton weep again.’ (CP:54.421.14)

The examples above represent a wide range of syntactic environments in which *motan occurs in Early OE: a purpose clause in (5) and (11); a complement clause of noun freodom ‘freedom’ in (6), of adjective weorþ ‘worthy’ in (7), and of verb fægnian ‘to rejoice’ in (8); a matrix question in (9); the antecedent of a conditional in (10). Despite the syntactic differences, for all cases it is in the discoursive common ground that the argument situation of the modal will be actualized if such a possibility opens. On one extreme, in (11) this conditional presupposition is supported by the context because the preceding sentence directly asserts its consequent (they are always weeping). On the other extreme, in (9) the assumption is accepted in the common ground because of the general rules of conversation, which are not explicitly discussed anywhere in the text (the speaker only asks whether a given speech act by her is OK to perform), so the conclusion that she would ask the question if allowed to follows from the pragmatics of the situation. But in most cases, it is the world knowledge together with the linguistic context of the modal that support the assumption of inevitable actualization.

The remarkable fact is that not just (5)-(11), but all instances of *motan in the Alfredian sample occur in contexts that support that assumption. In contrast to that, other modals need not appear only in such contexts. Consider magan ‘may’ in (12): it is clear from the context that both being among people and teaching them, and not being among people and therefore not helping them to get better, are metaphysically and circumstantially possible. The future of such a situation depends on the will of the individual, and can go either way. Compare this with, for instance, (7): “make me worthy to motan see you”, where the situation is such that its elements conspire to determine that if a person would have the chance to see God, that person would inevitably use that chance.
(12) ðonne beoð hie sua monegem scyldum scyldige sua hie manegra unðeawa gestiran mealton mid hiora larum & bisenum, gif hi ongemong correct may.PST with their teachings and examples if they among monnum beon wolden.

people to.be will.PST

‘Then they [=those who could teach, but avoid it for their own ease] are guilty of as many sins as there are men whose vices they could correct, if they would choose to be among people.’ (CP:5.45.20)

Note that it is not only *motan that appears in the contexts supporting the inevitability presupposition: other modals can also do so. This is similar to how the modals’ distributions often overlap with respect to other semantic properties. For instance, in Present-Day English, *may is restricted to expressing permission and epistemic possibility, and to some extent, circumstantial/metaphysical possibility. But permission and circumstantial/metaphysical possibility may also be expressed by *can, and epistemic possibility, by *might. Similarly, even though Alfredian *motan is exclusively found in contexts where inevitable actualization is presupposed, it is not to be expected that no other modal could appear in such a context.7

If we assume, as in the standard analysis, that Alfredian *motan was ambiguous between possibility and necessity, that does not predict that it would be restricted to contexts where inevitable actualization is presupposed. In my analysis that follows below, I take Alfredian *motan to directly presuppose inevitable actualization. First, that explains its restricted distribution; second, this presuppositional analysis actually predicts the “variable-force effect” without any need to assume ambiguity. Under my analysis, each instance of *motan simultaneously signals open possibility (by its assertive part) and inevitability (by the presuppositional part). Depending on which part the translator chooses to stress, we can get either possibility or necessity translational correlates. For example, in (13) Henry Sweet rendered *motan using necessity modal have to, while H.W. Norman chose possibility *might, but in the end both translations of (13) convey a very similar overall message.
(13) a. Hu mæg he ðonne beon butan gitsunge, ðonne he sceal ymb monigra how may he then be without avarice when he has.to about many monna are ðencan, gif he nolde δa δa he moste men’s property think if he would.not when he motan.sg.past.subj ymb his anes? (CP:9.57.19)
about his only
b. Translation by Sweet (1871):
“How can he be without covetousness when he has to consult the interests of many, if formerly he would not avoid it when he had to consult his own interests alone?”

c. Translation by H.W. Norman, printed in Giles et al. (1858):
“How can he be without covetousness when he must think about many men’s sustenance, if he would not when he might think about his own alone?”

2.2. Variable-force analysis of *motan: informal and formal versions. I argue that Alfredian *motan was not ambiguous between possibility and necessity, but had a “third-type”, variable-force meaning which can be imprecisely rendered by either. I will first lay out the proposal, and then discuss how it compares to other plausible accounts of the data. Informally, the meaning for *motan that I propose is as follows:

(14) Variable-force analysis of *motan (informal, preliminary): motan(p) asserts that p is an open possibility and presupposes that if p is given a chance to actualize, it will.

The crucial part of the meaning in (14) is not the assertion, but the presupposition. Because of the presupposition, *motan may only be used in a limited set of contexts where the actual future is taken to be predetermined one way or the other, though before the assertion is made, the context may provide no information which way the future will turn out.

One example of a context set that supports the presupposition is given in (15): it contains worlds that will develop into p-worlds (w₁), and those that will develop into ¬p-worlds
What is notably absent from the context set are worlds where it is not predetermined whether \( p \) or \( \neg p \) will actualize \((w_3)\). In such a context, asserting that it is possible for the current world to develop into a \( p \)-world symmetrically entails a necessity assertion saying that it is necessary for the current world to develop so. If the presupposition is met, possibility and necessity collapse together, and no scalar relation emerges between the two. Therefore we can call the presupposition of inevitable actualization the COLLABORATION PRESUPPOSITION. The variable-force, unambiguous analysis that crucially uses that presupposition may be called the COLLABORATION VARIABLE FORCE analysis.

(15) **Context set supporting the presupposition of motan\((p)\):**

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Context set after the assertion of motan\((p)\) is accepted:
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Given such semantics, we expect that neither possibility nor necessity modals of modern English would be perfect translation correlates of *motan. In particular, *motan does not belong to a scale of modal strength as modern English modals do. If we say \( \textit{can}(p) \), that triggers the implicature that \( \textit{must}(p) \) is false. But under my analysis of *motan, no such implicatures are to arise in Alfredian Old English: when the presupposition is met, there is no longer a distinction between possibility and necessity assertions.
Thus analyzed, *motan is a part of the class of variable-force modals together with several others recently described by semantic-fieldwork studies on several languages of the North-American Pacific Northwest. All modals in the class share the same feature: they are not ambiguous between possibility and necessity within the language, but are translated by the speakers into modern English sometimes as possibility, other times as necessity modals. However, such surface similarity does not imply underlying semantic identity, and the label VARIABLE-FORCE MODALITY is purely descriptive. In fact, the variable-force modals of St’àt’imcets (Rullmann et al. (2008)), Gitksan (Peterson (2010), Matthewson (2013)) and Nez Perce (Deal (2011)) all have different distributions, and have received several different analyses in the literature. The distribution of Alfredian *motan is different yet, and therefore the analysis for it that is formulated to fit the Old English data is very different from the previous variable-force analyses in the literature. I will compare both the distributions of and the analyses for other variable-force modals and *motan in Section (4).

Let me now turn to the formal rendering of (14). I will deal with the presupposition first, and with the assertion second. The presupposition of inevitability of the (yet unknown) outcome is captured using the metaphysical accessibility relation \( R_{\text{met}} \). For a world \( w_1 \), \( R_{\text{met}} \) determines the set of METAPHYSICAL ALTERNATIVES of \( w_1 \). Those metaphysical alternatives are defined as the worlds which share with \( w_1 \) all of its history up to the time of evaluation. (In this and many other details of the semantics, I use the formalization proposed by Condoravdi (2002)). A proposition \( p \) is METAPHYSICALLY NECESSARY relative to \( w_1 \) if all ways in which \( w_1 \) may develop in the future would make \( p \) true. Similarly, \( p \) is METAPHYSICALLY POSSIBLE at \( w_1 \) iff some of \( w_1 \)'s continuations are \( p \)-worlds. (Note that metaphysical possibilities and necessities are sensitive to the world of evaluation. What would amount to the metaphysical of everyday discourse, would emerge if we fix our actual world as the world of evaluation.) In the informal definition in (14), by “\( p \) gets a chance to actualize”, I intend to say that \( p \) is a metaphysical possibility, and by “\( p \) will actualize”,
I mean that $p$ is a metaphysical necessity. Thus the collapse of $\Diamond$ and $\Box$ which the presupposition is meant to derive is specifically the collapse of metaphysical possibility and necessity (as opposed to, for example, a collapse of permission and obligation.) In symbols, the informal version of the presupposition is $\Diamond p \to \Box p$.

The formal version of the presupposition needs to be more complex than just $\Diamond p \to \Box p$, though. Most propositions $p$ would be true at one time in the future from the evaluation moment, and false at another time. If we make the presuppositional semantics insensitive to time, then each world could be both a $p$ and a $\neg p$ world. This is not how the intuition represented in the diagram in (15) works: the intuition is that if a world is a $p$-world, it cannot then become a $\neg p$-world, and vice versa. Now, if we consider again the examples in (5)-(11) and (13) above, we can note the following pattern. If $p$ is an eventive proposition, as in (7) or (9), then each world will either feature a $p$-situation at some point or not. So $p$ would divide all worlds into two classes: one where a $p$-event happens, and another where it never occurs. (One can make a case that only a certain bounded period after the evaluation time is relevant for the statement made, so that $p$ would have to not happen only up to a certain point; it should be clear how to modify the semantics below accordingly.) With stative $p$-s, things are different: if we look at examples like (5) or (13) where */motan* takes a stative argument, we can see that the relevant time frame (i.e. for the situation of going on living in (5), and the situation of looking after one’s own profit in (13)) is the moment of evaluation plus the immediately following time period. Now, a person $x$ living at the time of evaluation and for some time after will die eventually, so if $p$ is $live(x)$, both $p$ and $\neg p$ will be true at different time periods in the same world. But if we only consider the moment of evaluation plus a time interval immediately following it, each world will be classified as either a $p$-world or a $\neg p$-world, just as we want it.

Now we can define the formal version of the presupposition, using the framework of Condoravdi (2002):

(16) $[[\text{motan}]]^{w,t}(p)$ presupposes that
In the definition above:

(i) $p$ is a property of events;

(ii) $R_{\text{met}}(w, w', t)$ holds iff $w$ and $w'$ are identical up until time $t$; and

(iii-a) for a stative $p$, $AT(p, w', [t, \infty))$ holds iff there is a $p$-situation the running time of which includes $t^0$;

(iii-b) for an eventive $p$, $AT(p, w', [t, \infty))$ holds iff there is a $p$-situation whose running time is included into interval $[t, \infty)$.

Let us now turn to the assertion of $\text{motan}(p)$. If the presupposition of $\text{*motan}$ is about metaphysical possibility collapsed with metaphysical necessity, for the assertion it is harder to establish the exact modal flavor. The two candidates are circumstantial/metaphysical, and deontic modal flavors. (I will discuss the choice between circumstantial and metaphysical shortly, for now just noting that they are often so close that there are current debates as to which modern English examples feature which, cf. Abusch (2012) who disagrees with Condoravdi (2002)'s characterizations.) Some examples, from the modern point of view at least, seem to favor a deontic interpretation: e.g., (9) may be interpreted as featuring a request for permission, and a deontic analysis could be appropriate in examples such as (5) or (10). Other examples, however, would hardly be compatible with a deontic interpretation (for instance, (11)), while favoring circumstantial/metaphysical readings. But in the Alfredian sample considered I did not find examples which would be only compatible with one of the two analyses.$^{10}$ The Alfredian data do not allow us to determine whether Alfredian $\text{*motan}$ made deontic, metaphysical, circumstantial assertive contributions, or a combination thereof. In contrast to that, already in Ælfric (late 10th cent.) there are instances of $\text{*motan}$ that are almost undoubtedly deontic, as we will discuss in Section (3).

For concreteness, I assume as the baseline analysis that $\text{motan}(p)$ asserted metaphysical possibility, (17). Combined with the metaphysical assertion as in (17), the presupposition
of inevitable actualization in (16) entails that \( p \) will happen, and moreover that \( p \) was inevitable — a reading matching the informal analysis in (14).

\[
(17) \quad [[motan]]^{w,t}(p) \text{ asserts that } \exists w': R_{\text{met}}(w, w', t) \land AT(p, w', [t, \infty]),
\]

where \( R_{\text{met}}(w, w', t) \) holds iff \( w \) and \( w' \) are identical up until time \( t \).

But what if *motan’s assertion was circumstantial or deontic in some cases? For the circumstantial case, the first thing to note is that there is no case where *motan would assert circumstantial possibility without the realistic restriction on the modal base. A circumstantial accessibility relation determines a set of worlds where some facts and circumstances relevant in the evaluation world are true. Realistic relations in addition require that the actual world be accessible; in other words, they require that the facts used were all actual facts of the current world. In everyday speech, we are rarely interested in circumstantial backgrounds not restricted to be realistic: in practical situations, we usually discuss what can actually happen, and to reason about that, we need to start with true premises. A case where we might want to use a non-realistic circumstantial relation is when we discuss whether somebody who started from potentially faulty premises nevertheless used sound reasoning in their argument. There are no cases of that kind among the Alfredian OE instances of *motan. Our choice is thus not simply between metaphysical and circumstantial, but rather between metaphysical and realistic circumstantial flavors.

And the difference between those two flavors is subtle. For metaphysical relations, all facts whatsoever about the world are factored in. For realistic circumstantial ones, only a subset of actual facts is used. But of course, speakers are not omniscient, so they can never know all the facts about the world. When they are using a metaphysical modal relation rather than a realistic circumstantial one, that is mainly a matter of presentation. Using metaphysical modality implies pretending that you are omniscient, while using realistic circumstantial modality does not involve that pretense. Thus if we ask the speaker to provide
reasons for which they find a modal statement true, there can be differences between metaphysical and realistic circumstantial modals: for a metaphysical modal, the speaker may say “Well, \( p \) is possible because that’s how the world is”, whereas for a realistic circumstantial, they could instead point to a specific set of facts that supports the possibility that \( p \). But we cannot ask the speaker of Old English what they think. From what may be found in the Alfredian texts I examined, a metaphysical analysis seems to me more plausible if one has to choose one for all instances of \(*motan\), but that is a matter of judgement. A very similar analysis where both the presupposition in (16) and the assertion in (17) are reformulated using realistic circumstantial relations, also fits the data reasonably well.

What about a deontic-possibility assertion? Consider again one of the examples which in principle allow for a deontic interpretation:

\[(5) \text{ ‘But he who unwarily hews wood and by that slays his friend, it is necessary for him that he flee to one of those three cities, so that he be saved in one of them, so that he mote live.’} \quad (CP:21.167.15)\]

If we assume that \textit{mote} in (5) asserts a deontic possibility, it is clear from the context that whether the person in question will live hangs entirely on that permission. If there is such permission, he will live; if not, he will die. A similar intuition holds for other potentially deontic cases. To capture that, I suggest the following formal analysis for the cases where one would like to see a deontic assertion. In general, permission does not imply metaphysical possibility: I may be permitted (=not forbidden) to photograph a dinosaur, but that doesn’t make it possible. But Alfredian \(*motan\) is not used to describe permissions of that sort. I propose that if \(*motan\) could have a deontic assertion, it came with a further presupposition tying the deontic assertion to the metaphysical presupposition as in (16): that permission implies metaphysical possibility, or, in symbols, \(?_{deon}p \rightarrow ?_{met}p\). The overall semantics is then derived as follows:
(18) (i) Presupposition 1 (= (16)):
the metaphysically accessible worlds are either all $p$ or all $\neg p$.

(ii) Presupposition 2: $\Box_{deon} p \rightarrow \Box_{met} p$

(iii) Assertion: $\Box_{deon} p$

(iv) Consequence: $\Box_{met} p \land \Box_{met} p$

In other words, with the additional presupposition $\Box_{deon} p \rightarrow \Box_{met} p$, we derive metaphysical necessity as a consequence of deontic possibility.

To sum up, I proposed three possible analyses for the assertive component of Alfredian *motan: 1) the baseline metaphysical analysis; 2) its very close variant with a realistic circumstantial accessibility relation; and 3) the permission analysis with the additional presupposition that $\Box_{deon} p \rightarrow \Box_{met} p$. All three analyses predict the specific variable-force effect that we observed for *motan: sentences featuring it convey both the openness of the relevant possibility, and also the inevitability of its actualization if it is given a chance.

The proposed analyses may be viewed as approximating formally some of the intuitions reported by Standop (1957) regarding his third reading for OE *motan. Indeed, when the presupposition in (16) is met, possibility and necessity collapse together, forming an “Einheit”. The presupposition itself would be satisfied in particular in those contexts where some future has already been determined, measured out, granted by some higher force, be it Fate or God. (16) describes a situation where it is destined what will happen, and it is the assertion (be it metaphysical, circumstantial or deontic) that tells us what that destined future will be.

However, our proposal is not a mere formalization of Standop’s ideas. In particular, none of the three analyses for assertion suggested above makes “rights and duties coincide” (one of Standop’s informal characterizations of his “third meaning”, not supported with a specific example like some of the others). Similarly, it is not required in our proposal that the force determining the future would always be of a higher nature, as Standop writes — thus under Standop’s informal analysis, examples like (9) or (11) would have to be analyzed
as instances of some regular possibility or necessity meaning, as in them it is the human will that makes the outcomes inevitable. In our analysis, both are captured.

Moreover, there is a particular type of examples for which our analyses all make the same correct prediction, while Standop’s informal analysis does not: examples with negation. There are about twenty of examples in my Alfredian sample that feature a clausemate or higher negation. All of them convey the meaning of impossibility, cf. (19).¹¹

(19) Eala hu yfele me doð mænege woruldmen mid þæm þæt ic ne mot wealdan minra agenra [beawa] moðan.pr.3sg. ind. follow my own customs

‘Alas, how evilly I am treated by many worldly people, so that I mot not (= it is impossible for me to) follow my own customs.’ (Bo:7.17.23)

With our “collapse” presupposition in (16), that is in fact expected regardless of the relative scope of the modal and the negation: if ♦p ↔ □¬p, then ♦¬p → □¬p, and □¬p = ¬♦p. (For the metaphysical and realistic circumstantial cases, that goes through directly; for the deontic case, the same additional presupposition ♦deon → ♦met is used.) But if we simply add negation to Standop’s informal paraphrases, that would not necessarily result in an impossibility reading: e.g., if p has not been determined for me, that does not mean that ¬p was determined instead. Our ♦□ collapse presupposition in (16) is crucial for deriving the determinedness of the future.

2.3. Collapse variable force analysis versus its competitors from the historical literature. It is useful to compare our analysis based on the collapse presupposition in (16) with several analyses for OE *motan from the historical literature. The analyses we will consider are: 1) the ♦□ ambiguity analysis; 2) the unambiguous ♦ analysis, and 3) the “periphrastic subjunctive” analysis. The arguments for our analysis and against those three (and, indeed, any possible others) often have to be subtle: as we are dealing with a limited size corpus of historical texts, we cannot directly test semantic hypotheses by asking for
speakers’ opinions regarding test cases specifically constructed to tease different analyses apart. Instead, we have to rely on “soft” arguments based on statistical considerations and historical credibility. That said, historical linguistics can go a great length using only such “soft” arguments, and historical semantics is no exception to that.

The ambiguity analysis, by far the most popular in the literature, has several flaws. First, it fails to predict that *motan would only appear in contexts where inevitable actualization is assumed. Second, when we are dealing with a truly ambiguous item, then at least some of its contexts would feature cues for disambiguation. This is not what we find, and it is significant for the following reason. In Section (3) we will see that when a modal is truly ambiguous between ♦ and □ — as the Early Middle English descendant of *motan turns out to be, — then the context often quite clearly disambiguates it. The lack of such disambiguation evidence in Alfredian OE, and the presence of cases like (13) where expert translators use different translation equivalents for *motan, are thus evidence against the ambiguity analysis. To sum up, the ambiguity analysis provides little insight into the empirical distribution of Alfredian *motan, while also being not particularly convincing because of the lack of disambiguation cues in the texts.

The possibility analysis, as suggested by Solo (1977), is harder to show to be inferior to our collapse variable force analysis. After all, in our analysis the assertion of the modal is a possibility assertion. So the difference between the generic ♦ analysis and ours is in the fact that our analysis crucially employs the collapse presupposition in (16). There are two kinds of arguments that show that our analysis is better.

The first kind is based on statistical considerations. For example, without the presupposition, it becomes hard to explain why it is only *motan that is restricted to such a particular kind of contexts in Alfredian OE. Other modals do not have similar restrictions. Of course, it could be a statistical fluke that all 72 examples of *motan in our sample just happened to be this way. However, it should also be noted that *motan is a very rare modal: compare its 72 instances in our corpus to the about 1000 instances of magan (>modern
may) and the about 700 instances of *sculan (>modern shall, a deontic and circumstantial necessity modal of choice in Alfredian OE, and arguably with some futurate meanings as well). The presuppositional nature of *motan helps to explain this difference in frequency, but for the possibility analysis the difference is harder to make sense of.

Another similar piece of evidence comes from participation in scalar relations with other modals. In modern English, possibility and necessity modals form dual pairs where □ creates a strictly stronger statement than ♦ does. E.g., in “You may take this exam. In fact, you have to”, have to in the second clause strengthens the assertion made with may in the first. Similarly in Alfredian OE, we easily find cases where possibility magan enters into such relationships with necessity *sculan. For example, (20) is an instance of the scalar pattern “Not only can(p), but also have.to(p)’:

(20) hi beoð swa geþwæra þætte no þæt an þæt hi magan geferan beon, ac þy furðor þæt heora furðum nan buton oðrum beon ne maeg, ac a sceal þæt widerwearde gemetgian.

‘they (=fire and water, and sea and land) are so harmonious that not only can they be companions, but moreover that none of them can be without each other, but they always have to on the contrary restrain each other.’

No such examples where *sculan would strengthen *motan are present in our Alfredian sample. Now, this is not exactly a killer argument: as I noted above, magan is one order of magnitude more frequent than *motan, so it could in principle be that the absence of scalar patterns with *motan is a sheer accident. But other things being equal, a theory for which that fact is not an accident is to be preferred. For our variable-force theory of *motan, that is indeed no accident: because of the presupposition, *motan under our analysis is predicted to not be able to form scales with other modals, cf. the scheme in (21). And absence of scalar patterns with *motan is exactly what we see in the data.

(21) Alfredian Old English:
The second type of arguments comes from historical and typological observations. Suppose for a moment that *motan was indeed a regular ♦ modal. We know plenty of regular possibility modals in a wide range of languages with long recorded histories. But they don’t just turn into □ modals as they develop. At the same time, it is not only *motan that developed into a necessity modal, but all of its Germanic cognates as well. Now, if there was something semantically special about that common-Germanic word — for example, presuppositional variable-force semantics — then we can explain why its descendants had such similar trajectories of semantic change. But if *motan was a plain possibility modal, and so were all its Germanic cognates, then we have to assume that the same very rare event of a ♦ turning into a □ happened independently to a set of cognates across many Germanic languages. In historical linguistics, such an explanation is to be rejected, unless there is very strong evidence for parallel independent development, of which there is none in the case of *motan.

Taken together, the arguments of statistical plausibility and historical consistency, I believe, provide sufficient support for the presuppositional variable-force theory of *motan over the theory that says it was an unambiguous possibility modal.

Finally, let us consider the “periphrastic subjunctive” theory. To my knowledge, it has not been invoked specifically to account for the special properties of *motan, but it is a frequent enough theory of the semantics of OE (and ME) modals to merit some discussion. The “periphrastic subjunctive” theory states that modals did not actually have independent semantic content (at least in some uses). Instead, they were analytical substitutes for the inflectional subjunctive, which has been slowly, but monotonously dying out since OE. For modern English, an example of a “periphrastic subjunctive” would be should in sentences such as ‘It is essential that we should hire her’, on one of its readings.
It should be stressed that there are considerations that make this theory not completely implausible: in a number of constructions, modals did indeed replace the earlier inflectional subjunctive as it was lost. For example, ‘Long live the king!’ is one of the few fossils in Present-Day English that preserve the earlier subjunctive of matrix wishes, while later they gradually started to be expressed first with (the ancestors of) must, then with (the ancestors of) may.

Despite that initial plausibility, Ogawa (1989) convincingly argues against this sort of analysis for OE modals in general. Ogawa demonstrates quantitatively that various modals had in Old English very clearly defined distributions which at least in some cases call for semantic explanations. Moreover, one of the clearest signs that the modals did not simply replace the subjunctive is the fact that they sometimes appeared with indicative inflections, but other times, bore subjunctive morphology themselves. In particular, *motan has unambiguous subjunctive morphology in (5) and (7), and unambiguous indicative morphology in, e.g., (8) and (9). Thus the periphrastic subjunctive theory is just not a plausible analysis for OE modals.

Finally, one more theory deserves some attention, though it was not not to my knowledge ever discussed in the literature. It would be along the following lines: *motan was not a genuine modal, but rather a sentential modifier that marked its argument situation as good or desirable. I know of two reasons why this theory should be taken seriously, though neither of them applies directly to the Alfredian sample that I use as my primary source in this work. First, as (Ogawa, 1989, Ch. 4.5) shows, *motan was used under verbs of asking and requesting to mark situations where the requester and the beneficiary of the request (usually the embedded subject) were the same person. If *motan could convey the meaning of desirability, that feature of its distribution would follow. Second, in the laws of Alfred and Ine, representing earlier, and crucially much more formulaic, OE prose than the Alfredian translations, *motan, *sculan and the inflectional subjunctive are used almost interchangeably, but the argument situations of *motan always involve something
beneficial for the subject — e.g., “to swear (one’s innocence)”, — and never involve bad things like “to pay a fine” or “to forfeit one’s property”, as happens with the subjunctive and *sculan. Again, if *motan conveyed the desirability of its argument situation for the subject, that is exactly what we would expect. However, for Alfredian OE translations specifically, it is clear that such an analysis fails. Many examples of *motan in CP, Bo and Sol indeed involve something good, such as continuing to live in (5) or getting to see God in (7). But there are also examples where the argument situation is clearly undesirable for the subject, such as the weeping as in (11). The example (2) from Beowulf can also hardly be taken to feature a desirable argument situation.

Summing up, none of the arguments for the presuppositional variable-force theory of *motan is decisive on its own. But they all point in the same direction, and taken together make it very probable that my variable-force theory, or something fairly close to it, is true for Alfredian Old English. None of the theories suggested in the earlier historical literature comes closer to accounting for the actual distribution of the modal.

3. FROM COLLAPSE VARIABLE FORCE TO TRUE ♦-□ AMBIGUITY IN EARLY MIDDLE ENGLISH

Though Alfredian OE *motan can be rendered with either possibility or necessity modern modals, there is no sign of true ambiguity in the Old English data. But when we turn to Early Middle English *moten, we find a very different picture. My analysis of ME *moten is based on data from Ancrene Wisse, an early-13-century manual for anchoresses touching upon both spiritual and practical matters. That book, immensely popular at the time, is one of our best sources for Early ME, written the so-called ‘AB language’, a dialect written in the West Midlands of England. In that text, some of the about 60 instances of *moten are clear □ uses, while some others feature possibility, or at least non-necessity. The Early ME modal is thus truly ambiguous in the source language. In this section, I will briefly
discuss the Early ME distribution, and outline possible paths of semantic development that could have led from Alfredian variable force to the ambiguity of AB-language *moten.

In about half of the examples from Ancrene Wisse, *moten conveys the meaning of circumstantial necessity. This type of use is illustrated in (22), with two instances of *moten. For the first instance, owning a cow does not just create a possibility to think about the cow’s fodder: it necessitates such thinking. For the second instance, the conditional antecedent in the second sentence in (22) talks about the case when the anchoress really has no other practical options but to have a cow — after all, if she had such options, then the preceding discussion about choosing not to have a cow would apply. Thus in both instances, we have a normal necessity reading: there is no collapse of possibility and necessity as in Alfredian OE, and no other kind of variable-force effect.

(22) “You should have no animal but one cat only. An anchoress who has livestock seems more a housewife, as Martha was, she cannot easily be Mary, Martha’s sister, with her tranquillity of heart.”

for þenne mot ha þench en of þe kues foddre <....>
for then moten.prs.3sg she think of the cow’s fodder

‘For then she (=the anchoress) has to think of the cow’s fodder <....>’

Nu þenne, ðef eani mot nedlunge hebben hit, loki þet hit na
Now then if any moten.prs.3sg necessarily have it, see that it.NOM no
mon ne eili ne ne hearmi
man.acc not all not not harm

‘Now then if any (anchoress) absolutely has to have a cow, at least see to it that the cow does not hurt or ail anyone.’

But even though circumstantial-□ uses as in (22) are the most common for *moten in Ancrene Wisse, some instances of the modal do not allow a necessity interpretation. A particularly clear such case involves the use of *moten in prayers, as in (23):
In addition to the meanings of circumstantial necessity and of wishing/praying, *moten in the AB language could express deontic necessity (of the objective kind, with clear moral overtones), perhaps teleological necessity (in conditional consequents, where it is hard to tease apart deontic and teleological flavors), and also — though very rarely — was used in examples that can be connected to the Alfredian collapse variable-force semantics.

One of the cases of the last type is (24). Here, the modal seems to assert the deontic openness of the possibility to change the formal rule according to which anchoresses live. But that permission is explicitly tied to the desire of the anchoresses themselves, so the permission is asserted only for the cases where it would be followed upon. This is very close to how *motan was used in our Alfredian sample. The difference between Alfredian *motan and the kind of *moten we see in (24) is that the former’s distribution was entirely tied to this type of contexts, while for Early ME *moten, it is just one marginal possibility among many. It is not clear whether *moten in (24) bears the presupposition of collapse any longer: its occurrence in such a context may be due to inertia of use, rather than to a constraint built into the meaning of this semantic variant of the modal.

(24) ah ȝe ȝet moten changin hwen-se ȝe eauer wulleð, þeose for betere. but you yet moten.PRS.PL change whenever you ever will those for better

‘But on the contrary you moten change those [rules], whenever you want, for the better.’ (AW 8:5-6)
Thus the overall distribution of *moten in Ancrene Wisse may be summarized as follows. The dominant meanings in this 13-century text are the meanings of circumstantial and deontic necessity. Yet non-necessity meanings are also present. Importantly, both for prayers/wishes and for ◇-like meanings as in (24), there is a connection to the older distribution of OE *motan. Matrix wishes and prayers like in (23) still retain the complementizer þæt, so the overall combination þæt + motan may be connected to the same in OE purpose clauses (cf. (5) in Sect. (2)) and under attitudes like wilnian ‘desire’ (cf. CP CP:58.443.10, ex. (21) in the online appendix). As for possibility-like uses as in (24), it is not clear if they bear anything like the collapse presupposition anymore, but they still occur in contexts where that presupposition would be satisfied.

We thus find clear signs of continuity between Alfredian *motan and AB-language *moten. But there is also a crucial difference between them: while Alfredian *motan could be accounted for using a uniform meaning, *moten in Ancrene Wisse is a clearly ambiguous modal. The ambiguity of Early ME *moten is unusual in that it involves dominant □ as well as non-□, perhaps ◇, readings. So if we only looked at the two modals’ translation correspondents in Modern English, we could have concluded that both of them are “variable-force modals”. But when we compare them to each other, the difference becomes clear. For example, there are no such clear □ instances of *motan in the Alfredian prose as we have seen in (22) from Ancrene Wisse.

What the comparison between Alfredian *motan and Early ME *moten thus shows is that a true variable-force modal of the collapse type may develop into a ◇-□-ambiguous one. Moreover, the particular semantic distribution that we find in Ancrene Wisse makes good sense given our semantics for Alfredian *motan and what we know about semantic change in general. As we have already noted, wishing and ◇-like uses as in (23) and (24) show certain continuity with the uses of Alfredian *motan. As for the innovative □ uses, we can sketch reasonable lines of development from the Alfredian collapse variable-force meaning.
The emergence of circumstantial □, the most frequent meaning of *moten in Ancrene Wisse, is quite straightforward given our variable-force analysis for OE. In Alfredian OE, the possibility assertion of *motan implied necessity given the presupposition. It is well known that semantic reanalysis may lead to conventionalization of inferences and implicatures into the plain meaning of a lexical item. We illustrate where such reanalysis could happen with an example from Wulfstan’s Homilies (early 11th cent.) in (25).

(25) nu deofol sylf his mægnes mot wealdan,
now devil himself his might motan.PRS.3SG wield

& deofles bearn swa swiðlice motan cristene bregan.
and devil’s children so severely motan.PRS.PL Christians terrify

‘...now that the devil himself mot wield his power, and the devil’s children motan
terrify Christians so severely.’ (WHom, 5:55-56)

Both instances of *motan in (25) still fit the Alfredian meaning I proposed in the last section. For example, for the first instance it is claimed that the possibility for the devil to wield his power is open (the assertion of variable-force *motan), and it is known in the context that if the devil gets a chance to harm humans, he surely will (the presupposition of variable-force *motan). No opposition between possibility and necessity arises in the context. And yet we can also see the potential for semantic reanalysis in the same example. A reader or hearer of the passage, given the eschatological nature of Wulfstan’s text, may take the author to mean that now, when the worst days have come (as Wulfstan believed and extensively argued), it is circumstantially unavoidable that the devil wield his power. In fact, we cannot tell from this example alone which of the two meanings Wulfstan himself intended. The presence of such examples where both the old and the new meaning would both fit constitutes a precondition for reanalysis. And in Early ME (22), we see the later result of such reanalysis: *moten in (22) cannot be reasonably interpreted using the earlier collapse meaning. It has to feature the innovative circumstantial-□ meaning.
As for the rise of deontic □, there are two plausible possibilities. First, circumstantial □s often develop into deontic □s (cf. van der Auwera and Plungian (1998), a.m.o.) We do not know much about the particular reanalysis mechanisms that are at play in such developments, but they occur often enough. Second, there is a second potential pathway leading to deontic □ more or less directly from collapse variable-force *motan. It would involve *motan in conditional consequents. Consider another passage from Wulfstan’s Homilies:

(26) We motan nyde þæt stiðre þolian, gyf we clæne beon sceolan þonne we motan.PRS.PL necessarily the harder suffer if we clean be shall when se dom cymð, nu we þæne fyrst nabbad þe þa hæfdom þe the judgment comes now we the period not.have which those had which wiðforan us wæron. before us were

‘We motan without other options suffer harder, if we were to be clean when the Judgment comes, now that we don’t have the time that those who were before us had.’

(WHom, 4:30-33)

In the Alfredian sample, there is only one example out of 72 where *motan occurs in the consequent of an if-clause or a wh-ever construction (cf. (51) in the online appendix.) But the semantics of such contexts is compatible with the presupposition of collapse: in the worlds to which the conditional clause is taking us, there may be only one way things can be. (In fact, Stalnaker (1981) argues for a type of collapse analysis for would in conditional consequents, which we will discuss in the next section.) Arguably, in Wulfstan’s passage the presupposition is also met: there is only one way that his audience may become clean enough to be saved, and the consequent declares what that way is.

In (26), Wulfstan does not mean that people should seek suffering. In the larger context of our example, he explains that Antichrist is given power by God in order to inflict such suffering on good people that they can then go to heaven. Wulfstan’s Homilies were composed at the time of Norman attacks on England, which involved a lot of severe suffering for its inhabitants. Wulfstan apparently attempts to at least rationalize why such tremendous
pain is needed. So it is clear from the homily as a whole that (26) does not contain a moral instruction about what people should do. However, if we consider that example in isolation, we can easily substitute *motan with deontic-□ ought: ‘If we are to be clean, we ought to suffer harder’. So again, we have an example that allows for semantic reanalysis — in this case, reanalysis from a collapse modal to a deontic necessity one.

To determine which of the two potential pathways to deontic □ actually applied, a careful investigation of the primary sources for the critical period is needed. It can also be that both paths were relevant, reinforcing each other — or that there was some other, third line of development. But importantly, we already have a plausible scenario for how Alfredian *motan could have turned into its Early ME descendant. In fact, very few cases of semantic change received analyses that are better supported by primary evidence than the story for *motan that we have just told.

The same cannot be said for the theories that try to explain the semantic shift of *motan starting from the assumption that it was a plain possibility modal, rather than a variable-force one. There are two kinds of such analyses. Neither of the two was directly supported by primary textual evidence; both thus constitute logically plausible hypotheses rather than developed theories.

The first analysis is based on conventionalization of implicatures, cf. Traugott (1989), and is generally plausible because such conventionalization is often featured in semantic change. The argument is that the necessity meaning arises from a necessity implicature appearing when permission is granted by a high authority figure such as a queen. The idea is that when the queen permits you to leave, it also becomes necessary for you to do so. But there is no evidence for such subjective deontic-♦ uses of *motan in early sources. Our scenario for the emergence of circumstantial □ is thus better supported by the data.

The second analysis, cf. OED (2002), links the change to negative contexts, using the observation that “not possible” is equivalent to “necessarily not”. But, for instance, in Ancrene Wisse we find only 2 (!) instances of negated *moten, out of ca. 60 examples. And
even worse, one of those two features the reading “not necessary” rather than “necessarily not”: *nis nan þet mahe edlutien þet ha ne mot him luuien* ‘none is such that can avoid it that she *does not have to* love him [=Christ]’ (AW 7:229-30). The point of the passage is that no one can avoid loving Christ, and that interpretation can only be generated if the negation within *edlutien* ‘avoid’ and the negation on the modal cancel each other out. The existence of such ¬ □ examples casts serious doubts onto the theory that relies on □ > ¬ contexts for reanalysis.

Of course, theoretically such reanalysis through negative contexts could have occurred much earlier, so that by the time of *Ancrene Wisse* the new □ meanings were no longer associated with negative contexts and with □ > ¬ scope. But there is currently no spelled-out theory of “negative reanalysis” that would have said when and through which examples specifically that change would have happened, and how it could have been generalized from negative contexts to positive ones. Moreover, what makes this theory particularly doubtful is the fact that ◊ modals generally have narrow scope with respect to clausemate negation, for reasons yet unknown (cf. van der Auwera (2001)). But we do not see them routinely turning into □ modals.

4. **Variable-force modality in Old English vs. in St’át’imcets, Gitksan, and Nez Perce**

It is well-known that some constructions in natural languages may be underdetermined between possibility and necessity, like the ‘*have something to say*’ construction (Fischer, 1994, Sec. 3.2) or German modal infinitives (van der Auwera and Plungian, 1998, Sec. 3.3). However, recent semantic fieldwork on St’át’imcets, Gitksan, and Nez Perce has uncovered a group of modals which seem to feature a different kind of “indeterminacy” between possibility and necessity: while those modals may be rendered into languages like Modern English with both possibility and necessity modals depending on the context, there seems to be no lexical ambiguity or vagueness involved. In this section, I review the data and
analyses formulated for various variable-force modals of St’át’ímcets, Gitksan, and Nez Perce, and discuss how they compare to the Alfredian OE data and to my presuppositional variable-force analysis.

4.1. Variable force in Alfredian OE and the Pacific Northwest: the empirical picture. Schematically, the shape of the modal system in the three Pacific Northwest languages where variable-force modals have been described can be represented as follows, alongside the same for Alfredian OE:

(27) Alfredian Old English:

<table>
<thead>
<tr>
<th>ability</th>
<th>circ.+met.</th>
<th>future</th>
<th>deontic</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ magan</td>
<td>magan</td>
<td>—</td>
<td>non-modal</td>
</tr>
<tr>
<td>□</td>
<td>sculan</td>
<td>0 or sculan</td>
<td>sculan</td>
</tr>
</tbody>
</table>

(28) St’át’ímcets (Rullmann et al. (2008))

<table>
<thead>
<tr>
<th>deontic</th>
<th>future</th>
<th>various epistemic</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ ka</td>
<td>kelh</td>
<td>k’a; ku7; -an’</td>
</tr>
<tr>
<td>□</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Consultants select □ paraphrases for variable-force modals more often

(29) Gitksan (Peterson (2010), Matthewson (2013))

<table>
<thead>
<tr>
<th>circ.</th>
<th>deontic</th>
<th>epist.</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ da’akhlxw</td>
<td>anook</td>
<td>imaf’á; gat</td>
</tr>
<tr>
<td>□ sgi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Consultants select ♦ paraphrases for variable-force modals more often

(30) Nez Perce (Deal (2011))

<table>
<thead>
<tr>
<th>circ. and deontic</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ o’qa</td>
</tr>
<tr>
<td>□ —</td>
</tr>
</tbody>
</table>

Even though the diagrams above provide, by necessity, very limited information, that is already enough to see that the shapes of modal systems with variable-force modals may
vary significantly between languages. In St’át’imcets, all modal expressions are apparently variable-force. In Gitksan, variable-force modals occur in the epistemic domain with little competition. In Nez Perce, the variable-force modal (argued by Deal (2011) to be a regular ♦, as we discuss below) occupies the circumstantial/deontic meaning domain alone, without other modals. But unlike in any of those, in Alfredian OE variable-force modal *motan is in the same general domain of deontic-circumstantial-metaphysical modality as non-variable force *sculan and magan.

If we look closer yet, the Alfredian variable-force pattern of behavior turns out to be very different from those in St’át’imcets and Gitksan. First, there is no inevitability conveyed by the variable-force modals in the latter two. In St’át’imcets (31), we see the variable-force future marker kelh. That marker often corresponds to English simple future will, but does not have to. In examples like (31), the argument situation of kelh is not construed as inevitable, only as potentially possible in the future.

(31) (Rullmann et al., 2008, (19)):

\[
\text{ka-kwís-a kelh ti k’et’h-a} \\
\text{CIRC-fall-CIRC FUT DET rock-DET}
\]

‘That stone might drop.’

Similarly for Gitksan ima, no inevitability is conveyed by the modal in the general case:

(32) (Matthewson, 2013, (22)):

\[
\text{yugw=imaa/ima’=hl wis} \\
\text{IMPF=EPIS=CN rain}
\]

‘It might be raining.’

Another difference between Alfredian OE on the one hand and St’át’imcets and Gitksan on the other concerns the interaction between variable-force modals with negation. As we discussed in Section (2), Alfredian *motan always conveys impossibility when combined
with negation, cf. (19). But in St’át’imcets and Gitksan, variable-force modals can give rise to ‘not necessary’ readings.

(19) ‘Alas, how evilly I am treated by many worldly people, so that I mot not (=it is impossible for me to) follow my own customs.’ (Bo:7.17.23)

In St’át’imcets, at least the evidential epistemic k’a shows both ‘necessarily not’ and ‘possibly not’ readings in different examples, (Rullmann et al., 2008, Sec. 3.6), and variable-force modals kelh and ka show at least ‘possibly not’ readings. This differs from Alfredian *motan. As for Gitksan, the variable-force reportative evidential kat scopes uniformly above its clausemate negation, (Peterson, 2010, pp. 66-8, 149-50), producing readings like ‘I heard ¬p’, and never ‘I didn’t hear that p’. But only ‘possibly not’ readings are provided by Peterson and Matthewson for inferential epistemic ima, (Peterson, 2010, pp. 45), (Matthewson, 2013, Sec. 3.1). So again the pattern of interaction with negation is different from that of Alfredian *motan, for which we find only ‘not possible’ readings.

Summing up, Alfredian OE and St’át’imcets and Gitksan differ not only in the kind of accessibility relations their variable-force modals can use, but also in whether the modals always convey inevitability (Alfredian *motan does, while St’át’imcets and Gitksan variable-force modals don’t), and how they interact with negation (Alfredian *motan always gives rise to the impossibility reading, while in St’át’imcets and Gitksan ‘possibly not’/‘not necessary’ readings are also attested, and sometimes are the only attested ones for a given modal.)

The variable-force modal o’qa of Nez Perce, described by Deal (2011), is much closer to Alfredian *motan, though not identical to it. First, o’qa may use accessibility relations from the same general domain of circumstantial-deontic(-metaphysical) as *motan. Second, o’qa always gives rise to impossibility meanings when combined with clausemate negation. But there is a very important difference: inevitability is not conveyed by Nez Perce o’qa,
as the sentence in (33) shows. No such examples were found in my Alfredian OE sample (N=72).

(33) (Deal, 2011, ex. (7)):

\[
\begin{array}{ll}
píc\ \text{ha-}'ac-o'q\ &\ \text{mét'\ u wéet'\ u ha-}'ac-o'. \\
cat & \text{3subj-enter-MOD but not 3subj-enter-PROSP} \\
\end{array}
\]

'The cat could go in, but it won't go in.'

The second important difference between o'qa and *motan surfaces when the modal occurs in a conditional antecedent. In Alfredian OE, possibility and necessity collapse in such examples, as we discussed regarding (13). But for Nez Perce, Deal (2011) provides several examples with o'qa in the antecedent of a conditional for which her consultants accept a possibility paraphrase, but firmly reject a necessity paraphrase, cf. (34):

(34) (Deal, 2011, ex. (59)):

\[
\begin{array}{ll}
c'alawí 'aac-o'q\ &\ \text{kaa 'aac-o'.} \\
\text{if enter-MOD then enter-PROSP} & \text{OK 'If I can go in, I will go in.'} \\
* \text{ 'If I have to go in, I will go in.'} \\
\end{array}
\]

Summing up, Alfredian *motan is empirically very different from the variable-force modals of St’át’imihealth'cets and Gitskan, and is more similar to, but still quite different from the variable-force modal o’qa of Nez Perce. In none of the three Pacific Northwest languages does a variable-force modal convey a sense of inevitability as Alfredian *motan does.

4.2. Variable force in Alfredian OE and the Pacific Northwest: comparison of theories. Because of the empirical differences just described, my presuppositional analysis for *motan does not carry over to the Pacific Northwest variable-force modals: it would derive the inevitability effect which is not observed for them. In the other direction, earlier analyses do not carry over to Old English either. The five analyses of the variable-force effect proposed in the literature, for different languages, are as in (35):
(35) a. □ with narrowing Rullmann et al. (2008), for St’át’imcets

b. ◊ with widening Peterson (2010), for Gitksan

c. upper-end degree modal (≈ ‘somewhat probable’) (Kratzer, 2012, analysis I), for St’át’imcets

d. modal with only 1 accessible world (Kratzer, 2012, analysis II) (for no language in particular)

e. regular ◊ without a dual □ Deal (2011), for Nez Perce

None of the first three analyses in (35), formulated for St’át’imcets and Gitksan, is designed to derive anything close to either the inevitability effect or the pattern of interaction with negation where the variable-force modal always giving rise to an impossibility reading. But the ‘analysis II’ of Kratzer (2012) and the analysis based on the absence of a modal dual by Deal (2011) may account for an empirical pattern closer to the one we see in Alfredian OE, and thus will be discussed here.

The second variable-force analysis by Kratzer (2012) is the following suggestion (explored by Kratzer without proposing that it is the right analysis for any particular language). Suppose a modal quantifies over a singleton set of worlds. In such a case, there is no distinction between ◊ and □ any more: a collapse occurs. A modal specified as one that only quantifies over singleton sets of worlds would be, using the descriptive term, a variable-force modal. And in fact, Stalnaker (1981) proposes such a collapse analysis for would in English counterfactual conditionals, independently from any concerns about variable-force modals of the kind found in the languages of the Pacific Northwest.

Our analysis has a lot in common with Kratzer’s suggestion: under both of them, possibility and necessity collapse in the set of worlds quantified over. But there are differences, too. First, the way in which the collapse is imposed (namely the presupposition proposed for *motan) is specific in my theory, and left unspecified in Kratzer’s brief suggestion. Second, there is no need to assume that the quantified set is singleton under my analysis, so
in a sense the guiding intuition behind my proposal is slightly different from Kratzer’s: the possibility-necessity collapse occurs not just because it is impossible to distinguish ◊ and □ in a singleton set of accessible worlds, but as something that needs to be specifically imposed within the semantics. Modulo those differences, my theory for Alfredian *motan may be viewed as an elaboration of Kratzer’s suggestion.

Turning to the analysis of the variable-force effect proposed for Nez Perce by Deal (2011), in principle it may be applied to Alfredian *motan, but only if one grants several further assumptions with no empirical basis for them in the Old English data. Deal’s analysis for Nez Perce variable-force modal o’qa makes crucial use of the fact that Nez Perce lacks a modal that could have been o’qa’s vanilla-necessity counterpart. o’qa has deontic and circumstantial readings (in the same general modal meaning domain as *motan). In upward-entailing contexts, it behaves similarly to the Gitksan variable-force modals: it may be rendered by consultants into English using both possibility and necessity modals, but possibility translations are generally preferred. However, in downward-entailing contexts (namely under negation, in relative clauses modifying universally quantified noun phrases, and in antecedents of conditionals), o’qa appears to unambiguously convey possibility: consultants strongly reject sentences with o’qa as translations for English sentences with necessity modals in such environments.

Deal explains this pattern as follows: o’qa’s literal meaning is always that of possibility, so it has roughly the same basic semantics as modern-English can or may. The peculiar variable-force pattern observed in upward-entailing contexts, Deal argues, is due to the absence of a stronger necessity dual for that regular possibility modal. In English, the speaker would not use can when she can use a stronger have to. But if her language does not have a modal with the semantics of have to, there would be no reason for the speaker to not use can in upward-entailing contexts. The variable-force effect in such contexts would be simply an epiphenomenon of the shape of the overall modal system of a given language.
So can we apply the same line of reasoning to *motan? Unlike in Nez Perce, in Alfredian OE there is a modal that would have been a necessity dual for *motan: the deontic/circumstantial modal *sculan (>modern shall). *sculan is the pure-necessity modal of choice both in deontic and circumstantial contexts: in (36) *sculan conveys the meaning of moral obligation, while in (37) *sculan is a circumstantial □ modal: the context suggests a much stronger force making the action inevitable than just deontic necessity.

(36)  
Hu micle suidor sculon we donne beon gehiersume ðæm ðe ure  
how much more shall we then be obedient to him who we.gen  
gesta Fäder bid wið ðæm ðæt we moten libban on ecnesse!  
spirit.gen father is so that we motanprs.pl live on eternity  
‘Then how much more must we obey the father of our souls so that we moten  
live eternally!’ (CP:36.255.8)

(37)  
Preceding context: “Every person’s inner thought desires two things, which are the will and the power. If someone lacks one of those two, then he cannot fulfill anything with just the other.”

Forþam nan nyle onginman þæt þæt he nele, buton  
because none not.wants.to start that which he not.wants.to unless  
[nede] scyle; and þeah he eall wille, he ne mæg gif he þæs  
by.necessity shall and though he entirely wants.to, he not may if he that.gen  
pinges anweald nafð.  
thing.gen power not.has  
‘Because nobody would start what they do not want to (start), unless they have  
to by necessity; and when someone truly wants to (do that), they cannot if they do  
not have power over that thing.’ (Bo:36.106.13)

Now, I have noted above that it is hard to establish with certainty which modal flavors the assertion of *motan may have had in Alfredian OE: it occurs in examples that could be argued to exhibit a meaning from the general range of circumstantial, metaphysical and deontic, but it seems impossible to establish without doubt whether *motan definitely had each of those meanings. Given that uncertainty, if we really wanted to stretch Deal’s analysis
to cover Alfredian *motan, we could stipulate that *motan only had metaphysical readings, while *sculan had only circumstantial and deontic readings, but never metaphysical ones. If so, then *motan would indeed have no exact necessity dual, and we would be able to apply Deal’s account.

But there is no basis in the data for making such a claim: it would be just an ad hoc assumption adopted specifically to make one particular theory work. Moreover, the assumption that there was a complementary distribution between the modal flavors of *sculan and *motan is problematic on both historical and typological grounds. On the typological side, modals rarely have such clear-cut complementary distributions. On the historical side, even when a modal does lack a particular modal flavor, it can often acquire it in time if it already can express close modal meanings — and circumstantial modality is close to metaphysical modality, and is known to give rise to deontic readings in language change. So the assumption we’d need to adopt to make Deal’s theory work, even if true at some point, should have become false quite fast. That is not very probable given the fact that *motan’s cognates in other Germanic were special in similar ways, suggesting that the variable-force situation was in place for a relatively long time. The same comparison with other Germanic, as we already discussed, suggests that *motan had special semantics, not the regular ♦ semantics: otherwise, it would be strange that only that particular ♦ and all its relatives in other closely related languages underwent the change into a □ modal.

Finally, we have already discussed in Section (4.1) that empirically, there are two important differences between *motan and Nez Perce o’qa: first, o’qa does not convey inevitability (cf. (33)), and second, o’qa gives rise to regular possibility readings in conditional antecedents (cf. (34)). Given those two differences, it does not look as if there are any benefits in adopting Deal’s analysis for Nez Perce to Alfredian OE.

To conclude the comparison of data from, and theories of, the variable-force modals of the Pacific Northwest and Alfredian *motan, first, the distribution of the Alfredian modal
is different than that of any of the Pacific Northwest variable-force modals; second, our presuppositional theory of *motan should not be applied to St’át’ímcs, Gitksan or Nez Perce, as it would make wrong predictions; third, the earlier accounts of the variable-force effect proposed in the literature do not apply to Old English *motan either.

5. Collapse variable force and other cases of inevitable actualization semantics

In this section, I discuss the relations between my collapse variable-force analysis for *motan and three different areas of modal semantics: 1) actuality entailments; 2) semantics of ability;19 and 3) acquisitive modality in languages spoken around the Baltic Sea. In all three cases, semantic elements are used that are very close to the ones we employed in the analysis of Alfredian *motan: possibility implying actualization, and setting a course of events without there being any possible alternatives. But the way those components are brought together in the lexical meanings, and the particular flavors involved, differ in all four cases. This section is thus a brief study of three phenomena that are close enough to collapse variable-force modality that one might try to see if they are the same, — but which all turn out to be quite different from Alfredian *motan in the end.

5.1. Collapse variable force and actuality entailments. Recall our collapse semantics for Alfredian *motan: the presupposition says that all possible developments of the evaluation world worlds are either all $p$ or all $\neg p$; the assertion says that some of them are $p$; it follows that in fact all of them are $p$. Thus the modal claim entails actualization of $p$.

That effect is similar on the surface to actuality entailments of non-epistemic modals, cf. Hacquard (2009), a.o. As argued by Hacquard, actuality entailments arise when a non-epistemic modal appears under perfective aspect. In such a configuration, it is implied that $p$ that is the argument of the modal has actually occurred:

(38) Pour aller à Londres, Jane a **pu** prendre le train.  
    to go to London, Jane has can.PST.PART take the train
lit. ‘To go to London, Jane was able to take the train.’, but can’t be followed by ‘...but he actually didn’t.’

In both the collapse case and the actuality entailment case, the argument situation $p$ of the modal is implied to actualize. However, the conditions under which that happens differ in the two cases. First, actuality entailments only arise in perfective environments, while the effects of collapse variable-force do not depend on the tense-aspect form of the modal. Second, modal statements with actuality entailments do not presuppose anything about the context: they may be made regardless of any prior assumptions about the actualization of $p$. So while the end effect is similar in the two cases, the conditions under which it arises are different, and thus the mechanism by which it comes through is likely to be different as well.

5.2. **Collapse variable force and ability modals.** Ability modals as in ‘Mary can swim’ look like possibility modals in many respects. For example, ability markers often serve as circumstantial-♦ markers as well, as English can and be able do. Moreover, ability modals do not make the scheme $Op(p) \land Op(\neg p)$ a contradiction, which makes sense if they are ♦s: in logic, $(\diamond p) \land (\diamond \neg p)$ is a contingent statement that can be true or false, but $(\Box p) \land (\Box \neg p)$ may be true only if there are no accessible worlds whatsoever. Ability can behaves as a ♦ in this respect:

(39) Mary can swim (which not everyone can), and of course Mary can [not swim], too (just as virtually every human).

But there are also properties of ability modals that make them not so similar to other ♦s. In particular, they give rise to entailments as in (40). An overview of related phenomena and their treatment in the literature may be found in (Portner, 2009, Sec. 4.4.1), who writes that current approaches to such facts ‘are alike in combining some sort of existential quantification, corresponding to the idea that the agent chooses an action, and some sort
of universal quantification, corresponding to the idea that the action guarantees a certain outcome'.

(40) Mary can swim.

⇒ Whenever Mary wants to (and the circumstances are normal), Mary will swim.

The form of the inference in (40) is structurally similar to our presupposition of collapse variable force. Informally, the ability inference says that if an action is enabled by the agent’s desires, the action will actualize. The collapse presupposition says that if the action is enabled by the way the world is, it will actualize. The status of the two statements is different: one is entailment, another a presupposition; the nature of the enabling is also different — for ability modals it’s the agent’s attitude, while for our collapse presupposition it’s the way the world objectively is. But the overall schema is similar.

So both in the case of actuality entailments and that of ability modals, what we are seeing is semantic building blocks similar to the ones used in the collapse presupposition, but employed differently, to produce different meanings.

5.3. **Collapse semantics around the Baltic Sea?** In the languages spoken around the Baltic Sea, there exists an areal phenomenon of **acquisitive modality**, cf. van der Auwerda et al. (2009), a.o. Verbs with the basic meaning ‘get’ in those languages acquired modal meanings as well, and have been described as sometimes conveying possibility, and other times necessity. Such *get*-modals include: Norwegian *få* (Askedal (2012)), Swedish *få* (Viberg (2002), Viberg (2012)), Finnish *saada* (Kangasniemi (1992), Viberg (2002)), Estonian *saama* (Tragel and Habicht (2012)), Latvian *dabūt* (Daugavet (2014)), as well as modals in other Finno-Baltic and Baltic languages.

From the descriptions in the secondary literature, it may seem as if some of those *get*-modals have semantics similar to the semantics of collapse variable force. If that were the case, we could have used data from the Baltic-Sea languages to shed further light on OE *motan*. Consider, for example, what Kangasniemi (1992) writes on Finnish *saada*:
'One motivation for the use of *saada* in expressions of necessity may be the speaker’s or writer’s pursuit of irony, stating that the actor has the possibility of doing something that he or she does not want to, and moreover, that *all other possibilities are excluded.*' (Kangasniemi, 1992, p.62); [emphasis mine]

And from the following description, it may seem as if there is no real ambiguity in Finnish *saada*:

(41) **Saa-t lähteä matkalle taivaaseen.**  
**SAADA-2SG go trip.textscAll heaven.ILL**  
‘You may/have to set out for your trip to heaven.’

‘The interpretation of [(41)] depend[s] on whether the agent wants to perform the act or not, i.e. whether the addressee of sentence [(41)] wants to go for a trip to heaven <...>. Thus sentence [(41)] could be interpreted as permission in a religious context (which was in fact the case) but as an obligation or a threat in James Bond adventure.’ (Kangasniemi, 1992, p.322-3)

Kangasniemi’s description suggests that *saada(p)*, at least in this case, simply signals that the future is determined in a particular way, and the choice of a translation equivalent depends on the perception of that determined future as desirable or undesirable. That looks somewhat similar to *motan(p)*, which according to our analysis entailed the absence of alternatives for *p*.

(Viberg, 2002, p.132-3), who at the time apparently was not aware of Kangasniemi’s work on Finnish, describes Swedish modal *få* very similarly:

Which alternative applies is a pragmatic question. <...> In the following example [(42)], Obligation is the correct interpretation, and this is also reflected in the English translation. The passage is taken from a novel (P.C. Jersild: Babels hus 1985) and describes what happens when someone arrives at a hospital. The presupposition is that someone who feels ill wants to stay at the hospital:
(42) Den som inte är sjuk är följaktligen frisk och får åka hem igen.

‘The person who is not ill is consequently well and has to go back home.’

In the following example [(43)] taken from the same novel, another patient wants to leave the hospital after an operation. In this case, Permission is the appropriate interpretation, which is reflected in the translation:

(43) Han skulle förmodligen snart få åka hem.

‘He would presumably be allowed [(to) go] home soon.’

Again, this explanation seems to feature components similar to the parts of our collapse variable-force analysis. There is a fixed course of events, and the translation equivalent of the modal depends on the perception of that course of events. In Old English, we could see that as well: *motan would be considered a possibility modal when the argument situation was desirable, as in (1) or (5), and a necessity modal when the situation is undesirable, (2) and (11). But I argued that in both cases we are dealing with the same semantics that ultimately conveys that there is a single alternative in the metaphysically accessible set of worlds.

So the question is whether Baltic-Sea aquisitive modals indeed have collapse variable-force semantics, or not. If they did, we would expect those aquisitive modals not to appear in those cases where their argument $p$ is an open possibility (circumstantially, metaphysically or deontically), but where it is not assumed that $p$ would necessarily actualize if it’s given a chance. We can test this prediction both using speaker’s judgments and naturally produced texts, and it turns out that at least in Norwegian, Swedish, Finnish and Estonian, *get*-modals behave differently from Alfredian *motan.

Imagine that John, an adult host, is explaining to Robin, a child, what she can and cannot do while she is at this house. There are multiple possibilities. She can play in the garden, and she can also watch cartoons in the room. Those are possible (both in the
deontic and in the circumstantial/metaphysical sense), but it’s not assumed that Robin will necessarily engage in one or another. The presupposition of inevitable actualization thus does not hold. Yet Norwegian få (which seems to be deontic) and Estonian saama (circumstantial) are good in this context (and Finnish deontic saama is good as well):20

(44) Estonian saama:

Sa saa-d mängi-da aia-s. Sa saa-d ka vaada-ta
you saama-2SG play-INF garden-INE you can-2SG watch-INF there
seal multika-id
cartoon-PL.PAT

‘You have the possibility to play in the garden. You can also watch cartoons over there.’

(45) Norwegian få:

Du får leke i hagen. Du får ogsåse tegnefilmer der.
you få play in garden you få also see cartoons there

‘You may play in the garden. You may also watch cartoons over there.’

We can also find naturally occurring examples where it is clear that despite the possibility for p is declared to be open, it is not assumed that it would be necessarily used. With Finnish saada in (46), it is clearly not presupposed that every teenager will work right after they get the right to. (The rest of the text describes other legal rights and restrictions — e.g., the age when a person can get a driver’s license, etc.) With Swedish få in (47), the relatives of immigrants are clearly not legally obliged to take the integration courses.

(46) Finnish saada:

Si-nä vuon-na, kun nuori täyttää-ä 14 vuot-ta, ääÅfnne-t saa
that-ESS year-ESS, when young fill-3SG 14 year-PART, they.3SG-ACC saada.3SG
ot-a kevye-en työ-hön.
take light-ILL work-ILL

"In the year when the young person gets 14 years, it is allowed to take him into
light work."
6. Conclusion

I have proposed a new analysis of the semantics of *motan in Alfredian Old English, arguing that it was a non-ambiguous variable-force modal. I derived the variable-force effect from the presupposition in (16), which forces possibility and necessity collapse in the set of worlds quantified over by the modal. This type of variable-force effect has not yet been observed, so Alfredian OE makes the typology of possible variable-force modals richer. Apparently there exist very many ways in which a variable-force effect may arise: the variable-force modals of St’át’imcets, Gitksan, Nez Perce, and Alfredian Old English, as well as the get-modals of the Baltic-Sea languages, seem all to show important distributional differences.

By the Early Middle English period, *moten turned from a non-ambiguous variable-force modal into one ambiguous between various possibility and necessity readings. I have shown, using evidence from Late Old English, that the rise of necessity readings for *motan/ *moten
can be explained well if we assume the proposed variable-force semantics for the earlier period.

Comparing the collapse semantics for *motan with the semantics of (i) actuality entailments, (ii) ability modals, and (iii) Baltic-Sea get-modals, we have seen how the semantic components of our meaning may occur in other linguistic constructions, though in different combinations and to a different end. This can be taken as evidence that our collapse semantics is natural, in the sense that it uses elements that are independently needed for the analysis of other natural-language phenomena.

The evidence supporting the new semantics for Alfredian *motan notwithstanding, could the proposal be wrong after all? As is always the case in empirical sciences, it may. There is plenty of evidence that may in the future falsify the presented theory. First, I have not examined the whole corpus of early and late Old English writing, which features quite a number of instances of *motan. Second, there is data from other early Germanic languages: *motan’s cognates are relatively widely used in Old Saxon and Old High German surviving texts. Third, German müssen was later on borrowed by Old Czech and Old Polish, and studying that process could provide additional insights into the semantics of the modal in the Germanic languages. If my proposal is on the right track, one should be able to eventually fit all those data together within a single general theory. Thus fortunately, there are many ways in which future research can falsify or further support the variable-force theory of *motan proposed in the current paper.


Drawing on the uncompleted edition by E.J.Dobson, with a glossary and additional notes by Richard Dance.


The star in *motan and *moten indicates that those particular forms are reconstructed from the known stem and inflectional ending, but were not observed directly: there are no instances of the infinitive of the modal in either OE or ME.

The orthography of OE and ME shows significant variation, and I use the following convention throughout the paper. When referring to OE and ME lexemes, I use the primary dictionary form from Bosworth and Toller (1898) and MED (2002), respectively. However, when citing a particular form from a specific example, I use the same orthography as in the example. Thus in the main text I write weorþ for the lexeme, but wyrðne when referring to the instance of that same word in (7).

I aim to minimize by-morpheme glosses, and thus gloss with wordforms of modern English whenever possible. PRS stands for present, PST for past, IND for indicative, SBJ for subjunctive.

For modals other than *motan I provide the modern descendant of the modal in the gloss, even though in many cases the modern modal is no longer capable of expressing the meaning conveyed by its OE ancestor. In translations, I aim to keep the structure of the sentence close to that of the original OE example, rather than provide a smooth Present-Day English translation. I leave *motan untranslated, in order not to smuggle in my analysis.

The modern Dictionary of Old English DOE (2007), which is to eventually replace Bosworth and Toller (1898) as the new standard dictionary, is currently in progress, and the entry on *motan was not in the works yet at the time of preparation of this paper.

It is hard to interpret Standop’s position on the presence of the necessity sense in OE. On the one hand, he says on pp. 169–170 that OE *motan lacked the meaning of pure, abstract necessity. On the other, on pp. 75-76 he calls the meaning of abstract necessity “rare” rather than completely absent, and provides an example where motan “ist fast normales müssen”.

“Examples are so numerous — mainly because our interpretation sheds new light on many — that one can quite indiscriminately pick out some.”

However, for the particular example from Wulfstan that is provided by Warner, Standop’s meaning is hardly appropriate.

Some semantic theories utilize principles such as Maximize Presupposition (cf. Heim (1991), Schlenker (2012)), which requires that given a choice between a lexical item with presupposition p and another lexical item without it, the first one should be used in a context that supports p. One may then worry that if we adopt a presuppositional analysis for *motan that I propose below, given Maximize Presupposition that
would predict precisely the absence of other modals from the contexts where the presupposition of inevitable actualization is satisfied. However, that principle actually does not affect our case: the semantic differences between modals in OE are not restricted to the presence of the relevant presupposition. All things not being equal, **Maximize Presupposition** does not apply: speakers may choose a presupposition-less modal because they find another of its semantic features most fitting the context.

8I was able to settle on this particular variant of the analysis, featuring specifically the metaphysical accessibility relation in the presupposition of *motan*, thanks to a discussion with Katrina Przyjemski. In addition to plain-metaphysical, one might argue that the presupposition could be circumstantial (“if the currently relevant facts make \( p \) possible, they also make \( p \) necessary”), and, as an anonymous reviewer notes, that it might also be metaphysical with a stereotypical ordering source (“if under the normal course of events, \( p \) would get a chance to actualize in \( w \), then normally it would actualize in \( w' \)”).

9This is where my semantics differs from the one given by (Condoravdi, 2002, p. 70, (19)). In Condoravdi’s semantics, for stative \( p \)-s, \( AT(p, w', [t, \infty]) \) holds iff \( p \)’s running time intersects with \([t, \infty)\). The difference is that on my semantics above, \( t \) is included into the \( p \)-interval, while on Condoravdi’s original semantics, it does not have to. For an epistemic sentence like *Mary might be in London*, Condoravdi derives a meaning that is true if it’s compatible with the relevant knowledge that Mary will be in London at some point in the future. With my definition of \( AT \), *Mary might be in London* can only be true if it’s not ruled out by evidence that Mary is in London now. I conjecture that the new semantics might be better across the board, as long as one allows for silent temporal arguments supplied by the context which may sometimes shift \( t \) to some relevant moment. For example, if we had been talking about a workshop to be held in London next June, *Mary might be in London* could effectively mean *Mary might be in London at the time of the workshop*.

Regardless of how that is resolved for modern English, there is no evidence of such forward-shifting for stative arguments of *motan* in Alfredian OE. At the same time the assumption of \( t \)-inclusion is crucial for deriving that metaphysical necessity that \( p \) entails metaphysical impossibility that \( \neg p \).

10The case of (9), one of the examples that favor the deontic interpretation the most, illustrates the difficulty well. From the modern-English point of view, it may feel natural to find the deontic flavor in that question. But Alfredian *mot* in (9) is a rendering of Latin *pateris*, with the primary sense “to be open”. The Latin word may also convey “to be accessible, attainable, allowable”, but the deontic flavor is secondary to the metaphysical/circumstantial one. Of course, the Latin correspondent does not rule out that the OE translator could intend a deontic interpretation for the modal. But the correspondence makes it less likely.
Moreover, this pattern of interaction with negation seems to hold across *motan’s cognates in other early Germanic: Breitbaerth (2011), studying the relative scope of modals and negation in Old Saxon (=Old Low German), finds that all 16 examples in her corpus convey impossibility, just as our Alfredian OE examples. However, cf. the discussion of later OE and Early ME in Section (3): with changes in the semantics of *motan/*moten, the previously unobserved ☐¬p meaning distinct from ¬☐p becomes available. Similarly in some of the Dutch dialects moeten, a cognate of OE *motan, scopes under negation, as well as Standard German müssen.

Note that forms such as moton in (11) are morphologically ambiguous. Though textbooks would give moton for the pres. ind. plural form, and moten for the corresponding subjunctive — which is in principle correct diachronically, — the vowels of such unstressed syllables were heavily reduced, and generally exhibit great variation in various manuscripts. Without carefully investigating the orthography of a given manuscript and reconstructing the morphological situation represented by it, one cannot assume that the spelling moton unambiguously signaled indicative. One should be especially careful given the fact that the levelling of the on-en endings seems to have been more rapid in preterite-presents such as *motan than in other verbs, see (Kitson, 1992, p. 66). Cf. also (Mitchell, 1985, §22) on the “confusion” between en/on in general. In contrast to that, the difference between mot and mote is a reliable indicator of a morphological difference, as the distinction between the zero and e endings survived into the Middle English period.

An anonymous reviewer asks about the following theoretical possibility: what would we get if we say that motan in motan(p) signaled “that p is an argument of a higher deontic or circumstantial modal operator”? As far as I can see, such a “modal concord” analysis does not give us much by itself. The distribution of *motan is highly peculiar, and needs to be explained. As the appearance of *motan does not correlate with any particular syntactic environment, cf. (5)-(11), the higher operator would have to be assumed to be covert. And it does not help us if we blame a mysterious higher covert operator for the semantic properties of *motan’s contexts: we still need to explain the peculiarities.

The edition used was Millett (2005). I checked my interpretation of the Middle English examples with the glosses in Hasenfratz (2000).

There may be different opinions regarding what exact meaning the modal in contexts like (23) has. But in Present-Day English, necessity modals cannot be used in such contexts, and possibility may is used instead. Moreover, as *moten gradually turned into an exclusively necessity modal in Late Middle and Early Modern English, it was ousted from such wishes/prayers (cf. §1692, §1680-1 of Visser (1963-1973)). That fact shows that whatever particular meaning the modal had in such constructions, it was crucial for it to be able to have non-necessity semantics in order to appear in them.
I provide homily number and line numbers from the edition of Bethurum (1957).

Rullmann et al. (2008) are a bit more cautious about the epistemic markers *ku?* and *-an’*, but the rest are unequivocally variable-force.

Both Rullmann et al. (2008) and Peterson (2010) attribute the rise of the variable-force effect to special mechanisms manipulating the quantificational domain of the modal. But there is a crucial theoretical difference between the two approaches. Rullmann et al. (2008) use a special apparatus of choice functions applied to sets of worlds to implement the narrowing, while Peterson (2010) proposes to use the standard apparatus of conversational backgrounds by Kratzer (1981) to the same end. As the result, Peterson’s treatment of Gitksan’s modals ends up being very similar to Kratzer’s treatment of German *können*, and his treatment of St’át’imcets modals, to Kratzer’s treatment of German *müssen*. But empirically German modals and the modals of Gitksan and St’át’imcets are very different. It is not clear how Peterson’s system that uses the same apparatus for both can accommodate that fact.

I owe the clarification of those two connections to discussions with Paul Portner and Irene Heim and to the comments of an anonymous reviewer.

I am grateful for the judgements to Atle Grønn, Andres Karjus and Lauri Karttunen.
Online appendix

Alfredian OE examples with *motan from Cura Pastoralis, Boethius and Soliloquies, with philological translations and with Latin correspondences for Cura Pastoralis and Boethius

Examples have been found with the help of YCOE and CorpusSearch, with search queries of the following form:

node: $ROOT
query: (*MD* Dominates mo*) AND (*cosolilo*|*coprefsolilo* inID)

As YCOE does not always use the latest edition of the text, I provide the examples according not to their YCOE form, but to the form of the latest edition. The only exception is Pastoral Care, for which I consistently provide the text according to Sweet (1871), even though a partial newer edition exists, namely Schreiber (2003).

Translation variants are provided for all full translations of the relevant works known to the author (namely, all those listed in Waite (2000), plus the recent translation of Boethius in Godden and Irvine (2009)).

APPENDIX A. OLD ENGLISH CURA PASTORALIS

IDs of the form cocura,CP:9.57.5.356 are from YCOE. The first number of the ID points to the chapter; the second, to the page in Sweet (1871); the third, to the line in Sweet (1871); the fourth, to the number of the “syntactic fragment” in YCOE.

1Restricting the search to modal constituents starting in mo is safe in the sense that it returns all the instances of *motan tagged as modals in YCOE (presumably, there are no instances of *motan which are not marked so in the corpus.) Actual initial searches have been more sophisticated in order to ensure that no examples are lost because of unexpected spellings.
OE text is given according to the edition Sweet (1871), the version based on the Hatton 20 manuscript. Translations under (b) are from the same edition and are by Sweet. Latin text under (c) provides the corresponding passage from the original, where there is such. Translations under (d) are from the partial translation by H. W. Norman, printed in Giles et al. (1858) (the translation ends at Chapter 10).

(1) a. Donne he to fundað, he ondræt ðæt he ne mote to cuman, and sona swa he to ðære are cymð, swa ðyncð him ðæt se hie him neidscylde sceolde se se hie him sealde, & brycð ðære godcundan are worldcundlice, & forgitt swiðe hræðe ðæt he ær æfæstlices gedøhte. (CP:9.57.5)

b. While he is aspiring to it, he dreads not attaining it, and when he attains the honour he thinks he who granted him the honour was bound to grant it out of necessity, and enjoys the divine honour in a worldly spirit, and very soon forgets his former pious resolutions.

c. Tendens enim, ne non perveniat, trepidat: sed repente perveniens jure sibi hoc debitum, ad quod pervenerit, putat.

d. When he is seeking it he dreads that he may not come to it, and, soon as he comes to the honour, so seems to him that he who gave it him owed it him, as a necessary debt, and brooks the spiritual benefice in a worldly manner, and forgets very quickly what he before religiously thought.

(2) a. Hu mæg he ðonne beon butan gitsunge, ðonne he sceal ymb monigra monna are ðencan, gif he nolde ða ða he moste ymb his anes?

b. How can he be without covetousness when he has to consult the interests of many, if formerly he would not avoid it when he had to consult his own interests alone?
c. Nequaquam vincere avaritiam potest, quando ad multorum sustentationem tenditur, is, cui sufficere propria nec soli potuerint.

d. How can he be without covetousness when he must think about many men’s sustenance, if he would not when he might think about his own alone?

(3) a. Dat sindon da de gehierad Godes word, & mid daere geornfulnesse & mid daere wilmunge disse vorlde & hiere welenæ bið asmorad daet sæd Godes worda, deah hie upaspryttæn, daet hie ne moten fulgrowan ne wastmæbre weordan. (CP:11.67.20)
b. That is those who hear the word of God, and by the cares and desires of this world and its wealth the seed of God’s words is smothered, although they spring up, so that they cannot flourish or bear fruit.

c. No direct parallel:

Semen autem, quod in spinis cecidit, hi sunt, qui audierunt verbum, et a sollicitudinibus et divitiis et voluptatibus vitae euntes suffocantur, et non referunt fructum.

(4) a. & ne gefeon hie na daet hie ofer oðre menn bion moten sua suide sua daes daet hie oðrum monnum mægen ny[t]toste beon. (CP:17.109.2)
b. nor rejoice so much in having authority over others as in being most useful to them.

c. nec praeesse se hominibus gaudeant, sed prodesse.

(5) a. Da de ofer oðre bioð giemen hie geornlice daette sua micle sua hira onwald bið mara gesweeney ofer oðre menn daet hie sua micle ma sien innan gedryccede mid caðmodnesse, dylæs daet gedøht hine ofersuíde & on lustfulnesse his mod geteo hwelces undeawes, daet he hit mæge donne to his willan gewealdan, forðæmde he him ær to undeawum his ag[en]ne willan underðeodde, & him gedafade daet hit mid anwalde him moste oferricsian, daette daet ofsetene mod mid daere lustfulnesse his anwaldes ne sie getogen to upahafenesse. (CP:17.119.13)
b. Let those who are above others be very careful that the greater their visible authority over others the more they be inwardly subdued by humility, lest his imagination overcome him and lead his mind to the desire of some vice so that he cannot subject it to his will, because he formerly had made his own will subservient to his vices, and allowed it to rule over him with authority, lest the troubled mind through the intoxication of authority be led to pride.

c. No direct parallel:

Studeant igitur sine intermissione, qui praesunt, ut eorum potentia quanto magna exterius cernitur, tanto apud eos interius deprimatur, ne cogitationem vincat, ne in delectationem sui animum rapiat, ne jam sub se mens eam regere non possit, cui se libidine dominandi supponit.

6.

a. forðæm ðæt wære his willa ðæt he moste ymb swincan, ond ðync[ð] him gesuinc ðæt he bið butan woroldgesuincium. (CP:18.127.24)

b. since it was his desire to be allowed to toil therein, and it seems to him a hardship to be without worldly troubles.

c. Voluptatem namque censent, si actionibus deprimantur, laborem deputant, si in terrenis negotiis non laborant.

7.

a. Ac se se ðe unwærlice ðone wuda hiewð, & sua his freond ofsliehð, him bið nidðearf ðæt he fleo to ðara ðreora burga anre, ðæt he bið butan woroldgesuincium. (CP:21.167.15)

b. But he who carelessly hews the wood, and so slays his friend, must flee to one of the three cities, that he may save himself in one of them, that he may live;

c. Sed is, qui incaute ligna percutit et proximum extinguit, ad tros necesse est urbes fugiat, ut in una earum defensus vivat:

8.

a. Be ðam saglum is suiðe gesceadlice gecueden ðæt hie sculon simle stician on ðam hringum, & næfre ne moton him beon ofatogene, forðæm is micel niedðearf
ðætte ða de beoð gesette to ðære ðenunga ðæs lareowdomes ðæt hi næfre ne gewiten from ðære geornfulnesse ðære rædinge & leornunge haligra gewrita.

b. It was very wisely directed that the poles were always to remain in the rings, and never be pulled out, because it is absolutely necessary that those who are appointed to the ministration of instruction never swerve from the desire of reading and learning the holy Scriptures.

c. De quibus apte subditur: "Qui semper erunt in circulis, nec unquam extra-hentur ab eis." Quia nimimum nescesse est, ut qui ad officium praedicationis excubant, a sacrae lectionis studio non recedant.

(9) a. Lætt ðonne an ðæt gefeoht sua openlice sume hwile, & ongienð hine diogollicce læren, & slitan his inngeðonc, & bit ðære tide, hwonne he ðæs wierðe sie ðæt he hine besuican mote.

b. So he ostensibly gives up the contest for a time, and begins to advise him secretly, and to wound his mind, waiting for the time when he is fit to be deceived.

c. interim quiescens, et secreta suggestione cogitationem lacessens aptum deceptionis tempus inquirit.

(10) a. Ðonne is æfter ðæm gecueden ðæt he sargige æt niehstan, ðonne his lichoma & his flæsc sie gebrosnod, forðæm oft sio hælo ðæs lichoman on unðeawas wierð gecierred, ac ðonne he ðære hælo benumen wierð mid monigfaldum sare ðæs modes & ðæs flæsces, se lichoma ðonne wierð gedrefed, forðæm sio saul, ðonne hio hire unðonces gebæedd wierð ðæt yfel to forlætanne ðæt hio ær longe on woh hire agnes ðonces gedyde, secð ðonne ða forlorenan hælo, & wilnað ðære, suelce he ðonne wel & nytwyrðlice libban wolde, gif he ford moste.

b. It is further said, that he will then sorrow, when his body and flesh are consumed, because often the health of the body is directed to vices, but when he
is deprived of his health with manifold pains of mind and body, the body is afflic-
ted, because the soul, when unwillingly compelled to forsake her wickedness,
which she formerly for a long time wickedly exercised of her own free will, seeks
her lost health, and desires it, as if she were going to live well and profitably, if
spared.

c. No direct parallel:
Bene autem subditur: "Et gemas in novissimis, quando consumpseris carnes et
corpus tuum." Plerumque enim accepta salus carnis per vitia expenditur; sed
cum repente subtrahitur, cum molestiis caro atteritur, cum jam egredi anima
urgetur, diu male habita quasi ad bene vivendum salus amissa requiritur.

(11) a. Hu micle suiðor sculon we ðonne beon gehiersume ðæm ðe ure gæsta Fæder bið
wið ðæm ðæt we moten libban on ecnesse! (CP:36.255.8)
b. How much more, then, must we obey our spiritual Father, that we may live
eternally!
c. (Patres quidem carnis nostrae habuimus eruditores, et reverebamur eos;) non
multo magis obtemperabimus Patri spirituum, et vivemus?

(12) a. Ðæt wæter, ðonne hit bið gepynd, hit miclað & uppað & fundað wið ðæs ðe hit
ær from com, ðonne hit flowan ne mot ðider hit wolde. (CP:38.277.6)
b. When water is dammed up, it increases and rises and strives after its original
place, when it cannot flow whither it would.
c. No direct parallel:
Humana etenim mens aquae more circumclusa ad superiora colligitur, quia illud
repetit, unde descendit, et relaxata deperit, quia se per infima inutiliter spargit.

(13) a. Eac is to wietanne ðætte hwæþhwugu bið betweoh ðæm irsiendan & ðæm ungedýldgan,
ðæt is ðæt ða ungedýldan ne magon aberan nanwuht ðæs laðes ðe him mon on
It is also to be known that there is a difference between the passionate and the impatient, which is, that the impatient cannot bear any annoyance to which they are subjected either by the words or deeds of others, while the passionate incur what they could easily avoid: although no one annoy them, they try to provoke others, and compel them to strife, and seek those who avoid them, and stir up strife and abuse, and rejoice in being able to busy themselves with discord.

Sciendum quippe est, quia in hoc ab impatientibus iracundi differunt, quod illi ab aliis illata non tolerant, isti autem etiam, quae tolerentur, important. Nam iracundi saepe etiam se declinantes insequuntur, rixae occasionem commovent, labore contentionis gaudent;

(14) a. Fordæm hie beoð to myndgianne dara goda ðe hie ær dydon, ðæt hie sien þe lusðbærren to gehieranne ðæt him mon ðonne beodon wielle. Swa [swa] wildu hors, ðonne we h[ie] æresð gefangni habbað, we hie ðacciað & straciað mid bradre handa & lemiæð, to ðon ðæt we eft on fierste hie moten mid gjerðum fullice [ge]læran & ða temian. (CP:41.303.7)

b. Therefore they are to be reminded of the good they formerly did, that they may the more cheerfully hear what is to be enjoined on them; like wild horses, which, when first caught, we soothe and stroke with the palm of our hands, and
subdue, that afterwards in course of time we **may** make them completely docile and tractable with whips.

c. Nam et equos indomitos blanda prius manu tangimus, ut eos nobis plenius postmodum etiam per flagella **subigamus**.

(15) a. Gehiren Ḟa fæstendan hwæt he eft cuæð, he cuæð Ḟat ge **moston** drincan gewealden wines for eowres magan mettrymnesse. (CP:43.319.5)

b. Let the abstinent also hear what he said again; he said that “ye **may** drink wine moderately for the weakness of your stomachs.”

c. *Vetus Latina 1 Tim. 5:23:*

  X: modico vino utere propter stomachum et adsiduas imbecillitates  
  D: noli adhuc aquam bibere sed vino modico utere propter stomachum et frequentes tuas infirmitates  
  I: iam noli bibere aquam sed vino modico utere propter stomachum et crebras tuas infirmitates  
  V: noli adhuc aquam bibere sed vino modico utere propter stomachum tuum et frequentes tuas infirmitates

(16) a. Swa se fiicbeam ofersceadað Ḟat lond Ḟat hit under him ne mæg gegrowan, forðæm hit sio sunne ne **mot** gescinan, ne he self name ne wæsðm ðærofer ne bireð, ac Ḟat land bið eal unnyt swa he hit oferbræt, swa bið Ḟam unnytwyrðan & ðæm unwisan menn, ðonne he mid ðære scande his slæwðe oferbræt ða scire Ḟe he ðonne hæfð, & ðonne nauðer ne ðone folgað self nytne gedon nyle, ne ðone tolæтан ðe hine ðurh Ḟa sunnan goodes weorces giendscinan wille, & nytwyrðone & wæsðmberne gedon wille. (CP:45.337.10)

b. As the fig-tree overshadows the land, so that nothing grows under it, because the sun's rays **cannot** reach it, and it does not bear any fruit above it itself, but the land is all useless, it spreads over it so; so it is with the useless and foolish
man, when with his disgraceful sloth he covers the district he possesses, and will neither himself make his authority beneficial, nor admit him who is ready to shine over it with the sun of good works, and make it useful and fruitful.

c. *No direct parallel*

(17) a. Eall moncyynn waes to Gode gewend, ða ða hi ærest gesceapene wæron on neorxna wonge; & he ða hie manode andwearde, & him forgeaf ðæt hie *moston* stondan on frioum anwalde, & him getæhte hwæt hi on ðæm don sceolden, hwæt ne scolden. (CP:52.405.27)

b. All mankind, when first created in Paradise, were inclined to God; and he admonished them in his presence, and granted them *freedom* of action, and directed them what they were to do with it, and what not to do.

c. Humanum quippe genus Dominus in faciem monuit, quando in paradiso condito homini atque in libero arbitrio *stanti*, quid facere, quidve non facere deberet, indixit.

(18) a. Ðæm monnum is gecyðed hwelce stowe hi *moton* habban beforan urum fæder, swa swa we ær cwædon, ðæt hie sceolden habban ece eardungstowe on ðæs fæder huse furðor donné his ægnu bearn. (CP:52.409.2)

b. To these men it is proclaimed what a place they *are* to have before our father, as we said above, they are to have eternal mansions in the Father’s house in preference to his own children.

c. Quo autem apud Patrem loco *habeantur*, ostenditur: quia in domo Patris videlicet aeterna mansione etiam filiis praeferuntur.

(19) a. Forðæm oft se mildheortaa Dryhten swide hrædlice ða geðohtan synna awe-gaðwiðð, donné he him ne geðafað ðæt hi hi ōrhtion *moten*. (CP:53.419.1)
b. For often the merciful Lord very quickly washes away the meditated sins, when he does not allow them to carry them out.

c. Saepe enim misericors Deus eo citius peccata cordis abluit, quo haec exire ad opera non permittit,

(20) a. Hwæt, se ðonne ne recð hwæðer he clæne sic, [de ne sie], se ðe æfter ðære hreowsunga hine ryhtlice & clænlice nyle gehealdan: ealne weg hi hi ðweað, & ne beoð hie næfre clæne, ðeah hi ealneg wepen; ealneg hi wepað, & æfter ðæm wope hi gewyrcead ðæt hi moton eft wepan.

(CP:54.421.17)

b. He does not care whether he is clean or not, who after repentance will not conduct himself virtuously and purely: they are always washing and are never clean, although they are always weeping; they are always weeping, and after their weeping they bring on themselves the necessity of weeping again.

c. Post lavacrum enim mundus esse negligit, quisquis post lacrymas vitae innocentiam non custodit. Et lavantur ergo, et nequaquam mundi sunt, qui commissa flere non desinunt, sed rursus flenda committunt.

(21) a. Forðæm him ætwat Petrus ða dæd ðe he walde, siððan hi ongeaten hiora wælhr-ownesse, ðæt hi waren gedrefde & gecæmedde, & ðæs ðe nytweorðlicor gehierden ða halgan lare, ðe hi ær wilnodon ðæt hi gehiran mosten.

(CP:58.443.10)

b. Peter reproached them with the deed, because he wished them, after perceiving their cruelty, to become contrite and humble, that they might hear the holy doctrine with more advantage, after previously desiring to hear it.

c. No direct parallel
(22)  a. Forðæm sceal se gesceadwisa læce lætan ær weaxan ðone læssan, & tilian ðæs maran; oððæt sio tid cume ðæt he ðæs oðres tilian mote, buton he begra æt-gæddre getilian mæge.  
   (CP:62.457.12)

b. (Often it also happens that two vices assail the same man, one less, the other greater. Therefore the physician of the mind must first direct his attention to the one which he thinks likely to be the first to bring the man to perdition. Sometimes, however, when the attention is concentrated on the one, the other increases.) Therefore the wise physician must first let the lesser one increase, and direct his attention to the greater; until the time comes when he can see to the other, unless he can attend to them both together.

c. Quod cum agit, non morbum exaggerat, sed vulnerati sui, cui medicamentum adhibet, vitam servat, ut exquirendae salutis congruum tempus inveniat.

APPENDIX B. OLD ENGLISH Boethius

IDs of the form coboeth,Bo:2.8.13.81 are from YCOE, which used the edition of the text in Sedgefield (1899). The structure of the ID is similar to the one for Cura Pastoralis: in coboeth,Bo:2.8.13.81, 2 is the chapter number, 8 is the page number, 13 is the line number, and 81 is the number of the syntactic fragment within the text in YCOE, counting from the very beginning of the book.

I give the OE text by the modern edition Godden and Irvine (2009). As Godden and Irvine mark Sedgefield’s page numbers and thus allow one to identify the examples in the text easily, I do not add page references for Godden and Irvine’s edition.

The (b) translations are from Godden and Irvine (2009). The (c) translations are from Sedgefield (1900). In several cases, I provide the translation of a larger portion of the text than the OE example itself, to make clearer the context. In such cases the part which is not
given in Old English is taken into brackets. Under (d), corresponding places in the Latin original are provided.

(23)  a. He gehet Romanum his freondscipe swa þæt hi **mostan** heora ealdrihta wyrðe beon.  
       (Bo:1.7.7)

       b. He promised the Romans his friendship, so that they **could** be entitled to their old rights.

       c. To the Romans he promised his friendship, and that they **should** keep their old rights.

       d. **Chapter not based on the Latin text**

(24)  a. Hu mæg se beon gesælig se þe on þam gesælþum þurhwunian ne **mot**?  
       (Bo:2.8.13)

       b. How can he be happy who is not **allowed** to continue in those felicities?

       c. How can he be happy that **cannot** abide in happiness?

       d. **No direct parallel**

       _Indirectly parallel text:_

       Quid me felicem totiens iactastis, amici?
       Qui cecidit, stabili non erat ille gradu.  
       (LatinBo:1m1.21-2)

(25)  a. Forþam went nu fulneah eall moncyn on tweonunga gif seo wyrd swa hweorfan **mot** on yfelra manna gewill and þu heore nelt stiran.  
       (Bo:4.10.23)

       b. And so nearly all mankind will fall into doubt, if fate is **allowed** to go according to the pleasure of the wicked, and you are not willing to control it.

       c. Wherefore well-nigh all men shall turn to doubt, if Fate **shall** change according to the will of wicked men, and Thou wilt not check her.

       d. **No direct parallel**
(26) a. Swa hwa þonne swa þæs wyrðe bið þæt he on heora þeowdome beon mot, þonne bið he on ðam hehtan freodome.  

b. Then whoever is worthy of being **allowed** to be in their service is in the highest freedom.

c. Whosoever then is worthy **to be** in their service hath perfect freedom.

d. **No direct parallel**

*Indirect parallel:* < ... > cuius [=the basileus’s] agi frenis atque obtemperare iustitiae summa libertas est.  

(27) a. Mot ic nu cunnian hwon þin fæstrædnesse þæt ic þanon ongiton mæge hwonan ic þin tilian scyle and hu?  

b. **May** I now explore a little your resolution so that I can understand from that with what means I am to cure you and how?

c. **May** I then put thy fixed belief to the proof, that I may thereby get to know by what means and in what manner I am to cure thee?

d. Primum igitur **paterisne** me paulis rogationibus statum tuae mentis attingere atque temptare, ut qui modus sit tuae curationis intellegam?

(LatinBo:1p6.1)

(28) a. Eala hu yfele me doð mænege woruldmen mid þæm þæt ic ne **mot** wealdan minra agenra [þeawa].  

b. Alas, how badly I am treated by many worldly people, so that I am not **allowed** to determine my own customs.

c. Oh how evilly I am entreated of many worldly men, in that I **may** not rule mine own servants!

d. An ego sola meum **ius exercere prohibebor**?

(LatinBo:2p2.8)
NOTES

(29) a. Se heofen mot bregon leohf dagas and eft þæt leohf mid þeostrum behelian;  
(Bo:7.17.23)

b. The sky is allowed to bring bright days and then to hide the light with darkness;

c. The sky may bring bright days, and anon hide the light in darkness;

d. licet caelo proferre lucidos dies eosdemque tenebrosis noctibus condere,  
(LatinBo:2p2.8)

(30) a. þæt gear mot brengan blosman and þy ilcan geare geniman;  
(Bo:7.17.23)

b. the year is allowed to bring flowers and take them away in the same year;

c. the year may bring flowers, and the same year take them away again;

d. licet anno terrae vultum nunc floribus frugibusque redimire nunc nimbis frig-oribusque confundere,  
(LatinBo:2p2.8)

(31) a. seo sæ mot brucan smyltra yþa,  
(Bo:7.17.23)

b. the sea is allowed to enjoy pleasant waves;

c. the sea may enjoy her gentle heaving,

d. ius est mari nunc strato aequore blandiri nunc procellis ac fluctibus inhor-rescere:  
(LatinBo:2p2.8)

(32) a. and ealle gesceafa motan heora gewunan and heora willan bewitigan butan me anum.  
(Bo:7.17.23)

b. and all created things are allowed to keep their customs and their desires,  
except me alone.

c. and all things created may follow their course and fulfil their desire.

d. No direct parallel
(33)  a. Ac hie hine habbað on me genumen and hie [hine] habbað [geseldene] heora wlen-
cum and getohhod to heora leasum wenum þæt ic ne mot mid minum [þeowum] minra þenunga fulgangan swa eallæ opra gescealta moton.  
(Bo:7.17.31)

b. But they have taken that from me and given it to their riches and assigned it to their false wealth so that I am not allowed to perform my duties with my servants as all other created things are allowed.

c. this they have wrested from me. Moreover, they have given me over to their evil practices, and made me minister to their false blessings, so that I cannot with my servants fulfil my service as all other creatures do.

d. No direct parallel

Indirect parallel:

nos ad constantiam nostris moribus alienam inexpleta hominum cupiditas alligabit?  
(LatinBo:2p2.8)

(34)  a. Nu þu eart scyldigra þonne we ægþer ge for þinum agnum unrihtlustum ge eac for|þam þe we ne moton for þe fullgan ures scippendes willan;

(Bo:7.19.19)

b. Now you are guiltier than we [the worldly felicities] are, because of your own wrongful desires and also because we are not permitted on account of you to perform our maker's will;

c. Thou art indeed more guilty than I, both for thine own wicked lusts and because owing to thee I am not able to do the will of my Maker.

d. No direct parallel

(35)  a. þæt gewyrð for þam dysige þe ge fægniað þæt ge moton sceppan [wone] naman, hatan þæt sælþa þæt nan ne beoð and þæt medumnes [þæt nan medumnes] ne beoð;

(Bo:16.39.4)
b. That happens on account of your folly, that you men delight in being able to give the wrong names, calling those things felicity which are not such and that excellence which is no excellence;

c. This comes, O men, from your foolish delight in making a name, and calling that happiness which is no happiness, and that excellent which hath no excellence;

d. Gaudetis enim res sese aliter habentes falsis compellare nominibus, [quae facile ipsarum rerum redarguuntur effectu;] (LatinBo:2p6.19)


(Bo:18.45.28)

b. It despises then all these earthly things and rejoices that it may share in the heavenly things after it is removed from the earthly things.

c. and she despiseth all these things of earth, and delighteth in being able to enjoy the heavenly things after she is sundered from the earthly.

d. < ... > nonne omne terrenum negotium spernat, quae se caelo fruens terrenis gaudet exemptam?2 (LatinBo:2p7.23)

(37) a. Ac se anwealda hæfð ealle his gesceafta swa mid his bridle befangene and getogene and gemanode swa þæt hi nauþer ne gestillan ne moton, ne eac swiðor styrian þonne he him þæt gerum his wealdleðeres to forlæt.

(Bo:21.49.2)

2(Godden and Irvine, 2009, vol. 2, p. 325) provide the following insular gloss: totus homo qui corpore et anima constat. et omnes homines moriuntur. sunt autem toti qua anima non moritur. etiamsi corpus moritur. This interpretation is relevant for the use of *motan because in Boethius's original text, both options of existing after one's death and not existing are considered (with the second notion rejected by him, and yet entertained seriously). The more Christian medieval interpretation exhibited by the gloss and by the OE translator show a presupposition that the soul lives after a person's death.
b. But the sole ruler has so embraced and drawn and instructed all his creatures with his rein that they may neither cease nor also move further than he allows them the scope of his bridle.

c. but the Lord hath so caught and led, and managed all His creatures with His bridle, that they can neither cease from motion, nor yet move more swiftly than the length of His rein alloweth them.

d. No direct parallel

(38) a. Swa hæfð se ælmihtiga God geheaðorade ealle his gescēfta mid his anwealde þæt heora ælc wið ðeow wæde oðer þæt hie ne moton toslupan, ac bioð gehwerfde eft to þam ilcan ryne þe hie ær urnon, and swa weordæð eft geedniwade. (Bo:21.49.5)

b. The almighty God has so restrained all his creatures with his power that each of them contends with others and yet supports others so that they may not fall away, but are turned back to the same course that they ran before, and so are renewed again.

c. Almighty God hath so constrained all His creatures with His power, that each of them is in conflict with the other, and yet upholdeth the other, so that they may not break away but are brought round to the old course, and start afresh.

d. No direct parallel

(39) a. Se ilca forwyrnð þæræ sæ þæt heo ne mot þone þeorscwold oferstæppan þære eorþan mæru. (Bo:21.49.22)

b. The same [=the power of God] restrains the sea so that it cannot cross the threshold of the earth’s boundary,

c. He forbiddeth the sea to overstep the threshold of the earth,

d. ut fluctus avidum mare certo fine coercet,
ne terris liceat vagis
latos tendere terminos,
hanc rerum seriem ligat
terras ac pelagus regens
et caelo imperitans amor.  

(LatinBo:2m8.9-15)

(40)  a. Ac he hæfð heora mearce swa gesette þæt [hio ne] mot heore mearce gebrædan ofer þa stillan eorþan.  
           (Bo:21.49.23)

b. but he has so set their boundary that it cannot extend its bounds over the motionless earth.

c. having fixed their boundaries in such wise that the sea may not broaden her border over the motionless earth.

d. ut fluctus avidum mare
certo fine coercat,
ne terris liceat vagis
latos tendere terminos,
hanc rerum seriem ligat
terras ac pelagus regens
et caelo imperitans amor.  

(LatinBo:2m8.9-15)

(41)  a. Hu licað þe nu se anweald and se wela, nu þu gehired hæfst þæt hine man nawðer ne buton ege habban ne mæg ne forlætan ne mot þeah he wille?  
           (Bo:29.67.12)

b. How do you like power and wealth now, now you have heard that one can neither have it without fear nor relinquish it when one wishes?

c. How do power or wealth please thee now that thou hast heard that no man can possess them and be free from dread, nor give them up if he so desire?
d. Quae est igitur ista potentia, quam pertimescunt habentes, quam nec cum habere velis tutus sis et cum deponere cupias vitare non possis? (LatinBo:3p5.12)

(42) a. Forgif nu drihten urum | modum þæt hi moton to þe astigan þurh þas ear-foðu þisse worulde, and of þissum bise gum to þe cuman, and openum eagum ures modes we moten geseon þone æþelan æwelm ealra goda, þæt eart ðu. (Bo:33.82.6)

b. O lord, grant now our minds that they may ascend to you through these tribulations of this world, and from these cares come to you, and that with open eyes of our mind we may see the noble source of all goods, which is you.

c. Grant unto our minds, O Lord, that they may rise up to Thee through the hardships of this world, and from these troubles come to Thee, and that with the eyes of our minds opened we may behold the noble fountain of all good things, even Thee.

d. Da, pater, augus tam menti conscendere sedem, 
da fontem lustrare boni, (da luce reperta
in te conspicuos animi defigere visus.) (LatinBo:3m9.22-24)

(43) a. Forgif us þonne hale eagan ures modes þæt we hi þonne moton afaestnian on þe, and todrif ðone mist þe nu hangað beforan ures modes eagum and onliht þa eagan mid ðinum leohte; (Bo:33.82.10)

b. Grant us then healthy eyes of our mind that we may then fasten them on you, and drive the mist that now hangs before our mind’s eyes and lighten the eyes with your light;

c. Grant us health for our minds’ eyes, that we may fasten them upon Thee, and scatter the mist that now hangeth before out minds’ sight, and let Thy light lighten our eyes;
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d.  (Da, pater, augustam menti consendere sedem,
da fontem lustrare boni,)   da luce reperta
in te conspicuos animi defigere visus.
Dissic terranae nebulas et pondera molis
atque tuo splendore mica;            (LatinBo:3m9.22-26)

(44)  a.  and ic wolde mid unarimedum feo gebycgan þæt ic hit moste gesion.
       (Bo:34.89.29)

b.  and I would pay countless treasure so that I might see it.

c.  and I would pay a sum beyond counting that I might see it.

d.  *Indirect parallel:*

   Infinito, inquam, si quidem mihi pariter deum quoque, qui bonum est,  con-
tinget  agnoscre.  (LatinBo:3p11.3)

(45)  a.  friðað and fyrdred swiðe georne swa lange swa hiora gecynd bið þæt hi growan
moton.  (Bo:34.91.24)

b.  (For it is the nature of every kind of land that it fosters similar plants and trees,
and it does so); it protects and advances them very keenly for as long as it is
their nature that they may grow.

c.  (for the nature of every country is to bring forth plants and trees like itself, and
it does so in this case.) It nurses them and helps them very carefully so long as
their nature allows them to grow.

d.  *Indirect parallel:*

   Sed dat cuique natura quod conuenit, et ne, dum manere possunt, intereant
elaborat.  (LatinBo:3p11.20)

(46)  a.  Hwæt wenst þu forhwi ælc sæd greowe innon þa eorðan and to cipum [and]
wyrtrumum weorþe on þære eorðan buton ðy þe hi tiohhað þæt se stemn and
se [helm] mote by fæstor and by leng standon?

(Bo:34.91.25)

b. Why, do you think, does each seed grow within the earth and develop into shoots and roots in the earth if not because they intend that the stem and crown may be allowed to stand the firmer and longer?

c. Why, thinkest thou, does every seed creep into the earth and grow into shoots and roots but because it wants the trunk and the tree-top to stand the firmer and the longer?

d. *No direct parallel*

(47) a. Ælcere wuhte is gecynde þæt hit willnige þæt hit a sie be þam dæle þe his gecynde healdan mot and mæg. (Bo:34.93.22)

b. For each thing it is natural that it should desire always to exist to the extent that its nature may and can endure.

c. For each being it is natural to desire to live for ever, in so far as its nature may admit.

d. <...> dedit enim providentia creatis a se rebus hanc vel maximam manendi causam, ut, quoad possunt, naturaliter manere desiderent. 

(LatinBo:3p11.33)

(48) a. Ac hit gebyrede, swa hit cynn was, þæt se godcunda anweald hi tostente ær hi hit fullwyrca moston, and towearp þone torr, and hiora manigne ofslog, and hiora spræce todælde on twa and hundseofontig geþeoda.

(Bo:35.99.13)

b. But it came about, as was fitting, that the divine power scattered them before they were allowed to complete it, and cast down the tower, and killed many of them, and divided their speech into seventy-two languages.
c. But it fell out, as was fitting, that the divine might dashed them down before they **could** bring it to a head, and cast down the tower and slew many a man among them, and split their speech into two and seventy tongues.

d. **No direct parallel**

(49) a. Ac þær ic nu **moste** þin mod gefiðerigan mid þam fiðerum þæt ðu mihtest mid me fliogan, þonne miht þu ofersion ealle þas eordlican þing.

(b) But if I now am **permitted** to feather your mind with those wings so that you can fly with me, then you can look down on all these earthly things.

c. But if only I **might** fleece thy mind with wings, so that thou mightest fly with me, then mightest thou look down upon all these earthly things.

d. **No direct parallel**

**Indirect parallel:**

Sunt etenim pennae volucres mihi
quae celsa conscendant poli;
quas sibi cum velox mens induit
terras perosa despicit.

(LatinBo:4m1.1-4)

(50) a. Ic wat þeah, gif þe æfre gewyrð þæt ðu wæt oððe **most** eft fandian þara þiostra þisse worulde, þonne gesiht þu þa unrihtwisan cyningas and ealle þa ofermodan rican bion swiðe unmihtige and swiðe earme wrecan, þa ilcan þe þis earme folc nu heardost ondræt.

(b) I know however that if it ever happens to you that you wish or are **allowed** to experience again the darkness of this world, then you will see the unjust kinds

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3In the commentary to the text, Godden and Irvine write (vol. 2, p. 427): “Wisdom seems to think of Boethius wishing to return to the earthly darkness, or being obliged to” (emphasis mine). What is interpreted as a permission modal in their translation, is interpreted as an obligation modal in the commentary.
and all the arrogant men in power, the very ones whom this wretched people now most severely dread, to be very unpowerful and very wretched exiles.

c. Nevertheless I know that if ever it shall happen to thee to desire or to be allowed to visit once more the darkness of this world, then wilt thou see that the unrighteous kings and all the overweening rich ones are very feeble and poor wretches, even those same men whom this poor folk now most sorely dreadeth.

d. Quodsi terrarum placeat tibi
noctem relictam visere,
quos miseri torvos populi timent
cernes tyrannos exsules. (LatinBo:4m1.27-30)

(51) a. and swa hwilc swa ærest to þæm beage cymð, þonne mot se hine habban him.  
        (Bo:37.112.24)

b. (as was customary among the Romans, and still is in many nations, that someone hangs a golden crown up at the end of some race-course; then a great crowd goes there and all run together, those who have confidence in their running), and whoever comes first to the crown, he is allowed to have it.

c. (even as once it was the custom of the Romans, and still is among many peoples, for a golden crown to be hung up at the end of a race-course; many men come together and all start level, as many put their trust in their running.) And whosoever first reaches the crown may have it for himself.

d. No direct parallel

(52) a. Forðæm he mot cuman æfter þæm earfoðum to ecre are.  
        (Bo:38.120.17)

b. And so it is allowed to come after those hardships to eternal favour.

c. These, having deserved some measure of mercy, are allowed, after their troubles, to come to eternal glory.
d. *No direct parallel*

(53) a. Forþy wenað þa ablendan mod þæt þæt sie sio mæste gesælð þæt men seo alefed yfel to donne, and sio dæd him mote bion unwitnod.

(Bo:38.121.17)

b. So the blinded minds think that the greatest felicity is that man is allowed to do evil, and that he might not be punished for the act.

c. Therefore these purblind minds account it the greatest happiness that a man be allowed to work evil, and his deed to go unpunished;

d. *No direct parallel*

(54) a. Gif þu nu deman mostest, hwæþerne woldest þu deman wites wyrþran, þe [þone þe þone unscyldgan] witnode, þe | ðone þæt wite þolode.

(Bo:38.122.28)

b. If now you were allowed to judge, which would you judge worthier of punishment, the one who tormented the innocent or the one who suffered the torment.

c. If you hadst to decide, which wouldst thou deem the more worthy of punishment, him that punished the innocent, or him that suffered the penalty?

d. Si igitur cognitor, ait, resideres, cui supplicium inferendum putares, eine qui fecisset an qui perulisset iniuriam?

(55) a. Ac se godcunda foreþonc heaþerað ealle gesceafta þæt hi ne moton toslupan of heora [endebyrdnesse].

(Bo:39.128.20)

b. But the divine providence restrains all creatures so that they may not slip from their ordering.

c. The divine forethought holdeth up all creatures, so that they may not fall asunder from their due order.
d. *No direct parallel*

(56) a. Me wære liofre þæt ic onette wið | þæs þæt ic *moste* gelæstan þæt ic þe ær gehet, and þe *moste* getæcan swa sceortne weg swa ic scyrtstne findan mihte to þinre cyððe.  
   (Bo:40.139.24)

b. I would rather hasten towards the aim of *fulfilling* what I promised before, and *might* teach you the shortest way that I could find to your homeland.

c. I would rather hasten on to *make good* my earlier promise to thee, and point *out* to thee the very shortest way I can find to thy native land.

d. *<...>* Festino, inquit, debitum promissionis *absolvere* viamque tibi, qua patriam reveharis, *aperire*.  
   (LatinBo:5p1.4)

(57) a. þæm he geaf micle gife freodomes, þæt hi *moston* don swa god swa yfel swa hi wolden.  
   (Bo:41.142.8)

b. To them [=angels and men] he gave the great gift of freedom, so that they *could* do either good or evil as they wished.

c. to them He gave the great gift of freedom, that they *might* do good or evil, whichever they pleased.

d. *No direct parallel*

(58) a. He sealde swiðe fæste gife and swiðe fæste æ mid þære gife ælcum menn [oð] his ende. þæt is se frydom þæt de mon *mot* don þæt he wile, and þæt is sio æ þæt [he] gilt ælcum be his gewyrhtum, ægþer ge on þisse worulde ge on þære toweardan, swa god swa yfel swaðer he deð.  
   (Bo:41.142.11)

b. He gave a very fixed gift and a very fixed law with that gift to every man until his end. That is the freedom, that man *may* do what he wishes, and that is the law that he [=God] rewards each according to his deeds, both in this world and the next, whatever he does, whether good or evil.
c. To every man until his end He hath given an abiding grace, and the grace an
abiding law; that is, freedom to do what he will, and the law whereby He
rewardeth each according to his deeds, both in this world and in the world to
come, with good and evil, according as the man acts.

d. No direct parallel

(59) a. Nu þincð me þæt he do woh þonne he arað þa godan and eac þonne he witnað
þa yfelan, gif þæt soð is þæt hit him swa gesceapen | wæs þæt hi ne moston
elles don.

(Bo:41.142.28)

b. Now it seems to me that he does wrong when he favours the good and also when
he punishes the wicked, if it is true that it was so shaped for them that they
might not do otherwise.

c. Now, I think He doeth amiss when He showeth favour unto the good, and also
when He chastiseth the wicked, if it be true that they are so made as to be
unable to act otherwise.

(60) No direct parallel

Indirect parallel:

Frustra enim bonis malisque praemia poenaevae proponuntur, quae nullus meruit
liber ac voluntaris motus animorum, idque omnium videbitur iniquissimum quod
nunc aequissimum iudicatur, vel puniri improbos vel remunerari probos, quos ad al-
terutrum non propria mittit voluntas, sed futuri cogit certa necessitas. (LatinBo:5p3.30-
1)

APPENDIX C. OLD ENGLISH AUGUSTINE’S SOLILOQUIES

I add to the IDs from YCOE page and line numbers from Carnicelli (1969) and Hargrove
(1902): Carnicelli’s is the most modern edition, and it does not provide corresponding
page numbers of the earlier editions of Hargrove (1902) or Endter (1922). As Carnicelli rearranges the order of the text of the Book III, following the suggestions of Jost (1920) (endorsed by Endter as well, but not reflected in the edition Endter (1922)), I chose to provide page and line numbers for all three mentioned editions. *Car* refers to Carnicelli (1969), *Har* to Hargrove (1902), and Endter’s page and line numbers can be found in the YCOE IDs.

The (b) translations are from Hargrove (1904) (made from the text in Hargrove (1902)). The (c) translations are from the partial translation, containing the preface and two first books, from Giles et al. (1858), and were made by E. Thomson.

(61) a. ac ælcne man lyst, siððan he ænig cotlyf on his hlaforde læne myd his fultume getimbred hæfð, þæt he hine *mote* hwilum þar-on gerestan, and huntigan, and fuglian, and fiscian, and his on gehwilce wisan to þere lænan tilian, ægþær ge on se ge on lande, oð þone fyrst þe he bocland and æce yrfe þurh his hlaforde miltse geearnige.

(b) (It is no wonder that one should labor in timber-work, both in the gardening and also in the building;) but every man desireth that, after he hath built a cottage on his lord’s lease and by his help, he *may* sometimes rest himself therein, and go hunting, fowling, and fishing; and use it in every manner according to the lease, both on sea and land, until such time as he shall gain the fee simple of the eternal heritage through his lord’s mercy.

(c) (It is no wonder, though men ‘swink’ in timber-working, and in the out-leading and in the building;) but every man wishes, after he has built a cottage on his lord’s lease, by his help, that he *may* sometimes rest him therein, and hunt, and fowl, and fish, and use it in every way to the lease, both on sea and on
land, until the time that he earn bookland and everlasting heritage through his lord's mercy.

(62) a. se god sealde fridom manna saulum, þæt hy *moston* don swa good swa yfel, swæðer hy woldon;

(b) (And all the creatures, about whom we say that they seem to us inharmonious and unsteadfast, have yet somewhat of steadiness, because they are bridled with the bridle of God's commandments.) God gave freedom to men's souls, that they *might* do either good or evil, whichever they would;

c. (And all the creatures about which we are speaking that they seem to us unharmonious and unsteady—they have however some deal of steadiness, for they are bridled with the bridle—God's commandments.) God gave freedom to men's souls, that they *might* do either good or evil, whether they would;

(63) a. and *gedo* me þæs wyrðne þæt ic þe mote geseon.

(b) (If I love naught above Thee, I beseech Thee that I may find Thee; and if I desire any thing beyond measure and wrongly, deliver me from it.) Make me worthy to behold Thee.

c. (If I love naught over thee, I beseech thee that I may find thee; and if I immoderately and unlawfully desire anything, free me of that,) and make me worthy that I *may* see thee.

(64) a. Nat ic ðe nanwiht to bebeOdanne þæs þe þe mare ðearf sie to ðam cræfte þe ðu wilnast to wittanne þonne þæt þæþ þu forseo swa ðu swidost mage weorlde ara, and huru ungemethlice and unalifedlice, forðam ic *ondrede* þæt hy gebynden þin mod to hæom and þa gefon myd heora grine, swa swa man deor oððe fugelas
feht, *þæt þu ne mote* began *þæt þæt þu wilnast;*

*(cosolilo,Solil_1:47.6.600; Car:78.29; Har:46.6)*

b. I know not anything to command thee of which thou hast more need for the science which thou wishest to know, than that thou despise, so much as thou art able, worldly honors, and especially intemperate and unlawful ones, because I fear that they may bind thy mind to themselves and take it with their snare, just as one catcheth wild beasts or fowls, so that thou *canst* not accomplish what thou wishest;

c. I wot naught to command thee, of which thou hast more need for the craft which thou wishest to know, than that thou despise as thou most strongly canst the world’s honours, and especially the immoderate and unlawful: for I dread that they bind thy mind to them, and catch it with their snare, so that thou *may* not go about that which thou wishest.

(65)  

a. Wost þu þonne genoh gif ic *gedo ðæt þu ðæt wost ðæt þu most* simle lybban?

*(cosolilo,Solil_2:57.1.741; Car:84.14; Har:56.9)*

b. Wilt thou, then, know enough if I cause thee to know that thou *mayest* live always?

c. Shalt thou then know enough, if I make thee know that thou *mayest* always live?

(66)

a. and efter domes dæge us ys *gehaten ðæt we moten* god geseon openlice, ealne geseon swylce swylce he ys, and hyne a syððan cunnan swa georne swa he nu us can.

*(cosolilo,Solil_3:67.25.939; Car:93.18; Har:67.6)*

b. And after Doomsday it is promised that we *may* see God openly, yea, see Him just as He is; and know Him ever afterwards as perfectly as He now knoweth us.
(67)  a. ... meahte oððe *mosten* on þas wurld, oððe hweðer hy enige geminde hefde þara freonda þe hi be(æ)ftan heom lefdon on þisse weorulde.\(^4\)

   (cosolilo,Solil _3:67.32.946; Car:95.2; Har:67.17)

b. ...might or *could* in this world, or whether they had any rememberance of the friends whom they left behind in this world.

(68)  a. Ða cwæð Abraham: “nese, min cyl(d)\(^5\), nese. Ac geþenc þæt þu hym forwyndest ælcr ða git begen\(^6\) on lichaman weron, and þu hefdest ælc good, and he hefde ælc yfel. *ne mot* he þe nu þy mare don to getæsan þe ðu þa hym woldest.”

   (cosolilo,Solil _3:68.14.953; Car:95.15; Har:67.30)

b. Then said Abraham: ‘Nay, my son; but consider that thou didst withhold from him all comforts when ye were both in the body, thou having every good, and he every misfortune. He *cannot* now do more for thy comfort than thou wouldst do for him.’

(69)  a. Ði me þincð swiðe dysig man and swiðe unlæde, þe nele hys andgyt æcan þa hwile þe he on þisse weorulde byð, and sile *wiscan* and *willnian* þæt he *mote* cuman to ðam æcan lyfe þær us nauwilt ne byð dygles.

   (cosolilo,Solil _3:70.16.988; Car:97.14; Har:69.34)

b. Therefore methinks that man very foolish and very wretched who will not increase his intelligence while he is in this world, and also wish and desire that he *may* come to the eternal life, where nothing is hid from us.

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\(^4\)There is a gap in the manuscript text, so it is impossible to restore the context of this fragment.

\(^5\)Hargrove (1902) substitutes *sunu* instead of *cyl*, hence the translation in (c).

\(^6\)Hargrove (1902): *beegen*